Wastewater Treatment Project

Treated for a cleaner future

CRD Wastewater Treatment Project

Quarterly Report

Reporting Period: April - June 2017

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1 Executive Summary

1.1 Introduction

This quarterly report covers the reporting period of April - June 2017, and outlines the progress made on the Wastewater Treatment Project over this time.

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

Overall the Project is progressing as planned. The set-up of the CRD Project Management Office ("PMO") continued over the reporting period. Recruitment efforts were successful with the staffing level increasing over the reporting period from 8 to 22 full time equivalents ("FTE"); the PMO office is now close to fully-staffed for this phase of the Project.

After the CRD signed the WWTP contract with Harbour Resource Partners (HRP) in March, the WWTP moved into the construction phase. The construction phase has progressed in accordance with the overall schedule, with HRP furthering design while materials and equipment were mobilized, and construction sites were prepared. Note that while the casing installation work at Ogden Point started two weeks later than was initially scheduled (starting on June 29th rather than during the week of June 12th), this is not anticipated to have an impact on the overall Project schedule.

The RTF is in the procurement phase and progressed from the Request for Qualifications ("RFQ") stage to the Request for Proposals ("RFP") stage in the reporting period. Following the successful completion of the RFQ stage a shortlist of three proponents were issued with the RFP. The 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 construction contracts: two design-build contracts and five design-bid-build contracts.

The two design-build Conveyance System contracts entered the procurement phase over the reporting period:

- the RFP for the Clover Point Pump Station was issued on May 22, 2017 and is scheduled to close on August 2, 2017; and
- the RFQ for the Macaulay Point Pump Station and Forcemain was issued on May 24, 2017 and is scheduled to close on July 5, 2017.

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. For each of the design-bid-build contracts the Project Team will procure design consultant services (including the "Engineer of Record" role). Planning for the procurement of these services progressed for each of the Arbutus Attenuation Tank, Clover Point Forcemain 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 two safety-related incidents.
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 construction activities at Ogden and McLoughlin Points. Significant efforts will continue to be made to provide accurate and timely information to stakeholders.
Schedule	Deliver the Project by December 31, 2020.					Casing installation work at Ogden Point started two weeks later than initially scheduled but this is not anticipated to have any impact on the overall Project schedule.
Cost	Deliver the Project within the Control Budget ($765 million).					Project expenditures were within the 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 staff, was zero.

HRP began mobilization to WWTP work sites in April, mobilizing staff each month. At the end of the reporting period there were 54 HRP staff working on the Project.

In addition to HRP's work, three sets of geotechnical investigations were undertaken over the reporting period to gather information for future construction: by HRP on the McLoughlin Point outfall; and by Stantec related to the alignment of the Clover Forcemain on Dallas Road, and the Macaulay Point Pump Station and Forcemain in Esquimalt.

The increase in construction work on the Project over the reporting period resulted in an increase in safety activitites.

Site inspections were carried out by Project Team construction and safety personnel over the reporting period. With increased construction activities on the Project these inspections increased in frequency and starting in May documented site inspections were performed weekly with an HRP and CRD representative. Office and site orientations were delivered as required.

The key safety activity during April was the review of HRP's Health, Safety and Environmental Plan. The plan was reviewed and accepted by the Project team.

In May, key safety activities included the review and rejection of HRP's Rock Blasting and Property Protection Plan (which was subsequently revised by HRP and resubmitted for Project Team review in June), and the review and approval of the McLoughlin Point site specific safety plan.

In June, key safety activities included:

- the investigation of two safety-related incidents;
- the issue of a hazard identification to a Project Contractor;
- asbestos removal; and
- participation in CRD safety coordination meetings.

Each of these key safety activities is outlined below. Additional safety activities in June included: HRP installing engineered anchor points to the sound wall at Ogden Point, as required for inclement weather such as high winds; and the Project Team held a project delivery workshop to review Project roles and safety responsibilities.

The first safety incident involved a worker from Millennia (the Project's archaeological advisor). The worker accessed the Ogden Point worksite without receiving a site orientation from HRP (the prime contractor for the Ogden Point worksite). The incident was recorded as a 'near miss'. The following corrective actions were taken:

- the worker subsequently received an HRP orientation that covered:

  - access to all worksites for which HRP is the prime contractor;
  - the provision of an employee handbook on site policies and procedures; and
  - a knowledge and competency test, to ensure that the worker retained knowledge of site rules and conditions.
- signage was placed at the entrance to both work sites advising that anyone entering the site must have an HRP orientation and that all visitors must report to the site office.

The second safety incident was related to the geotechnical invetigations undertaken by Stantec (as the owner's engineer) related to the alignment of the Clover Forcemain on Dallas Road. On 20 June, 2017 a call was received from a member of the public who had a concern with regards to public safety related to drilling activities being undertaken by at the corner of Dallas and Douglas Roads. Access to a sidewalk had to be temporarily suspended to accommodate the drilling activities. This led members of the public to take alternative routes, with some pedestrians walking in roadways. Upon receipt of the call the WTP Construction Manager and Safety Manager attended the area to evaluate the situation and to identify corrective measures. As a result Stantec undertook the following corrective measures to ensure public safety:

- extra flaggers were assigned and a temporary cross-walk was installed to assist anyone crossing the road at locations wihout a cross-walk;
- the control zone around the drilling truck was reduced in order to allow pedestrians to access a portion of the sidewalk and avoid walking on the road; and
- traffic management was provided and traffic management was reviewed daily prior to work commencing.

The second incident involved the issuance of a hazard identification (Hazard ID) by the Project Team to HRP related to ladder safety. Workers were observed at Ogden Point using a ladder that was not appropriate for the task and was not tied off. Workers were made aware of the Hazard ID and removed and replaced the step ladder with an extension ladder and had it tied off correctly as per WorkSafe BC Regulation

In June, the "Anglers Hut" located at Ogden Point was closed. A site trailer was located nearby at Ogden Point as a new temporary facility, facilitating demolition of the old building. During testing undertaken prior to demolition asbestos was found. All appropriate measures were taken to deal with the asbestos both prior to and during demolition. The demolition of the Anglers Hut was completed in June.

In June, Project Team members participated in two CRD safety coordination meetings as follows:

- the WTP Safety Manager attended a safety coordination meeting with various CRD representatives to review CRD (non-Project-specific) incident updates, corrective actions and safety updates; and
- the WTP Safety Manager attended a Corporate Joint Occupational Health and Safety (JOHS) Committee Meeting. JOHS Committee Meetings are held monthly and attended by the WTP Safety Manager and CRD safety representatives. The purpose of JOHS Committee Meetings is to co-ordinate safety activities and share lessons learned.

Table 2 – WTP Safety Information

	Reporting Period (Q2 2017)	Project Total to-Date (from January 1, 2017)
Person Hours		
PMO	7,093	10,070
Project Contractor	16,736	20,949
Total Person Hours	23,829	31,019
Number Of Employees		
PMO	22	
Project Contractors working on Project site	54	
Total Number Of Employees	76	
Number Of Occurrences		
Near Miss Reports	1	1
High Potential near Miss Reports	0	0
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

The Project Team's Environmental, First Nations and Regulatory Manager role was filled at the end of May.

2.2.1 Environment

Environmental work progressed as planned over the reporting period.

In April, key environmental management activities included:

- a draft archaeological permit associated with the geotechnical investigations for the Clover and Macaulay forcemains was sent to Millennia, the Project's archaeological advisors, for review; and
- the Project Team reviewed HRP's WWTP Early Works Construction Environmental Protection Plan and returned comments.

In May, key environmental management activities included:

- HRP prepared environmental protection plans in anticipation of construction activities beginning at Ogden Point, McLoughlin Point sites and the laydown areas located on adjacent DND land;
- Stantec prepared a Project-wide environmental management plan to act as a framework for staff and contractors working on the Project; and
- baseline environmental assessment work, including Environmental Impact Studies related to facility and outfall construction and effluent discharge, contaminated sites assessments and archaeological assessments that were completed during the previous iteration of the Project were reviewed and shared with HRP, Stantec, Millennia and proponents. These studies were used to inform permit applications and the development of environmental management plans and environmental protection plans.

In June key environmental management activities included:

- Millennia began preparing a Heritage Conservation Act Inspection Permit application for submission to the Province in July, to enable intrusive (i.e. ground disturbing) studies to be undertaken to inform Millennia's Archaeological Impact Assessment of the entire Project;
- a bi-weekly meeting with CRD Parks and Environmental Services staff and the Project Team was initiated to ensure the coordination of Project activities with CRD policies and requirements; and
- HRP completed ocean floor sampling activities to inform environmental-related permitting requirements for the outfall.

2.2.2 Regulatory Management

Regulatory management work progressed as planned over the reporting period.

The progression of the various Project permits are an area of key Project Team focus due to the potential Project schedule impacts.

The Project Team continued engagement with municipal, provincial and federal government departments throughout the reporting period. Activities included:

- the first District of Saanich Technical Working Group meeting was held in May;
- a City of Victoria Technical Working Group meeting;
- the Project Team progressed Heritage Act permits and operational permits required for the Project;
- the Project Team conducted ongoing operational and progress update meetings with Department of National Defence;
- the Project Team conducted a Project update and briefing session for Environment and Climate Change Canada; and
- archeological (*Heritage Conservation Act*) permits from the Ministry of Forests, Lands, and Natural Resource Operations for the Project are in development by Millennia, which, as noted above, is the Project Team's archaeological advisor.

HRP also furthered regulatory activities over the reporting period. Key regulatory activities undertaken by HRP included:

- HRP sent an updated blasting notification to Nav Canada and Transport Canada (Harbour Master);
- HRP submitted a request for review to Fisheries and Oceans Canada for all works in water;
- HRP completed studies and an application to the Department of National Defence to amend the previously approved Environmental Effects Determination, thereby allowing for the widening of Victoria View Road;
- HRP's applications for Facility Alteration Permits for the horizontal directional drilling ("HDD") and installation of the casing and pipe for the cross harbour forcemain were approved by Transport Canada; and
- HRP's application for the Facility Alteration Permit and Transport Canada licence for the McLoughlin Point outfall is under review by Transport Canada.

The Project Team continued to meet the CRD's commitments under Project-related agreements.

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.

Updates to Table 3 from that presented in the Project's May 2017 monthly report are as follows:

i) related to the McLoughlin Point WWTP:
   a. the addition of the Township of Esquimalt Development Permit Amendment: HRP have advised that they will be submitting a Permit Amendment related to the progression of their design
   b. the addition of the Township of Esquimalt Phased Building Permits:
   c. the replacement of the Ministry of Environment (MOE) Draft Operational Certificate and Operational Certificate with the Municipal Wastewater Regulation ("MWR") Registration: BC's MOE have indicated that, as a result of the planned harmonisation of federal and provincial regulations the Project will require registration under the MWR rather than the issue of an Operational Certificate;

ii) related to the McLoughlin Point Harbour Crossing:

a. Transport Canada Licence (works access) has been obtained; and
b. Transport Canada Facility Alteration Permit has been obtained.

iii) related to the McLoughlin Point Outfall:
a. Transport Canada Facility Alteration Permit anticipated date has ben deferred from Q2 2017 to Q4 2017: this permit has been submitted and is anticipated to be issued in time to allow the work to proceed as scheduled;
b. Transport Canada Licence anticipated date has ben deferred from Q2 2017 to Q4 2017: this permit has been submitted and is anticipated to be issued in time to allow the work to proceed as scheduled; and
c. the addition of the Provincial Tenure Crown Grant.

iv) Related to the Macaulay Point Pump Station Upgrade:
a. the Development Permit application to the Township of Esquimalt for the Macaulay Point Pump Station that was previously scheduled for Q2 of 2017 has been deferred until Q1 of 2018 to align with the procurement process for this component of the Project.

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 • Phase 1: Early Works	Obtained	Complete	HRP
Township of Esquimalt Phased Building Permits • 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			
Transport Canada Facility Alteration Permit	Q4 2017	Submitted: under review by Transport Canada	HRP

Permit / Licence	Anticipated Date	Status	Responsible Party
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 were ongoing and progressed as planned over the reporting period.

In April the CRD submitted the First Nations engagement log to Transport Canada (TC) as part of the permit approval process for the harbour crossing and outfall application, and Transport Canada's duty to consult First Nations.

Archaeological responsibilities were defined in April:

- a site specific permit was submitted by the Project's owner's engineer (Stantec) to the Archaeology Branch, in order to allow geotechnical drilling to be undertaken. A mandatory 30 day referral process to neighbouring Nations (beyond Songhees and Esquimalt Nations) was initiated. The permit was received within the reporting period.

- Millennia were retained as the Project's archaeological advisor, and were tasked with providing archaeological consulting services for the entire Project, including First Nations cultural protocol development. This involves following best practices in heritage planning, and requires the establishment of cultural and spiritual protocols with affected First Nations, in the event intact ancestral remains are disturbed. Protocols include an understanding with spiritual advisors and gravediggers as to how ancient individuals will be handled, protected and eventually respectfully re-interred according to Coast Salish traditions.

In April seven letters signed by the acting CRD Board Chair 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 and will continue efforts to follow up in July.

The Project was discussed at the June WSANEC Leadership Committee. No issues were raised during the meeting but a request was made by one of the Saanich First Nations to have Saanich archaeological monitors work alongside Esquimalt and Songhees archaeological monitors during the geotechnical investigations on Dallas Road. This was not supported by the Esquimalt and Songhees Nations, as the area is core Lekwungen territory. The CRD Aboriginal Relations team and the Ministry of Forest Lands and Natural Resource Operations with assistance from the First Nations Liaisons are working together to avoid potential conflicts and develop an archaeological monitoring protocol that is acceptable to all parties.

In April initial planning meetings were held with Esquimalt and Songhees administrators to discuss the two First Nations Project Liaison positions. The Esquimalt and Songhees Nations explored a joint approach to managing the positions and the Terms of Reference were jointly developed. Discussions were ongoing in May to finalize the job descriptions and terms of engagement for the positions; ultimately the Esquimalt and Songhees Nations determined that their preference was to have the positions operate cooperatively, but as separate and independent positions. In June the Songhees First Nations Liaison started in the role and the Esquimalt First Nations Liaison is anticipated to start in July.

2.4 Stakeholder Engagement

On April 4 the Project Board approved the Project's Communications and Engagement Plan, and the Project Team implemented the plan over reporting period. Now that the Project has transitioned to the construction phase 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 and were used over the reporting period to provide Project information to stakeholders, communities and the public and to respond to public inquiries, including: a public inquiry program, Project website updates, social media, construction notifications, community and stakeholder meetings, and door-to-door notifications.

Project Updates

Two Project updates (Appendices A and B) were developed and distributed during the reporting period:

- Project update #1 was developed to support the April Community Information Meetings (described further below) and posted to the website in April; and
- Project update #2 was developed and: posted to the Project website; mailed to 7,500 households in James Bay; and emailed to our stakeholder list in April.

Further Project updates will be issued as the Project progresses.

Construction Communications

Construction was underway over the reporting period at two main work sites: McLoughlin Point and Ogden Point. In addition, three sets of geotechnical investigations took place to gather information for the future construction of: the McLoughlin Point outfall, the Clover Forcemain on Dallas Road, and the Macaulay Point Pump Station and Forcemain in Esquimalt. Communications tools were used to keep the community aware of construction activities including: hand-delivered notices in James Bay and Esquimalt neighbourhoods, emails to stakeholders, website updates, 24-7 phone line, community meetings, and construction notices.

Information Sheets

In April Project information sheets were developed in support of the community information meetings and were posted to the Project website:

- Construction Schedule: McLoughlin Point Wastewater (Appendix C);
- Treatment Plant: Noise During Operations (Appendix D);
- Odour Control: McLoughlin Point Wastewater Treatment Plant (Appendix E);
- Ogden Point Noise Mitigation (Appendix F); and
- Clover Point Pump Station (Appendix G);

In May, as part of communicating with the community about future construction activities, the Project members went door-to-door along Niagara Street in James Bay in order to provide residents with information. The Project Team delivered 188 notices to residents with an information sheet (Appendix H) to inform them of future construction along that corridor anticipated to be undertaken in June 2018. The Project Team members spoke in-person to approximately 60 residents. Residents were also provided with the most recent Project update (#2) and were informed that the Project Team is planning an update meeting in spring 2018.

Two information sheets regarding the Esquimalt traffic management plan (Appendix I) and McLoughlin Point construction (Appendix J) were developed in June and posted to the Project website. The Team hand-delivered the two information sheets to approximately 79 residences and businesses in Esquimalt along the approved truck traffic route, as laid out in the Traffic Management Plan. These information sheets were also provided to the Department of National Defence Communications Team for distribution to residents in the area.

Construction Notices

As the Project progresses and construction increases the number of Construction Notices will increase.

Over the reporting period nine construction notices (Appendices K to S) were issued to stakeholders and uploaded onto the Project website, these were as follows:

- Ogden Point Site Preparation: May 18, 2017
- Construction Laydown Site Preparation: May 29, 2017
- McLoughlin Point: Excavation and Controlled Blasting: May 30, 2017
- Ogden Point: Casing Installation: June 7, 2017
    - The Project Team hand-delivered approximately 200 notices to residents in the Ogden Point neighbourhood notifying them of the upcoming casing installation work, as part of preparations for the HDD operation. This part of the Project is anticipated to be the noisiest part of the work at Ogden Point.
    - Notifications also included emails to stakeholders, posting of notices on the website, and attaching a sign with the construction notice to the fence at Ogden Point.
- Geotechnical Work for the McLoughlin Point Outfall: June 12, 2017
- Clover Forcemain: Geotechnical Work: June 13, 2017
- Macaulay Point Pump Station and Forcemain: Geotechnical Work: June 22, 2017
- Ogden Point: Casing Installation Update – Anticipated to Start Week of June 26: June 23, 2017
    - After the June 7 notices were delivered, the schedule for this part of the work changed and a later start date was identified. The Project Team re-notified the community of the change by hand-delivering approximately 300 notices.
    - Notifications also included emails to stakeholders, posting of notices on the website, and attaching a sign with the construction notice to the fence at Ogden Point.
- Geotechnical Work: Dallas Road and Douglas Street: June 28, 2017
    - The Project Team Team hand-delivered 70 copies of the construction notice for upcoming geotechnical work on Dallas Road and Douglas Street to nearby neighbours.

Project Website

The Project website, wastewaterproject.ca, was regularly updated throughout the reporting period. 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 (April);
- Ecole Macaulay Elementary School (April);
- James Bay Community School (April);
- Victoria West Community Association (April);
- the Esquimalt Liaison Committee was established and held its inaugural meeting during the reporting period: 13 committee members attended the meeting (May);
- Fairfield Gonzales Community Association Land Use Committee (CALUC) (May);
- President of James Bay Neighbourhood Association and City of Victoria Mayor (May);
- Esquimalt Liaison Committee (June);
- Greater Victoria School District (June); and
- MLA Carole James, Victoria-Beacon Hill (June).

The Project Team also held meetings with municipalities as follows:

- Township of Esquimalt Special Council meeting - Traffic Management Plan (May)
- City of Victoria, including the City of Victoria Technical Working Group (June)
- District of Saanich (June), including the District Saanich Technical Working Group (May);
- Township of Esquimalt (June)

In April two Community Information meetings were held; one in Victoria, and one in Esquimalt. Over 300 people attended the meetings, which were publicized widely through mailed notices to residents, email, newspaper advertisements, social media, and on the Project website. The meetings provided an opportunity for residents to learn more and have questions answered, particularly regarding the Project schedule, noise, odour and upcoming construction at Ogden Point and McLoughlin Point. 27 members of the Project Team and HRP attended the meetings and were available to answer questions.

In May, the Project Team presented an overview of the Wastewater Treatment Project at the BC Water and Waste Association Annual Conference and Trade Show held in Victoria. The presentation focused on the delivery strategy for the Project explaining the procurement approach and highlighting upcoming opportunities.

Public Inquiries

The Project's public information line (1-844-815-6132) was launched on May 1, 2017. The line provides members of the public with a number that will be answered 24 hours a day, 7 days a week, and provides a single point of contact for any Project-related inquiry.

During the reporting period the Project public email interface was established via a web email link from the following public email page: https://www.crd.bc.ca/project/wastewater-treatment-project/contact-us.

Public inquiry numbers from the aforementioned sources are noted in Table 4.

Table 4- Project Inquiries

Inquiry source	Contacts for the reporting period
Information phone line inquiries	16
Web-email inquiries	32

Key themes of the public inquiries were as follows:

- risk management and home insurance for homes and buildings which may be impacted by construction;
- concern regarding what might happen if there are leaks in the Project Conveyance System;
- environmental impacts of the Project;
- odour and noise studies and mitigation measures during both construction and operation of the Project;
- interest in Seabed Pipeline proposal;
- seismic standards for the Project and what might occur in the event of an earthquake or Tsunami;
- traffic impacts of construction;
- noise impacts of construction;
- construction and operational impacts near the McLoughlin Point Wastewater Treatment Plant;
- construction at Ogden Point;
- construction along Dallas Road;
- results of the pre-construction air quality assessment for schools in Esquimalt;
- alignment of the Residual Solids Pipes and Pump Stations and questions about Marigold Pump Station;
- Willis Point watershed and the Residuals Treatment Facility;
- plans for the Arbutus Attenuation Tank at Haro Woods;
- noise wall effectiveness and appearance at Ogden Point;
- amenities in Esquimalt and public realm improvements in Victoria;
- employment, supplier and contractor interest; and
- Project procurement processes

Media Releases

Four media releases were issued over the reporting period (attached as Appendices T to W) as follows:

- Residuals Treatment Facility Proponents Shortlisted for the Wastewater Treatment Project: April 10, 2017;
- McLoughlin Point Wastewater Treatment Plant Contract Awarded: April 5, 2017;
- RFQ released for the Macaulay Point Pump Station and Forcemain: May 24, 2017; and
- Clover Point Pump Station Proponents Shortlisted: May 25, 2017.

Communications Planning

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

The focus of construction communications to-date has been the first major component of the Project: the McLoughlin Point Wastewater Treatment Plant.

The Project Team is currently establishing a process for communications and engagement regarding construction of those components of the Wastewater Treatment Project (the Project) that will be located in the District of Saanich, being the Residuals Treatment Facility at Hartland Landfill, the Residuals Treatment Pipelines and Pump Stations and the Arbutus Attenuation Tank. Communications and engagement has not yet begun for these components of the Project as the design for these components is not as advanced as for the Wastewater Treatment Facility, and the construction of these components is not scheduled to start until 2018 or later. However, the Project Team have held meetings with staff at the District of Saanich and have established a technical working group to co-ordinate on matters as planning progresses.

The Project Team have also discussed with Saanich staff the establishment of a Liaison Committee, as has been formed in Esquimalt. It is anticipated that a Saanich Liaison Committee would be made up of members of Saanich community associations, and/or the Saanich Community Association Network. The Project Team would update the Saanich Liaison Committee as the Project moves forward and would request input into the best ways to connect with the Saanich community. The Project Team anticipates establishing a Saanich Liaison Committee by the end of this year, when it will have more information to share with Saanich community members regarding the Project components that are to be constructed in Saanich.

2.5 Resolutions from Other Governments

The Project Board received a number of resolutions over the reporting period from: the Core Area Liquid Waste Management Committee's (CALWMC) April 12th meeting; the Integrated Resource Management Advisory Committee's (IRMAC) April 12th open and closed meetings; the City of Victoria Council's May 11th meeting; and the District of Saanich's Bicycle and Pedestrian Mobility Advisory Committee's May 18, 2017 meeting. The resolutions and the Project Board's responses and/or Project Team's plans to address the resolutions are detailed below by committee/council.

2.5.1 Core Area Liquid Waste Management Committee

The Project Board received a number of resolutions from the Core Area Liquid Waste Management Committee's (CALWMC) April 12th meeting. The Project Board considered these resolutions at its May 2nd meeting and directed staff to prepare the response. The CALWMC's resolutions are in italics and the Project Board's responses follow.

> *That the Core Area Liquid Waste Management Committee recommend to the Capital Regional District Board, that the Wastewater Treatment Project Quarterly Report - Reporting Period December 25, 2016 to March 24, 2017 be received for information.*

Amendment:
That future Wastewater Treatment Project Quarterly Reports include a section 11.3 that indicates stakeholder issues and responses from the Project Board.

The Project Board agreed with this request and directed the Project Team to include in future Wastewater Treatment Project Quarterly Reports a summary of key themes and responses from correspondence received during the reporting period. This is included in Section 2.4 of this report and will be included in future quarterly reports.

That the CRD Board request that the Core Area Wastewater Treatment Project Board:

1. *Explore a Change Order with Harbour Resource Partners to ensure that enforceable performance Standards are in place upon completion of the McLoughlin Point waste-water treatment plant to ensure that odour levels do not to exceed 2 Odour Units.*

The Project Board reviewed this request in detail and discussed it at the May 2, 2017, open Project Board meeting. At the conclusion of the discussion, the Project Board voted unanimously in favour of the staff recommendation to not explore a Change Order with Harbour Resource Partners (HRP).

The guiding principle for the design of the McLoughlin Point Wastewater Treatment Plant is that there will be no detectable odour by residents. The contract with HRP specifies that:

a) All process tankage must be covered, which will result in one of the highest levels of odour capture and treatment in the industry;
b) The plant include a robust and reliable treatment strategy consisting of a two stage odour control system utilizing a bioscrubber followed by activated carbon, that is capable of treating all odorous air streams;
c) Back-up odour control equipment and back-up power generators be installed, to reduce the possibility of odour escaping the plant in the unlikely event there is an equipment or power failure; and
d) A 24 hour odour control monitoring system be installed, to ensure that odour requirements are met or exceeded.

Under normal operating conditions atmospheric odour modelling predicts that the odour at the plant's property line will be approximately two odour units. The performance standard within the contract of up to five odour units provides a margin to deal with an extraordinary event such as an equipment or power failure. The CRD will maintain the facility in accordance with an asset management plan that will mitigate the risk of any such failures.

The scope of the contract with HRP includes the design, build and finance of the McLoughlin Point Wastewater Treatment Plant. The contract is structured such that third party debt capital is at risk until HRP can demonstrate that the plant has satisfactorily achieved operational capability, including compliance with contract odour specifications. Such performance will have to be demonstrated continuously over a 90 day acceptance period for HRP (and their lenders) to receive full payment. In determining whether to put their capital at risk, third party lenders satisfied themselves that HRP's designs are capable of meeting the contract specifications; including the odour specifications.

In addition, HRP must demonstrate that the plant can meet the contract standards with respect to odour performance during a two-year performance period after achieving operational capability. If the odour specifications are not met over this two-year performance period, HRP will be obliged to upgrade the plant as required to meet the standards. HRP are therefore incentivized to design and build the plant so that it can be operated well below the performance standard.

Re-opening the contract to establish the odour performance limit at two odour units is therefore unnecessary to achieve the guiding principle (that there be no detectable odour by residents) and would also have significant impacts to both schedule and budget.

2. *Report back to the Core Area Liquid Waste Management Committee on the advisability and cost of reducing operating Noise levels when measured at the McLoughlin Point property line to 55 Decibels.*

The Project Board reviewed this request in detail and discussed it at the May 2, 2017, open Project Board meeting. At the conclusion of the discussion, the Project Board voted unanimously in favour of the staff recommendation to not explore a Change Order with Harbour Resource Partners (HRP).

The guiding principle for the design of the McLoughlin Point Wastewater Treatment Plant is that operating noise levels are within reasonable levels for all residents. The reference point is noise bylaws and agreements with the Township of Esquimalt and City of Victoria.

The contract specifies that:

a) Noise enclosures are required for equipment which generates high levels of noise, such as air blowers and generators;
b) Acoustic baffles will be installed on the intake and exhaust louvers;
c) Acoustic insulation of walls, doors and roofs as necessary to meet noise control bylaws; and
d) Noise levels at receptors must be in compliance with municipal bylaws.

The contract with HRP specifies that operational noise from the McLoughlin Point Wastewater Treatment Plant must not exceed 60 decibels at the plant's property line. Under normal operating conditions noise modelling shows that the predicted decibel levels in James Bay (the closest location to the plant site in the City of Victoria) and other surrounding areas in the City of Victoria, will not exceed 35 decibels. This is 5 decibels below the most stringent limit in the City of Victoria noise bylaw.

The noise modelling was undertaken assuming a "worst case scenario" of 60 decibels everywhere along the McLoughlin Point Wastewater Treatment Plant site's property line. However, actual noise levels from the treatment facility once operational are anticipated to be lower.

The scope of the contract with HRP includes the design, build and finance of the McLoughlin Point Wastewater Treatment Plant. The contract is structured such that third party debt capital is at risk until HRP can demonstrate that the plant has satisfactorily achieved operational capability, including compliance with contract noise specifications. Such performance will have to be demonstrated continuously over a 90 day acceptance period for HRP (and their lenders)

to receive full payment. In determining whether to put their capital at risk, third party lenders satisfied themselves that HRP's designs are capable of meeting the contract specifications.

Re-opening the contract to establish the operating noise limit at 55 decibels is therefore unnecessary to achieve reasonable levels of noise for all residents and would have significant impacts to both schedule and budget.

3. *Continue and improve consultation with James Bay, Victoria West, Fairfield and Downtown residents on mitigation of construction and long-term impacts from conveyancing infrastructure, the McLoughlin Point waste-water treatment and the Clover Point Pump Station.*

The Project Board reviewed this request in detail and discussed it at the May 2, 2017, open Project Board meeting. At the conclusion of the discussion, the Project Board voted unanimously in favour of the staff recommendation outlined below, which is in agreement with the request.

The Project Team will continue to look for ways to build relationships and expand their communications tools in order to provide timely information about construction planning and to hear questions and concerns. As the Project moves into the construction phase, we expect the level of engagement will increase as the Project Team will have more information to share with potentially impacted communities. The Project Team's communications will follow the linear nature of the construction of the Project, which starts in Esquimalt and James Bay, moves into Fairfield Gonzales in the fall of 2017 and to Saanich in 2018. For each phase of the Project, the Project Team will communicate with communities to provide information and hear questions and concerns. The Project Team will continue to use all the communication tools described in the Project's Communications and Engagement plan, which include a 24/7 phone line, web updates, residential mail updates, email updates, construction bulletins, community liaison meetings, community information meetings, and where appropriate, door-to-door visits.

4. *Closely monitor geotechnical issues along the Dallas Road waterfront and advise the Core Area Liquid Waste Management Committee of any issues that arise and solutions.*

The Project Board reviewed this request in detail and discussed it at the May 2, 2017, open Project Board meeting. At the conclusion of the discussion, the Project Board voted unanimously in favour of the staff recommendation outlined below, which is in agreement with the request.

In addition, and subsequent to the CALWMC's April 12th meeting, the City of Victoria passed a related resolution on May 11th as follows:

> *Put in place risk mitigation measures to protect the Dallas Road Bluffs during construction including but not limited to:*
>
> a. *Assembling an interdisciplinary team to study and address the protection of the bluffs.*
>
> b. *As part of the detailed design of the conveyancing, include a plan for the preservation of the bluffs.*

And that the Project Board report out to the public at one of their regular community meetings, to the JBNA and to Victoria City Council on the measures outlined.

The following response captures the direction of the Project Board to resolution 4 from the CALWMC's April 12th meeting and elaborates on the Project Team's plans in order to address the related resolution from the City of Victoria's May 11th meeting.

Geotechnical investigations and monitoring will take place along Dallas Road with an enhanced focus on the shoreline and bluffs prior to, during and after the construction of the Clover Point Forcemain and related pipework. The geotechnical investigations will include a series of test holes drilled along the pipe alignment to establish existing geological conditions and to collect samples for laboratory testing and use in establishing geotechnical design parameters for the pipe and bluff stability analysis. The geotechnical monitoring will include the installation of instruments near the bluffs and along the pipe alignment. Recordings from these instruments will be used to monitor conditions during the construction and post construction phase of the project.

The design process for the conveyance system from Ogden Point to Clover Point (the Clover Point Forcemain) has begun. It includes the development of an indicative design and a final design. Stantec, as the owner's engineer, will undertake the indicative design. Another qualified engineering firm (which we will call the 'Second Engineering Firm') will review the indicative design and prepare the final design. Both firms will have input into the undertaking of, and access to the outcome of, geotechnical investigations and monitoring outlined above.

Specifically, the Project Team will competitively-procure the Second Engineering Firm to review the indicative design and prepare the final design. This firm will have expertise in the fields of geotechnical, terrain analysis, environmental and civil engineering. The firm will be provided with the indicative design and the results of the geotechnical investigations undertaken to-date, and will be responsible for reviewing that work as part of developing the final design. They will also be responsible for fulfilling the duties of Engineer of Record as defined by the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC). Professional members of the firm and their qualifications will be noted as part of their work.

As part of their scope of work, the Second Engineering Firm will prepare a plan to mitigate any impacts on the bluffs during construction. As noted, this plan will include post construction monitoring for 12 months following completion of construction.

Reports detailing the results of the geotechnical investigations and the indicative alignment will be complete in the fall of 2017. The Project Team will report on these to the public at one of their regular community information meetings, to the James Bay Neighbourhood Association and to Victoria City Council. Results will also be posted on the Project website.

5. *Explore a Green Shores certification for the Clover Point Pump Station*

The Project Board reviewed this request and discussed it at the May 2, 2017, open Project Board meeting. At the conclusion of the discussion, the Project Board voted unanimously in favour of the staff recommendation outlined below, which is in agreement with the request.

The Project Team will review the Green Shores certification process and determine whether the certification might be appropriate for the Clover Point Pump Station, and identify any impacts to cost and schedule of pursuing the certification.

2.5.2 Integrated Resource Management Advisory Committee (IRMAC)

The Project Board received resolutions from IRMAC's April 12th Open meeting. The Project Board considered these resolutions at its May 2nd meeting. The IRMAC's resolutions are in italics and the Project Board's response, as discussed at its May 2nd meeting follow.

1. *That the Integrated Resource Management Work Plan as amended be submitted to the Minister of Environment by May 31, 2017; and*

2. *That this report [staff report entitled 'Advanced Integrated Resource Management – Next Steps'] be forwarded to the Core Area Liquid Waste Management Committee, the Saanich Peninsula Wastewater Commission and the Core Area Wastewater Treatment Project Board for information.*

The Project Board received this report for information and noted that it is anticipated that biosolids will start to be produced by the Residuals Treatment Facility from the spring-summer of 2020 rather than from January 2021 as noted in the CRD staff report to the IRMAC entitled 'Advanced Integrated Resource Management – Next Steps'.

The Project Board also received a number of resolutions from the Integrated Resource Management Advisory Committee's (IRMAC) April 12th closed meeting. The Project Board considered these resolutions at its May 2nd meeting. The IRMAC's resolutions and the Project Board's responses, as discussed at its May 2nd meeting, were sent to the IRMAC in a letter from Bob Lapham on behalf of the Project Board, dated May 5, 2017 and attached as Appendix X.

2.5.3 City of Victoria

The Project Board received a resolution from the City of Victoria's May 11th Council meeting. The Council's resolution is in italics.

That Victoria Council request that the Project Board put in place risk mitigation measures to protect the Dallas Road Bluffs during construction including but not limited to:

a. *Assembling an interdisciplinary team to study and address the protection of the bluffs.*
b. *As part of the detailed design of the conveyancing, include a plan for the preservation of the bluffs.*

That the Victoria City Council request the Project Board to report out to the public at one of their regular community meetings, to the JBNA and to Victoria City Council on the measures.

The Project Team's plans to address this resolution were covered in section 2.5.1 of this report, as this resolution was related to a resolution received from the Core Area Liquid Waste Management Committee's April 12th meeting.

2.5.4 District of Saanich

Mayor Richard Atwell sent a letter dated June 2, 2017 to the Chair of the Project Board that included a motion passed by the District of Saanich's Bicycle and Pedestrian Mobility Advisory

Committee at its May 18, 2017 meeting. The letter is attached as Appendix Y and the Committee's May 18 motion is in italics below.

> *That the Bicycle and Pedestrian Mobility Advisory Committee write to the CRD Wastewater Treatment Project Board to inquire about the proposed sewer pipeline conveyance route as it travels through Saanich, and the proposed consultation timeline for this project.*

The Project Board considered the resolution motion at its July 4th meeting, and the Project Board's response, as discussed at its July 4th meeting, were sent to Mayor Atwell in a letter from the Chair of the Project Board (Jane Bird), dated July 18, 2017 and attached as Appendix Z.

2.6 Schedule

The Project progressed as planned over the reporting period.

In March the procurement phase of the WWTP Project Component was completed and the WWTP subsequently moved into the construction phase. The construction phase progressed generally in accordance with HRP's schedule - note that while the casing installation work at Ogden Point started two weeks later than was initially scheduled (starting on June 29th rather than during the week of June 12th), this is not anticipated to have an impact on the HRP's overall schedule.

The RTF Project Component procurement phase progressed as planned over the reporting period, with the progression from the RFQ stage to the RFP stage. The RFP is progressing as planned, with technical submissions due in September 2017 and financial submissions due in October 2017.

The Conveyance System Project Component procurement phase progressed as planned over the reporting period.

The two design-build Conveyance System contracts entered the procurement phase over the reporting period:

- The RFP for the Clover Point Pump Station was issued on May 22, 2017 and is scheduled to close on August 2, 2017; and
- The RFQ for the Macaulay Point Pump Station and Forcemain was issued on May 24, 2017 and is scheduled to close on July 5, 2017.

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. For each of the design-bid-build contracts the Project Team will procure design consultant services (including the "Engineer of Record" role). Planning for the procurement of these services progressed for each of the Arbutus Attenuation Tank, Clover Point Forcemain and the Residual Solids Conveyance Line.

Given the early execution stage of the Project a number of Project planning related activities were ongoing over the reporting period. Key amongst these were detailed schedule integration activities including:

- further development of the Work Breakdown Structure ("WBS"), to facilitate earned value management;

- on-going review of HRP's baseline schedule for alignment and incorporation into the Project's detailed 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 undertaken within the next quarter.

Figure 1 shows the high-level Project schedule. This schedule is unchanged from the April and May monthly reports and 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 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 appropriate 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

- review of various HRP environmental plans;
- review of HRP permit applications prior to submission to regulators;

First Nations

- appointment of Esquimalt First Nations Liaison position;
- continue attempts to engage Pauquachin Nation;

Stakeholder Engagement

- distribution of Project update #3;

Cost Management and Forecast

- cost loading of Project schedule;

Construction

Ogden Point

- complete Harbour Crossing casing installation;
- commence drilling HDD pilot hole (375mm diameter);

McLoughlin Point

- mobilize equipment and construct McLoughlin Point workspace;
- installation of temporary dewatering and water treatment system;
- installation of gate;

- connection of temporary power;
- commence blasting and detailed excavation;
- remove fill behind existing retaining wall and demolition of retaining wall;
- preparation of Area A Laydown area;
- establish trailer complex in Area A;
- preparation of Area E Parking Lot;
- hydrocarbon contaminated soils removal and disposal;

Engineering

- McLoughlin WWTP 30% Design Review Workshop;
- Project Team review of and response to 30% Design comments;

Procurement

- commencement of RFP process for Clover Forcemain design consultant services;
- commencement of RFP process for Residual Solids Conveyance Line design consultant services; and
- close RFQ for Macaulay Point Pump Station and Forcemain.

Key activities and milestones for the next 60 days are:

Environment and Regulatory Management

- Millennia expects to receive a Heritage Inspection Permit to allow for the field portion of the Archaeological Impact Assessment work to proceed;
- Stantec expects to receive a Road Allowance Construction Permit from the Township of Esquimalt and a Borehole Permit from the District of Saanich for geotechnical investigations along the proposed route of the residual solids conveyance line;
- HRP is expecting to receive 'Notice from a Director' that construction of the McLoughlin facility may proceed.

Construction

- continue drilling of HDD pilot hole (expected to reach McLoughlin Point by end of September, in accordance with the schedule);
- blasting and excavation at McLoughlin site throughout August (estimated completion date mid-September);
- trailer complex setup including office, crew and sanitary facilities (estimated move-in to site in September);
- hydrocarbon contaminated soils removal and disposal;

Engineering

- commencement of WWTP 50% design;

Procurement

- closure of the RFP for Clover Point Pump Station; and
- selection of short-list to participate in the Macaulay Point Pump Station and Forcemain RFP.

2.7 Cost Management and Forecast

The monthly cost report for June and quarterly cost report are shown in Appendices AA and BB. 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 Cost and Finance System Set up

The allocation of the Project's Control Budget, and associated implementation of the Prolog Project cost management software system was ongoing over the reporting period.

The WBS structure and WBS dictionary were approved in May. The approved WBS was created in Prolog and SAP and the transfer of costs was initiated. The historical WBS was closed for posting and the new WBS codes were distributed for use.

In May the allocation formulas were defined in Prolog to enable reporting on the Project on the three major Project Components.

In June the allocation set up was completed and tested and HRP's financial model was reviewed and the workflow for draft invoicing was prepared.

2.7.2 Colwood Reserve Fund

The September 7, 2016 final report of the Project Board with respect to its recommendation for the Project (the "Final Report") included a commitment to advance studies for a wastewater treatment proposal in Colwood. The business case attached as Appendix 1 (the "Business Case") to the Final Report established the Project's control budget (the "Control Budget") and included a provision for these studies.

Colwood Council, at their meeting on November 14, 2016, voted unanimously to request that the Project Board postpone conducting the studies for a wastewater treatment proposal in Colwood until the McLouglin Point Wastewater Treatment Plant is within an estimated five years of capacity, and agred to ask that the funds to carry out the study be set aside in a reserve fund.

The Project Board discussed the request at their December 15, 2016 meeting and directed the Project Team to establish a reserve fund. Accordingly, $2,000,000 of the Control Budget has been fully committed for the Colwood Reserves (meaning that these funds cannot be used for other matters), and once the Project is completed these funds will be converted to a reserve.

2.7.3 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.

2.7.4 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.

Risks reduced to a 'low' risk level over this reporting period will continued to be managed by the Project Team, however they will not be shown in subsequent reports.

Risk Level Key

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

Table 5- Project Active Risks Summary

Risk No.	Risk	Risk Status	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	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
3	Project Team Start up: development and implementation of systems, plans and processes	The roll-out of the PMO systems and the development of the Project Management Plan and key subsidiary plans was ongoing over the reporting period.	The majority of the Project Team management positions were recruited by the end of the reporting period and project chartering and delivery workshops were held. The development of Project management plans and supporting systems implementation remained ongoing over the reporting period.	L	Risk level reduced
4	Project Team Start up: Hiring of staff	The hiring of key staff remained a priority with a number of senior staff operating in interim capacities across a number of functional and project management roles.	Hiring of project office staff continued over the period, with the Project Team FTEs increasing to 22. Two Project Team leadership roles were filled in late June (Conveyance and WWTP project managers)	L	Risk level reduced

Risk No.	Risk	Risk Status	Risk mitigation activities undertaken or planned in the reporting period	Assessed risk level	Trend in risk level from previous reporting period
6	Divergent interests between multiple parties and governance bodies whose co-operation is required to successfully deliver the Project	As detailed in section 2.5 a number of local government authorities and management committees met over the period and passed resolutions.	The Project Board considered and responded to resolutions from other governments. The Project Team hosted technical working group meetings with Saanich and Victoria.	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 two community information meetings were held in the period, as well as updates to the website and responses to the phone line and e-mail inquiries.	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
18	Provincial or Federal government/agency permit requirements not met	Provincial or Federal permit conditions are not met by Project 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 Project Contractors. The Project Team will meet with Federal and Provincial agencies to fully understand requirements.	M	No change

2.9 Status (Engineering, Procurement and Construction)

2.9.1 WWTP

The WWTP moved into the construction phase in the reporting period. The construction progressed in line with the schedule with HRP furthering design and mobilizing materials and equipment (Figure 4) and preparing construction sites (Figures 2, 3 and 5). In May the majority of work on the WWTP Project Component consisted of preparation for the harbour crossing at Ogden Point and Figures 2 to 5 show examples of progress made. In June work was completed on the DND temporary works yard (see Figure 6) and material was relocated from the old works yard. Marine geotechnical investigations were completed for the marine outfall (see Figure 7) and pre-construction structure and road surveys were completed.

At Ogden Point preparation work for the Harbour Crossing was ongoing with the demolition of the angler's hut (see Figure 8) and the delivery and set-up of a temporary angler's hut (see Figure 3), erection of the noise wall (see Figure 9) and installation of the HDD casing (see Figure 10). Pre-construction structure surveys were also completed for neighbouring homes.

Design also progressed as planned with the completion and submission of the 30% design package.

Figure 2- Negative air pressure asbestos enclosure

Figure 3- Temporary Angler's Hut delivered and set up

Figure 4- Mobilization of equipment and drill components

Figure 5- Temporary fencing installed

Figure 6- DND temporary works yard

Figure 7- Marine geotechnical investigation for outfall

Figure 8- Demolition of angler's hut

Figure 9- Sound wall with overlay

Figure 10- Installing hammer die in HDD casing

2.9.2 RTF

The RTF Project Component has been in the procurement phase throughout the reporting period and has progressed as planned. During the quarter a proponent kick off meeting was held, two addendums were released, two rounds of collaborative meetings were held and enquiries from proponents were responded to.

2.9.3 Conveyance System

Throughout the quarter the Conveyance System Project Component has been in the engineering and procurement phase.

The two design-build Conveyance System contracts entered the procurement phase over the reporting period:

- the RFP for the Clover Point Pump Station was issued on May 22, 2017 and is scheduled to close on August 2, 2017. Collaborative meetings were held with each proponent and an addendum issued; and
- the RFQ for the Macaulay Point Pump Station and Forcemain was issued on May 24, 2017 and is scheduled to close on July 5, 2017.

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

Appendix A: Project Update #1

Wastewater Treatment Project
Treated for a cleaner future

Project Update #1
April 2017

Wastewater Treatment Project Overview

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.

With funding, approvals and permitting in place, Wastewater Treatment Project construction will begin this spring to meet the end of 2020 delivery deadline, comply with the law and meet our commitments to senior governments. The Wastewater Treatment Project consists of three main elements:

McLoughlin Point Wastewater Treatment Plant

Located at McLoughlin Point in Esquimalt, the treatment plant will provide tertiary treatment to the core area's wastewater.

Residuals Treatment Facility

Residual solids from the wastewater treatment plant will be piped to a Residual Treatment Facility Hartland Landfill, where they will be turned into what are known as "Class A" biosolids. These biosolids are a high quality by-product treated such that it is safe for further use.

PROJECT FUNDING

The Wastewater Treatment Project costs $765 million and is being funded by:

Government of Canada

- Up to $120 million through the Building Canada Fund for the McLoughlin Point Wastewater Treatment Plant
- Up to $50 million through the Green Infrastructure Fund for the conveyance system
- Up to $41 million from P3 Canada for the Residuals Treatment Facility

Government of British Columbia

- Up to $248 million for the three components of the project

The Capital Regional District

- Remaining $306 million for the three project components; responsible for any additional costs

Conveyance System

The conveyance system refers to the 'pumps and pipes' of the Wastewater Treatment Project. This system will carry wastewater from across the core area to the treatment plant, and residual solids to the Residuals Treatment Facility at Hartland Landfill.

Artist rendering

Wastewater Treatment Project
Treated for a cleaner future

Project Update #1
April 2017

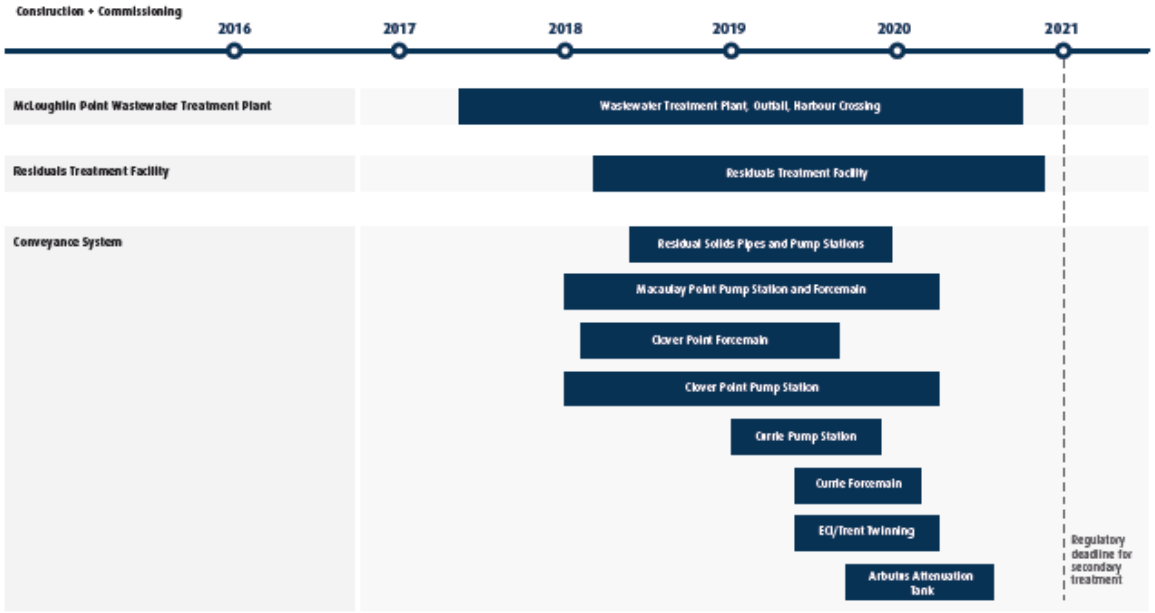
How We Got Here

The approved McLoughlin Point Wastewater Treatment Plant design is significantly revised from earlier plans to respond to the interests of the surrounding community:

- It is further set back from the shoreline
- It has extensive landscaping and a multi-level green roof irrigated with treated water
- Refinements to the exterior of the wastewater treatment plant and landscaping address the Design Review Committee and other input as part of the development permit process
- The plant will go beyond secondary treatment and include tertiary treatment, providing even better protection of the marine environment
- Odour control systems will reduce odour emissions to a level not detectable by residents

Wastewater Treatment Project Schedule*

The Wastewater Treatment Project will be constructed through nine separate contracts, and construction will be staged to the end of 2020. Communications and engagement activities will take place in advance of project construction beginning in each area.



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

Wastewater Treatment Project
Treated for a cleaner future

Project Update #1
April 2017

Odour Control: McLoughlin Point Wastewater Treatment Plant

The McLoughlin Point Wastewater Treatment Plant has been designed so there will be no detectable odour by residents. Modelling shows odour will be approximately 2 OU at the plant's property line.

The plant will have one of the highest levels of odour capture and treatment in the industry:

- All treatment processing tanks are covered
- All air is captured and treated

A 24-hour odour control monitoring system will ensure requirements are met or exceeded. Back-up odour control equipment and back-up power generators will be installed, reducing the possibility of odour escaping the facility if there is an equipment failure.

There will be detailed procedures for responding to odour issues, in the unlikely event that one occurs. The public will be able to call a CRD phone line and report any odour issues 24 hours a day, once the plant is in operation.

What is an Odour Unit (OU)?

- An odour unit is a standard measure used to describe the amount of odour present in one cubic metre of neutral air.
- Odour is not discernible at 5 OU or less.
- A typical residential neighbourhood has a background odour of 7 to 20 OU which may include:
  - Grass
  - Mulch
  - Plants
  - Marine environment

Noise During Operations: McLoughlin Point Wastewater Treatment Plant

Per the Township of Esquimalt's Zoning Bylaw, operational noise from the McLoughlin Point Wastewater Treatment Plant will not exceed 60 decibels (dBA) at the plant's property line. This means predicted noise levels in James Bay, the closest location to the treatment plant in Victoria, will not exceed 35 dBA. This is 5 dBA below the most stringent limit in the City of Victoria's noise bylaw.

The Wastewater Treatment Project Team will engage with residents through construction to ensure that the community is fully informed on the progress of the Project.

THE COMMUNICATIONS AND ENGAGEMENT PROGRAM INCLUDES:

- Regular project updates
- Outreach: community associations, businesses, schools, day cares, recreational groups, transportation providers, tourism groups and other organizations
- Community/neighbourhood/stakeholder meetings
- Communications tools include: website, project information phone line, email, social media, community updates, construction notifications, traffic media updates, door-to-door advisories (where appropriate)

HOW TO CONTACT THE PROJECT:

Website:
wastewaterproject.ca

Email:
wastewater@crd.bc.ca

Phone:
Available May 1, 2017

Wastewater Treatment Project
Treated for a cleaner future

Project Update #1
April 2017

Construction is beginning this spring on the McLoughlin Point Wastewater Treatment Plant in Esquimalt and the cross-harbour undersea pipe between McLoughlin Point and Ogden Point. Construction will take place at Ogden Point to drill the undersea pipe; this will take just over a year to complete. Construction and commissioning of the Wastewater Treatment Plant at McLoughlin Point will take place from spring 2017 to fall 2020.

OGDEN POINT CONSTRUCTION ACTIVITIES: ANTICIPATED APRIL 2017 – JUNE 2018*

APRIL TO MAY 2017

Remove Anglers Hut

Set up work site

- Bring equipment and materials to the site; on average five trucks per day
- Build noise wall

JUNE 2017

Install casing

- Involves approximately two weeks of pile driving
- On average five trucks per day

JUNE 2017 TO JUNE 2018

Conduct horizontal directional drilling

- Involves equipment and generators for drilling operations
- On average five trucks per day

JUNE 2018

Assemble pipe on Niagara Street

- Deliver pipe segments
- Weld pipe together

Pull pipe through directional drill passage (24 hours per day for approximately four days)

MCLOUGHLIN POINT CONSTRUCTION ACTIVITIES: ANTICIPATED APRIL 2017 – FALL 2020*

APRIL/MAY 2017

Set up construction laydown area

- Heavy equipment and personnel preparing the site

MAY 2017 TO AUG 2017

Site preparation (excavation/blasting)

- On average 30 trucks per day hauling excavated material
- Blasting activities will be periodically scheduled and communicated to immediate neighbours; blasting schedule will be posted to project website weekly

JUNE 2017 TO JUNE 2018

Conduct horizontal directional drilling

- On average five trucks per day

AUG 2017 TO FALL 2018

Pouring concrete

- On average 15 trucks per day with more for large pours

SPRING 2018 TO FALL 2019

Plant construction

- On average 10 trucks per day

FALL 2019 TO FALL 2020

Plant commissioning

** Construction schedules subject to updates based on construction operations. Project to provide regular updates on anticipated dates.*

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**.

Appendix B: Project Update #2

Wastewater Treatment Project
Treated for a cleaner future

Project Update #2
April 2017

Welcome to the Wastewater Treatment Project Newsletter

This newsletter will give you an overview of the Capital Regional District's Wastewater Treatment Project, and let you know how you can stay informed or contact the Project. There is also lots of information on our website: **wastewaterproject.ca**

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 is approved and now entering the construction phase. The first phase of work will begin in May 2017 on the McLoughlin Point Wastewater Treatment Plant and the cross-harbour undersea pipe between Ogden Point and McLoughlin Point.

The Project consists of three main elements:

McLoughlin Point Wastewater Treatment Plant

Located at McLoughlin Point in Esquimalt, the treatment plant will provide tertiary treatment to the core area's wastewater.

Residuals Treatment Facility

Residual solids from the wastewater treatment plant will be piped to a Residual Treatment Facility Hartland Landfill, where they will be turned into what are known as "Class A" biosolids. These biosolids are a high quality by-product treated such that it is safe for further use.

Conveyance System

The conveyance system refers to the 'pumps and pipes' of the Wastewater Treatment Project. This system will carry wastewater from across the core area to the treatment plant, and residual solids to the Residuals Treatment Facility at Hartland Landfill.

The Wastewater Treatment Project costs $765 million and is being funded by the Government of Canada, Government of British Columbia and Capital Regional District.

1 CRD WASTEWATER TREATMENT PROJECT | PROJECT UPDATE #2 — APRIL 2017 *Artist rendering*

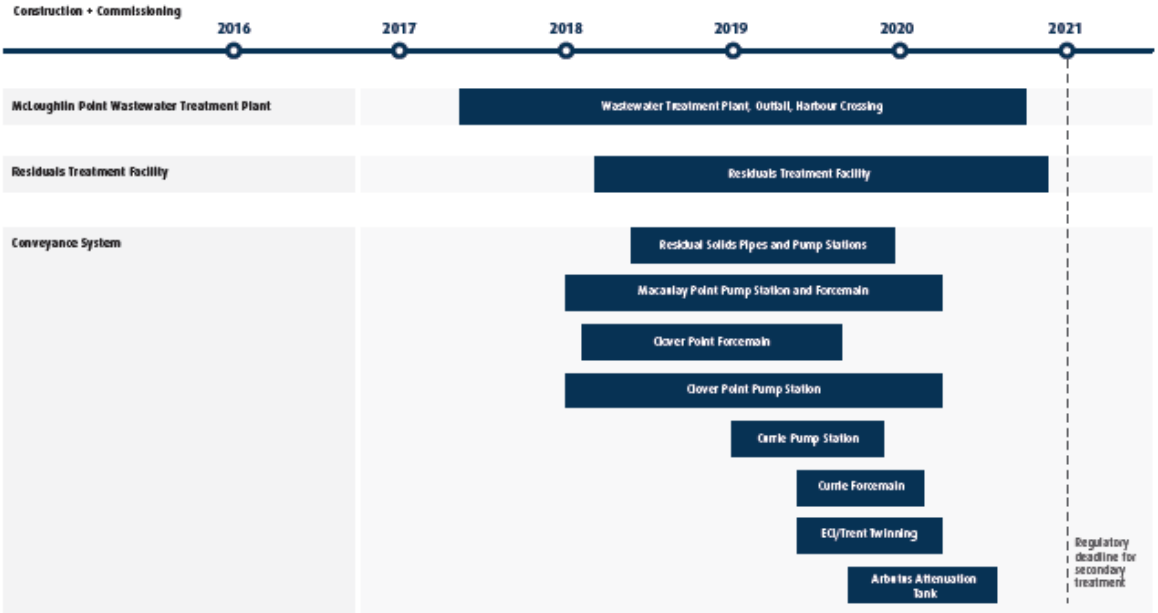
Wastewater Treatment Project
Treated for a cleaner future

Project Update #2
April 2017

Wastewater Treatment Project Components and Schedule

This summary will give you a high-level view of what's happening and when. The Wastewater Treatment Project will be constructed through nine separate contracts, and construction will be staged to the end of 2020. Communications and engagement activities will take place in advance of project construction beginning in each area.

Wastewater Treatment Project Schedule*



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

Wastewater Treatment Project
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Wastewater Treatment Project
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Project Update #2
April 2017

Construction is beginning this spring on the McLoughlin Point Wastewater Treatment Plant in Esquimalt and the cross-harbour undersea pipe between McLoughlin Point and Ogden Point. Construction will take place at Ogden Point to drill the undersea pipe; this will take just over a year to complete. Construction and commissioning of the Wastewater Treatment Plant at McLoughlin Point will take place from April 2017 to fall 2020.

OGDEN POINT CONSTRUCTION ACTIVITIES: ANTICIPATED APRIL 2017 – JUNE 2018*

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Install casing

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Conduct horizontal directional drilling

- Involves equipment and generators for drilling operations
- On average five trucks per day

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Assemble pipe on Niagara Street

- Deliver pipe segments
- Weld pipe together

Pull pipe through directional drill passage (24 hours per day for approximately four days)

MCLOUGHLIN POINT CONSTRUCTION ACTIVITIES: ANTICIPATED APRIL 2017 – FALL 2020*

APRIL/MAY 2017

Set up construction laydown area

- Heavy equipment and personnel preparing the site

MAY 2017 TO AUG 2017

Site preparation (excavation/blasting)

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- Blasting activities will be periodically scheduled and communicated to immediate neighbours; blasting schedule will be posted to project website weekly

JUNE 2017 TO JUNE 2018

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SPRING 2018 TO FALL 2019

Plant construction

- On average 10 trucks per day

FALL 2019 TO FALL 2020

Plant commissioning

** Construction schedules subject to updates based on construction operations. Project to provide regular updates on anticipated dates.*

Wastewater Treatment Project
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Project Update #2
April 2017

Frequently Asked Questions about the Wastewater Treatment Project

Here are some questions we've heard from the community, and the answers. For more questions and answers, please check our "Community Questions" section on the Wastewater Treatment Project Website: **wastewaterproject.ca**

NOISE

How loud will the noise be coming from the plant during operation and how will it impact Victoria?

As per the Township of Esquimalt's Zoning Bylaw, the operational noise level will not exceed 60 decibels (dBA) measured at the plant's property line. Predicted noise levels in James Bay, the closest location to the treatment plant in Victoria, will not exceed 35 dBA. This is 5 dBA below the most stringent limit in the City of Victoria's noise bylaw.

How noisy will the construction be at Ogden Point. What are you doing to reduce it?

Construction at Ogden Point will take place over about a year, beginning in May 2017. We are building a 5-metre high noise wall around the Ogden Point work site. It will be in place before construction begins. This will reduce construction noise below the City of Victoria construction noise bylaw level.

In June there will be approximately two weeks of pile driving. After that, while there will be noise from generators and other equipment, noise levels will be reduced considerably, and we do not anticipate any vibration.

In addition to the noise wall, we're working with the contractor to consider other noise mitigation measures to further reduce noise at the work site. We have engaged noise consultants and they will be monitoring noise levels during construction.

ODOUR

Will I be able to smell anything from the McLoughlin Point Wastewater Treatment Plant when it is up and running?

No – there will be no detectable odour in the surrounding community. The plant includes state-of-the-art odour control and a 24-hour odour control monitoring system.

OGDEN POINT/DALLAS ROAD CONSTRUCTION

When will construction along Dallas Road start? When will you give us more information about this construction?

The Wastewater Treatment Project is being constructed in phases. The first phase, construction of the McLoughlin Point Wastewater Treatment Plant and cross-harbour undersea pipe from Ogden Point to McLoughlin Point, will begin this spring. The construction sites will be confined to the Ogden Point area (near the existing James Bay boat launch – which will remain available) and to McLoughlin Point in Esquimalt.

Construction of the pipe from Ogden Point to Clover Point (the Clover Point Forcemain), will begin in early 2018. The Project Team is conducting field investigations which include geotechnical, environmental, archeological, civil and topographic surveys, to inform the final design and alignment of the pipe.

The 50% design of the pipe will be complete in the fall of 2017. At that time, the Project Team will present the alignment of the pipe, as well as the alignment of the cycle track, which will be built above it, to City Council at a public meeting and to the James Bay Neighbourhood Association and Fairfield Gonzales Community Association in a separate presentation.

Wastewater Treatment Project
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Project Update #2
April 2017

Will construction on the pipe from Ogden Point to Clover Point (the Clover Point Forcemain) impact the bluffs along Dallas Road?

The proposed alignment of the pipe from Ogden Point to Clover Point (the Clover Point Forcemain) was developed in collaboration with City of Victoria planning staff and considered the bluffs, location of mature trees, sensitive vegetation, potential erosion, and traffic impacts. The Project Team will be conducting geotechnical, environmental, and archeological assessments, including civil and topographic surveys, to inform the final design and alignment of the pipe.

What are the traffic impacts to Dallas Road and Niagara Street due to the construction of the under harbour pipe at Ogden Point?

Ogden Point construction is anticipated to take just over a year to complete: from late April 2017 to July 2018. The majority of this work will take place within the fenced work site at the boat launch site next to Ogden Point. Site set up will start in May and is expected to take just over a month. This involves bringing equipment and materials to the site, which will result in about five truck trips per day.

After that, the traffic impacts will be limited, and mainly associated with construction workers getting to and from the site. There will be approximately five two-way truck trips daily to remove material from the site. The traffic impacts to Dallas Road and Niagara Street associated with assembling the under harbour pipe are expected to occur during the final month of the work, which is anticipated to be June 2018.

WHAT WILL HAPPEN ON NIAGARA STREET?

Many people have inquired about construction impacts for residents and businesses on Niagara Street. Niagara Street will be used to assemble the pipe that will be pulled through the drill passage between Ogden Point and McLoughlin Point. This work is expected to take place in June 2018 and it will take about a month to complete.

- Assembling the pipe involves delivery of the pipe segments, and welding the pipe together. **There is no digging required on Niagara Street.**
- A portion of Niagara Street will be temporarily closed to general traffic for about a month while the pipe is assembled. We will do everything possible to ensure local traffic has continued access. Residents will have pedestrian access to their homes at all times.
- The Project Team will coordinate with emergency services and there will be a first responder emergency services access plan in place. Emergency services will have access to all homes at all times.

As there have been many questions about this section of the work, we will be coming door-to-door on Niagara Street in the coming weeks to ensure that residents have the opportunity to get the correct information and ask questions.

Wastewater Treatment Project
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Project Update #2
April 2017

Staying Up-to-Date on the Wastewater Treatment Project

The Project team is working to ensure residents know what work is planned, when it's expected to begin and end, how the construction activity may impact communities, and what we have planned to mitigate those impacts.

THANKS FOR COMING!

Thank you to the over 300 people who attended our two Community Information Meetings on April 5 (at the Grand Pacific Hotel) and April 12 (at the Royal Canadian Legion, Esquimalt Branch). If you weren't able to make it, meeting information can be found at: wastewaterproject.ca.

What is the Project doing to get the word out?

Since January the Project Team has held five community information open houses, six meetings with residents' associations (four with James Bay Neighbourhood Association, one with the Fairfield Gonzales Community Association and one with Victoria West Community Association), and met with Macaulay Elementary School and James Bay Community School. We are also creating an Esquimalt Liaison Committee and will be planning further community meetings as we move into other phases of the Project.

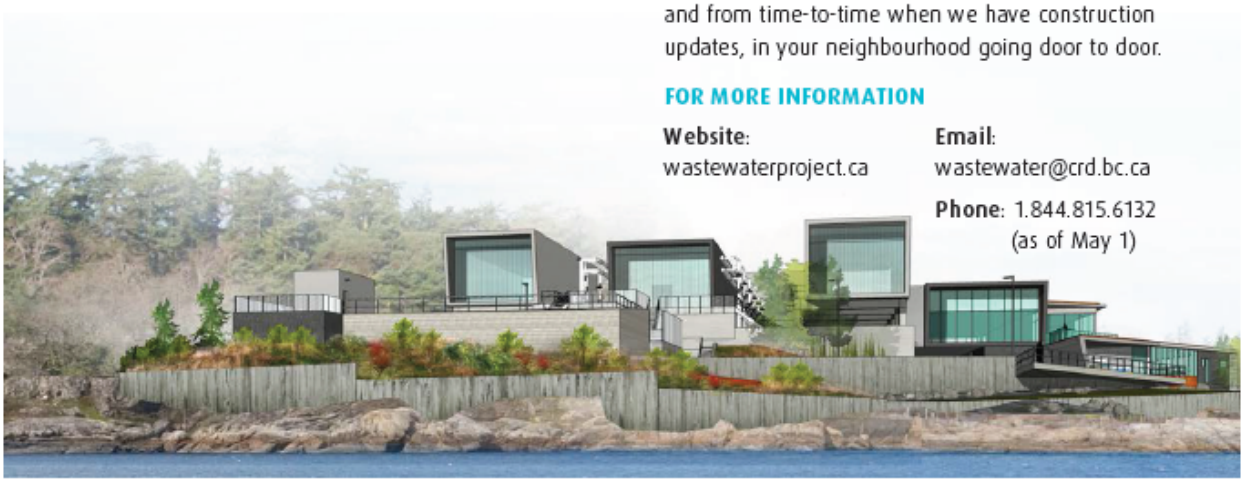
We've also created a new Project website where you can find everything you need to know about the project and a project information line that you can call to get information or to report a concern. You'll also find us on social media, email (if you sign up at a meeting or on the website to receive updates), and from time-to-time when we have construction updates, in your neighbourhood going door to door.

FOR MORE INFORMATION

Website: wastewaterproject.ca

Email: wastewater@crd.bc.ca

Phone: 1.844.815.6132 (as of May 1)



For More Information

Website: wastewaterproject.ca
Email: wastewater@crd.bc.ca
Project Information Line: 1.844.815.6132 *(as of May 1)*

Appendix C: April Information Sheet- Wastewater Treatment Project Schedule

Wastewater Treatment Project
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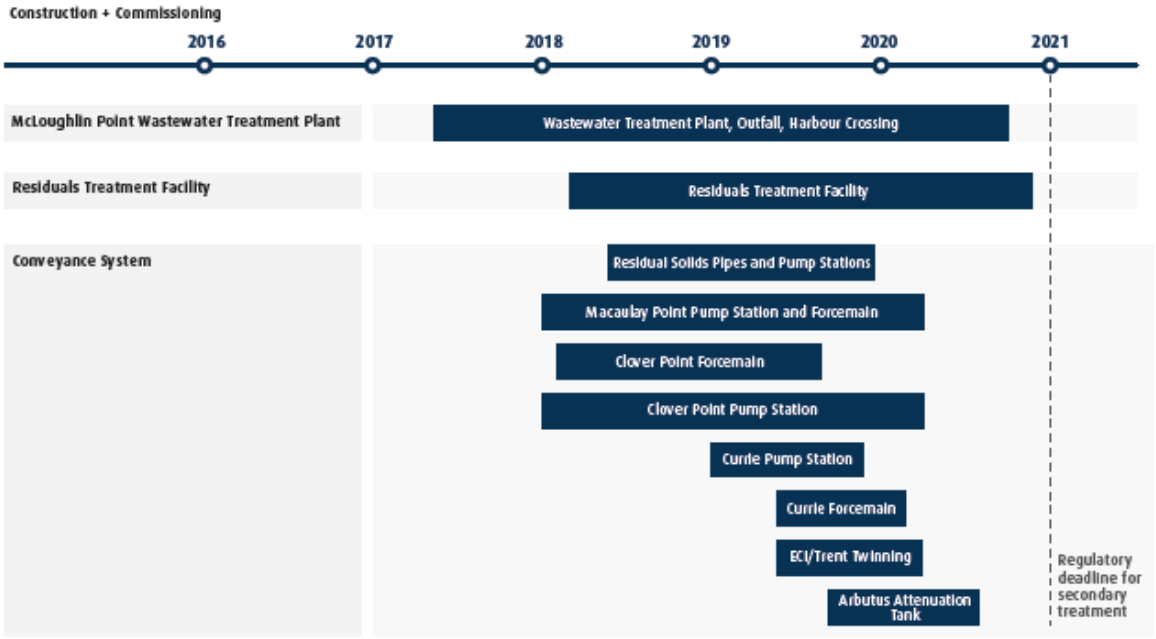
Information Sheet

Wastewater Treatment Project Schedule*

The Wastewater Treatment Project will be constructed through nine separate contracts, and construction will be staged to the end of 2020. Communications and engagement activities will take place in advance of project construction beginning in each area.



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

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 Wastewater Treatment Project will be complete 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 treatment plant, and residual solids to the Residuals Treatment Facility.

Appendix D: April Information Sheet- Treatment Plant: Noise During Operations

Wastewater Treatment Project
Treated for a cleaner future

Information Sheet

McLoughlin Point Wastewater Treatment Plant: Noise During Operations

Per the Township of Esquimalt's Zoning Bylaw, operational noise from the McLoughlin Point Wastewater Treatment Plant will not exceed 60 decibels (dBA) at the plant's property line. This means predicted noise levels in James Bay, the closest location to the treatment plant in Victoria, will not exceed 35 dBA. This is 5 dBA below the most stringent limit in the City of Victoria's noise bylaw.

Noise Levels for Common Sounds/Environments

NOISE / ENVIRONMENT	APPROXIMATE SOUND LEVEL (dBA)
Threshold of hearing	0
Just audible	10
Nighttime background noise, urban residential area	35
City of Victoria Noise Bylaw – most stringent limit	40
Township of Esquimalt Zoning Bylaw	60
Busy office	60
On sidewalk by passing car	70
On sidewalk by passing bus	80

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.

(Continued on next page)

Wastewater Treatment Project
Treated for a cleaner future

Information Sheet

Noise Model

- Noise levels at the locations shown on this map were calculated by assuming a "worst-case scenario" of 60 dBA everywhere along the property line. However, actual noise emissions from the treatment plant may result in lower noise levels.
- This noise model considers all sound propagation to occur under downwind or temperature inversion conditions (worst-case conditions).

Predicted noise from McLoughlin Point Wastewater Treatment Plant. The noise model was generated with the state-of-the-art acoustical modelling software CadnaA which performs sound propagation calculations according to the widely used International standard ISO 9613-2:1996.

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: April Information Sheet- Odour Control: McLoughlin Point Wastewater Treatment Plant

Wastewater Treatment Project
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Information Sheet

Odour Control: McLoughlin Point Wastewater Treatment Plant

The McLoughlin Point Wastewater Treatment Plant has been designed so there will be no detectable odour by residents. Modelling shows odour will be approximately 2 OU at the plant's property line.

The plant will have one of the highest levels of odour capture and treatment in the industry:

- All treatment processing tanks are covered
- All air is captured and treated

A 24-hour odour control monitoring system will ensure requirements are met or exceeded. Back-up odour control equipment and back-up power generators will be installed, reducing the possibility of odour escaping the facility if there is an equipment failure.

There will be detailed procedures for responding to odour issues, in the unlikely event that one occurs. The public will be able to call a CRD phone line and report any odour issues 24 hours a day, once the plant is in operation.

What is an Odour Unit (OU)?

- An odour unit is a standard measure used to describe the amount of odour present in one cubic metre of neutral air.
- Odour is not discernible at 5 OU or less.
- A typical residential neighbourhood has a background odour of 7 to 20 OU which may include:
  - Grass
  - Plants
  - Mulch
  - Marine environment

Odour Control at other Wastewater Treatment Plants

KELOWNA, BC WASTEWATER TREATMENT PLANT

- Kelowna Plant is in a residential neighbourhood
- Homes are within 20 metres of plant; Okanagan College is adjacent to the site
- 5 OU used for design limit
- Secondary treatment processing tanks are uncovered; by comparison, all McLoughlin Point Plant treatment processing tanks are covered
- No odour complaints

VERNON, BC WASTEWATER TREATMENT PLANT

- Vernon Plant is in a residential neighbourhood
- Homes are situated at the plant's fence line
- 5 OU used for design limit
- Single stage odour treatment; by comparison, the McLoughlin Point Plant will have two stage odour treatment
- Secondary treatment processing tanks are uncovered; by comparison, all McLoughlin Point Plant treatment processing tanks are covered
- No odour complaints

(Continued on next page)

Wastewater Treatment Project
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Information Sheet

Odour Control: McLoughlin Point Wastewater Treatment Plant

While the maximum allowable odour is 5 OU at the property line, modelling based on the current design shows odour during operations will be approximately 2 OU at the McLoughlin Point Wastewater Treatment Plant property line and dissipates quickly as it moves away from the plant.

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.

Odour Model

Odour from McLoughlin Point Wastewater Treatment Plant. Odour model based on the worst-case wind conditions over the last five years, based on regional meteorological data.

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: April Information Sheet- Ogden Point Noise Mitigation

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Information Sheet

Ogden Point Noise Mitigation

The City of Victoria construction noise bylaw is 85 dBA. Noise mitigation will reduce construction noise below the bylaw level.

- 5-metre high acoustic sound barrier (noise wall)
- Constructed in advance of casing installation and drilling operations
- Noise mitigation will result in 75 dBA at the midpoint of Dallas Road, below the 85 dBA noise bylaw
- The project team is working with the contractor to consider other noise mitigation measures to further reduce noise at the Ogden Point work site. These could include enclosures around specific pieces of equipment, or other structures which may require additional approvals.

Noise Wall – Street view

Noise Wall – Aerial view

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 Wastewater Treatment Project will be complete 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 treatment plant, and residual solids to the Residuals Treatment Facility.

Wastewater Treatment Project
Treated for a cleaner future

Information Sheet

Noise Model

- Noise levels at the locations shown on this map were calculated by assuming a "worst-case scenario" of 60 dBA everywhere along the property line. However, actual noise emissions from the treatment plant may result in lower noise levels.
- This noise model considers all sound propagation to occur under downwind or temperature inversion conditions (worst-case conditions).

Predicted noise from McLoughlin Point Wastewater Treatment Plant. The noise model was generated with the state-of-the-art acoustical modelling software CadnaA which performs sound propagation calculations according to the widely used International standard ISO 9613-2:1996.

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: April Information Sheet- Clover Point Pump Station

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Information Sheet

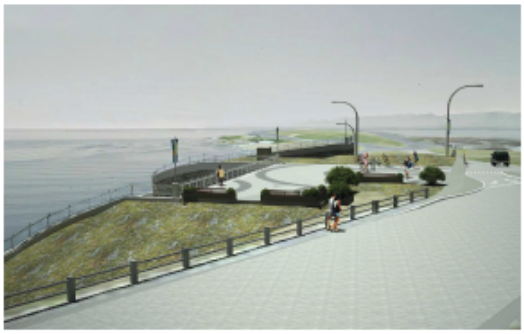
Clover Point Pump Station

The City of Victoria has approved the rezoning for improvements to and expansion of the Clover Point Pump Station. The current pump station pumps sewage directly into the ocean. The expanded pump station will pump wastewater to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment during normal flows and provide bypass pumping to the outfall during storm events. Construction of the Clover Point Pump Station and forcemain will begin in early 2018 and be complete in early 2020.

PROJECT DESCRIPTION

The Clover Point Pump Station expansion will be primarily underground and below the grade of the adjacent section of Dallas Road. Similar materials will be used to blend the expanded facility with the existing facility and surrounding area. The expansion will increase the existing Pump Station facility area from about 500m^2 to about 1500m^2. The expanded facility will include upgraded odour and noise control features.

As part of the pump station expansion, the existing split rock wall facing the waterfront will be extended to enable access to the Pump Station and maintain the seaside walkway.



Conceptual image for discussion purposes only.

Public realm improvements at Clover Point will include:

- Public Plaza accessible to pedestrians and cyclists
- Install street furniture and bicycle facilities (e.g. benches, bike racks, a bike rack for bicycle maintenance and repair, and a drinking fountain) on the plaza
- Replace the existing public parking lot located above the pump station
- Bike Node
- Interpretive signage and wayfinding signs at the Public Plaza
- 2 replanted grassed open spaces to the west and east of the Public Plaza
- 2 public washrooms
- Clover Point Road and Dallas Road intersection improvements
- New connecting walkway and bike path across Clover Point Road to the Dallas Road/ Ross Bay Seawalk
- Pedestrian path from Dallas Road alongside Clover Point Road and connecting to the existing Clover Point Park Path
- One-time payment toward the construction of additional capital improvements by the City

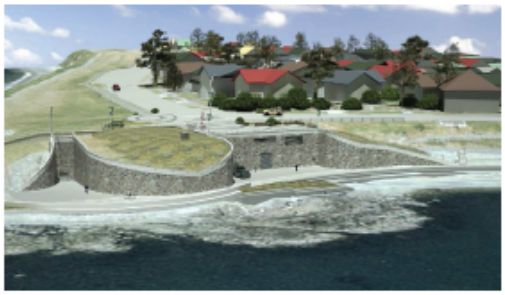
(Continued on next page)

Wastewater Treatment Project
Treated for a cleaner future

Information Sheet

Public realm improvements for Dallas Road will include:

- Cycle track extending from Dock Street at the Ogden Point breakwater to Clover Point
- Gathering/dismount area for the Cycle Track incorporated on the west side of Clover Point Road at Dallas Road
- Site furnishings (bike rack and a bench at a minimum of 6locations at key intersections)
- Barrier fencing between dog off-leash areas
- Wayfinding signage
- One-time payment for the construction of additional capital road improvements by the City



Conceptual image for discussion purposes only.

Next Steps: Design Finalization

Public Input:

- Presentation to James Bay Neighbourhood Association (on Dallas Road conveyance route) at 50% design finalization
- Presentation to Fairfield-Gonzales Community Association (on Clover Point Pump Station and Dallas Road Conveyance route) at 50% design finalization

City of Victoria input:

- 3 Design Workshops between CRD and City regarding pump station exterior and public realm improvements (at the 30%, 50% and 90% design completion stages)
- Presentation to the City Council at a public meeting at 50% stage
- Presentation to City Council in a public meeting prior to the commencement of the detailed design and construction
- Final design of the exterior of the pump station, public realm improvements, conveyance pipeline alignment subject to City approval in accordance with the criteria set out in the licences.

First Nation Engagement:

- The CRD will invite the Songhees and Esquimalt Nations to nominate a representative to participate in the final design of the pump station exterior and public realm improvements

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 Wastewater Treatment Project will be complete 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 treatment plant, and residual solids to the Residuals Treatment Facility.

Appendix H: May Information Sheet- Ogden Point Construction

Wastewater Treatment Project
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Information Sheet

Ogden Point Construction: Niagara Street and Dallas Road

OGDEN POINT WORK SITE

The McLoughlin Point Wastewater Treatment Plant includes construction of a cross-harbour undersea pipe from Ogden Point to McLoughlin Point. This work will take just over a year to complete, from May 2017 to July 2018, and will take place from both sides of Victoria Harbour using a process called horizontal directional drilling. One of the drill locations will be at Ogden Point within a fenced work site near the James Bay Anglers Boat Ramp.

Site set up will start in May and is expected to take just over a month. This involves about five truck trips per day bringing equipment and materials to the site. After that, the traffic impacts will be limited, and mainly associated with construction workers getting to and from the site, as well as approximately five two-way truck trips daily to remove material from the site. Construction workers will park on site not on residential streets.

TRAFFIC IMPACTS ON NIAGARA STREET AND DALLAS ROAD

Traffic impacts to Dallas Road and Niagara Street associated with the under harbour pipe will occur during the final month of the work, which is anticipated to be just over a year from now, in **June 2018**.

The Project has developed a draft Traffic Management Plan (TMP) for the Ogden Point work, and an updated TMP will be developed well in advance of the pipe assembly. The Wastewater Treatment Project Team will arrange meetings with neighbours along Niagara Street in April 2018 to discuss details of the temporary impact and address residents' needs and concerns.

(Continued on next page)

Artist rendering

Wastewater Treatment Project
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Information Sheet

While the work on Niagara Street and Dallas Road is anticipated to take place in June 2018, the exact timing of this work will be determined based on construction operations. As construction progresses, the Project will provide regular updates on anticipated dates.

Niagara Street – anticipated June 2018

Impacts on Niagara Street will occur over about a month. Specifically:

- Niagara Street will be used to assemble the pipe that will be pulled through the directional drill passage between Ogden Point and McLoughlin Point.
- Assembling the pipe involves delivery of the pipe segments, which will be laid along one side of the street, and welding the pipe together. There is no digging required on Niagara Street.
- A portion of Niagara Street will be temporarily closed to general traffic for about a month while the pipe is assembled. We will do everything possible to ensure local traffic has continued access. Residents will have pedestrian access to their homes at all times.
- The Project will coordinate with emergency services and there will be a first responder emergency services access plan in place. Emergency services will have access to all homes at all times.

Dallas Road – anticipated June 2018

Impacts on Dallas Road will occur over about a week. Specifically:

- A portion of Dallas Road will be closed to traffic for about a week while the pipe is being 'pulled' along Niagara Street and through the directional drill passage at Ogden Point.

About the Wastewater Treatment Project

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

Artist rendering

For More Information

Website: wastewaterproject.ca
Email: wastewater@crd.bc.ca
Project Information Line: 1.844.815.6132

Appendix I: June Information Sheet- Esquimalt Traffic Management Plan

Wastewater Treatment Project
Treated for a cleaner future

Information Sheet

Esquimalt Traffic Management Plan

Harbour Resource Partners, the contractor that is building the McLoughlin Point Wastewater Treatment Plant, has developed a Traffic Management Plan to ensure that all project traffic follows designated traffic routes. The Traffic Management Plan has been approved by the Township of Esquimalt.

Wastewater Treatment Project
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Wastewater Treatment Project
Treated for a cleaner future

Information Sheet

The Traffic Management Plan was developed using the following guiding principles:

- Public safety for motorists and pedestrians
- Impacts on local community
- Bylaw compliance
- Incorporate community feedback

Community feedback incorporated into the Traffic Management Plan includes:

- Two supplemental crossing guards for Macaulay Elementary PAC
- Sweeping of the road surface during bulk earthmoving
- Conducting a pre-construction road assessment

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.

For More Information

Website:wastewaterproject.ca
Email: wastewater@crd.bc.ca
Project Information Line: 1.844.815.6132

Appendix J: June Information Sheet- McLoughlin Point Construction

Wastewater Treatment Project
Treated for a cleaner future

Information Sheet

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.

With funding, approvals and permitting in place, Wastewater Treatment Project construction has begun this spring to meet the end of 2020 delivery deadline, comply with the law and preserve senior government funding. The Wastewater Treatment Project consists of three main elements:

McLoughlin Point Wastewater Treatment Plant

Located at McLoughlin Point in Esquimalt, the treatment plant will provide tertiary treatment to the core area's wastewater.

Residuals Treatment Facility

Residual solids from the wastewater treatment plant will be piped to a Residual Treatment Facility at Hartland Landfill, where they will be turned into what are known as "Class A" biosolids. These biosolids are a high quality by-product treated such that it is safe for further use.

Conveyance System

The conveyance system refers to the 'pumps and pipes' of the Wastewater Treatment Project. This system will carry wastewater from across the core area to the treatment plant, and residual solids to the Residuals Treatment Facility at Hartland Landfill.

How We Got Here

The approved McLoughlin Point Wastewater Treatment Plant design is significantly revised from earlier plans to respond to the interests of the surrounding community:

- It is further set back from the shoreline
- It has extensive landscaping and a multi-level green roof irrigated with treated water
- Refinements to the exterior of the wastewater treatment plant and landscaping address the Design Review Committee and other input as part of the development permit process
- The plant will go beyond secondary treatment and include tertiary treatment, providing even better protection of the marine environment
- Odour control systems will reduce odour emissions to a level not detectable by residents

Artist rendering

Wastewater Treatment Project
Treated for a cleaner future

Information Sheet

McLoughlin Point Construction

The McLoughlin Point Wastewater Treatment Plant construction and commissioning will take place from spring 2017 to fall 2020.

Construction at McLoughlin Point will look similar to any large urban construction site. Construction works include: site preparation; horizontal directional drilling to construct the cross-harbour undersea pipe from Ogden Point to McLoughlin Point; pouring concrete foundations; exterior building construction and mechanical and electrical work inside the building.

Anticipated work hours are Monday to Friday from 7:00 a.m. to 7:00 p.m. and on Saturday from 9:00 a.m. to 6:00 p.m.

* *Construction schedules subject to updates based on construction operations. Project to provide regular updates on anticipated dates.*

McLoughlin Point Construction Activities Anticipated April 2017 – Fall 2020*

APRIL/MAY 2017

Set up construction laydown area

- Heavy equipment and personnel preparing the site

MAY 2017 TO AUG 2017

Site preparation (excavation/blasting)

- On average 30 trucks per day (round trips) hauling excavated material
- Blasting activities will be periodically scheduled and communicated to immediate neighbours; blasting schedule will be posted to project website weekly

JUNE 2017 TO JUNE 2018

Conduct horizontal directional drilling

- On average five trucks per day (round trips)

AUG 2017 TO FALL 2018

Pouring concrete

- On average 15 trucks per day (round trips)with more for large pours

SPRING 2018 TO FALL 2019

Plant construction

- On average 10 trucks per day (round trips)

FALL 2019 TO FALL 2020

Plant commissioning

For More Information

Website:wastewaterproject.ca
Email: wastewater@crd.bc.ca
Project Information Line: 1.844.815.6132

Appendix K: May Construction Notice- Ogden Point: Site Preparation

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

May 18, 2017

Ogden Point: Site Preparation

The McLoughlin Point Wastewater Treatment Plant includes construction of a cross-harbour undersea pipe from Ogden Point to McLoughlin Point. The contractor, Harbour Resource Partners, will begin to prepare the Ogden Point work site for the construction of the undersea pipe the week of May 23. Site preparation work will take place on weekdays between 7:00 a.m. and 7:00 p.m.

Work Description

- Removal of the James Bay Anglers Hut
- Construction of a 5-metre high noise wall (temporary construction fencing will be on-site until the noise wall has been assembled)
- Mobilization and set up of the horizontal directional drill equipment

The James Bay Anglers Association have been supplied a temporary replacement structure adjacent to the boat launch.

Traffic Impacts

- No traffic disruptions are anticipated due to this work
- On average five trucks per day (round trips) will bring equipment and materials to and from the site
- Local access to businesses and residences will be maintained at all times
- The boat launch will remain open with minor access delays

Once site preparation is complete and the noise wall is built, construction of the cross-harbour undersea pipe will begin using a process called horizontal directional drilling. 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 L: May Construction Notice- Construction Laydown Site Preparation

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

May 29, 2017

Construction Laydown Site Preparation

As part of the Wastewater Treatment Project, the contractor Harbour Resource Partners and its subcontractors will begin to construct laydown area at 327 Anson Street for the McLoughlin Point Wastewater Treatment Plant. The work includes:

- Construction of temporary laydown area
- Construction of a chain-link perimeter fence

Work Description

- Earthworks equipment will be used to supply and install gravel to construct the laydown area
- Temporary construction fencing will surround perimeter of work area
- Signage will be posted prior to work

Traffic Impacts

- No street closures will be required
- On average 25 trucks per day (roundtrips) will be bringing equipment and materials to and from the site at 327 Anson Street

Start Date: Week of May 29th

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

Location: 327 Anson St.

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 M: May Construction Notice- McLoughlin Point: Excavation and Controlled Blasting

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

May 30, 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. Subject to receiving approval of the building permit from the Township of Esquimalt, excavation work is expected to begin in early June, with blasting starting in mid-June, and will take approximately four months to complete.

What to Expect

- Fencing will be installed prior to excavation and blasting
- 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 N: June Construction Notice- Ogden Point: Casing Installation

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

June 7, 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.

Starting the week of June 12th, crews will install the casing, or entry point for the pipe, in preparation for the horizontal directional drill operation. This involves hammering the casing into place (a process similar to pile driving). This casing installation is anticipated to take approximately two weeks and will take place behind a 5-metre high noise wall.

What to expect

- 5-metre high noise wall and signage will be in place
- Approximately two weeks of hammering the casing into place
- 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) will bring equipment and materials 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 O: June Construction Notice- Geotechnical Work for the McLoughlin Point Outfall

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

June 12, 2017

Geotechnical Work for the McLoughlin Point Outfall

As part of the Wastewater Treatment Project, the contractor for the McLoughlin Point Wastewater Treatment Plant, Harbour Resource Partners, will conduct the third and final phase of geotechnical work for the McLoughin Point outfall, to gather additional information about the subsurface conditions.

Geotechnical work is scheduled to begin on the week of June 19 and will take approximately three weeks to complete, depending on the weather. Work on the water will take place 24 hours a day.

The Wastewater Treatment Project and Harbour Resource Partners are working with Victoria's Harbour Master to coordinate the work.

Map: Location of work area

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 P: June Construction Notice- Clover Forcemain: Geotechnical Work

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

June 13, 2017

Clover Forcemain: Geotechnical Work

The Wastewater Treatment Project includes construction of a pipe which will transport wastewater from the Clover Point Pump Station to the McLoughlin Point Wastewater Treatment Plant. This pipe, which is referred to as the Clover Forcemain, will run along Dallas Road from Clover Point to Ogden Point, where it will connect to the Victoria Harbour Crossing.

The Wastewater Treatment Project will conduct a geotechnical investigation to inform the indicative design and alignment of the pipe. This geotechnical investigation will include drilling boreholes along the route of the pipe, to collect soil samples.

The geotechnical drilling work along Dallas Road is anticipated to begin the week of June 19 and it will take a little over 2 weeks to complete, depending on the weather. A truck mounted drilling rig will be used to create approximately 22 boreholes located along or in close proximity to the proposed pipe alignment on Dallas Road. Drilling is anticipated to begin near the intersection of Dallas Road and Douglas Street, then move towards Clover Point. Once that leg of the work is complete, crews will complete boreholes from the intersection of Dallas Road and Douglas Street towards Ogden Point. There will be some noise associated with the drilling work. The estimated duration for drilling a borehole is approximately 2 to 3 hours.

Hours of work

- Weekdays from 8 a.m. to 5 p.m.

Traffic Impacts

- Some of the boreholes will require lane closures along Dallas Road.
- Some of the boreholes will require parking stall closures along Dallas Road.
- Flaggers will be on site for traffic control.

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

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

Background

The proposed alignment of the Clover Forcemain was developed in collaboration with City of Victoria planning staff and considered the bluffs, location of mature trees, sensitive vegetation, potential erosion, and traffic impacts. There will be extensive engineering work completed prior to the start of construction to ensure that construction does not compromise the bluffs along Dallas Road.

Geotechnical investigations and monitoring will take place along Dallas Road with an enhanced focus on the shoreline and bluffs prior to, during and after the construction of the Clover Forcemain. The geotechnical investigations will include a series of test holes drilled along the pipe alignment to establish existing geological conditions and to collect samples for laboratory testing and use in establishing geotechnical design parameters for the pipe and bluff stability analysis. The geotechnical monitoring will include the installation of instruments near the bluffs and along the pipe alignment. Recordings from these instruments will be used to monitor conditions during the construction and post construction phase of the project.

A plan will be prepared to mitigate any impacts on the bluffs during construction. Reports detailing the results of the geotechnical investigations and the indicative alignment will be complete in the fall of 2017. The Project Team will report on these to the public at one of its regular community information meetings, to the James Bay Neighbourhood Association and to Victoria City Council. Results will also be posted on the Project website.

For more information, please visit: https://www.crd.bc.ca/project/wastewater-treatment-project/news-and-information/community-questions .

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.

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

Appendix Q: June Construction Notice- Macaulay Point Pump Station and Forcemain: Geotechnical Work

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

June 22, 2017

Macaulay Point Pump Station and Forcemain: Geotechnical Work

The Wastewater Treatment Project includes construction of a pipe which will transport wastewater from the Macaulay Point Pump Station to the McLoughlin Point Wastewater Treatment Plant. You will find a map of the route of this pipe, which is referred to as the Macaulay Forcemain, at the end of this notice.

The Wastewater Treatment Project will conduct a geotechnical investigation to inform the design of the Macaulay Point Pump Station and the design and alignment of the Macaulay Forcemain (pipe). The geotechnical investigation will include drilling boreholes at the Macaulay Point Pump Station and along the route of the pipe to collect soil samples.

The geotechnical work for the Macaulay Point Pump Station and Forcemain is anticipated to begin the week of July 3 and will take approximately one week to complete depending on the weather. The actual duration could extend longer depending on the soil conditions encountered during the drilling operation. A truck mounted drilling rig will be used to drill approximately six boreholes, with two boreholes located at the Macaulay Point Pump Station site, and four boreholes located along or in close proximity to the proposed pipe alignment. The estimated duration for drilling each borehole is approximately 2-3 hours.

Construction of the Macaulay Point Pump Station and Forcemain is anticipated to begin in Q1 of 2018. Information about the construction will be provided closer to the start of construction.

Hours of work

- Weekdays from 8 a.m. to 5 p.m.

Traffic Impacts

- Some of the boreholes will require temporary single lane closures along Anson Street, Bewdley Avenue, Peters Street and View Point Road.
- Flaggers will be on site for traffic control.

About the Wastewater Treatment Project

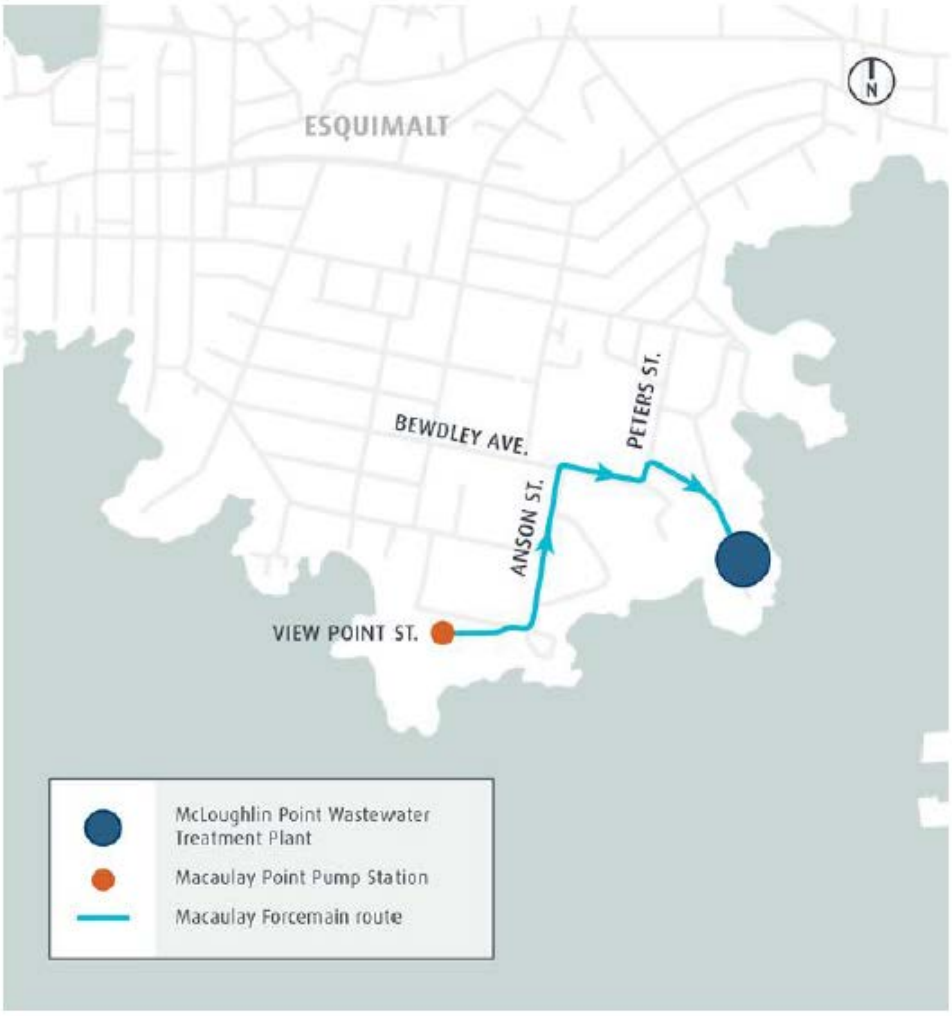
The Wastewater Treatment Project will provide tertiary treatment for wastewater from the core area municipalities of Victoria, Esquimalt, Saanich, Oak Bay, View Royal, Langford and Colwood, and the Esquimalt and Songhees First Nations and will be complete by the end of 2020.

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

Route of Macaulay Forcemain:



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

Appendix R: June Construction Notice- Ogden Point: Casing Installation Update – Anticipated to Start Week of June 26: June 23, 2017

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

UPDATE

June 23, 2017

Ogden Point: Casing Installation - Anticipated to Start Week of June 26

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 will install the casing, or entry point for the pipe, in preparation for the horizontal directional drill operation. This involves hammering the casing into place (a process similar to pile driving). This work has been delayed slightly and it is anticipated that it will begin the week of June 26 and take approximately two weeks to be completed. The casing installation will take place behind a 5-metre high noise wall.

What to expect

- 5-metre high noise wall and signage will be in place
- Approximately two weeks of hammering the casing into place
- 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. (there will not be work on the long weekend, July 1-3)

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 S: June Construction Notice- Geotechnical Work: Dallas Road and Douglas Street

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

June 28, 2017

Geotechnical Work: Dallas Road and Douglas Street

The Wastewater Treatment Project includes construction of a pipe which will transport wastewater from the Clover Point Pump Station to the McLoughlin Point Wastewater Treatment Plant. This pipe, which is referred to as the Clover Forcemain, will run along Dallas Road from Clover Point to Ogden Point, where it will connect to the Victoria Harbour Crossing.

The Wastewater Treatment Project will conduct a geotechnical investigation to inform the indicative design and alignment of the pipe. This geotechnical investigation will include drilling 24 boreholes along the proposed route of the pipe, to collect soil samples. The geotechnical drilling work along Dallas Road began on June 19 and it will be finished by approximately July 7.

Crews will be working on Tuesday, July 4, 2017 at the corner of Dallas Road and Douglas Street to drill a borehole, using a truck-mounted drill rig. The estimated duration is approximately 5 hours.

Traffic Impacts

- Douglas Street will be closed between Dallas Road and Battery Street. Dallas Road will remain open.
- Local traffic will have access on Douglas Street, as needed.
- Pedestrians will have full access to the sidewalk.
- Flaggers will be on site for traffic control.

Hours of work

- Tuesday, July 4 from 8 a.m. to 5 p.m.

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

Wastewater Treatment Project
Treated for a cleaner future

Construction Notice

Background

The proposed alignment of the Clover Forcemain was developed in collaboration with City of Victoria planning staff and considered the bluffs, location of mature trees, sensitive vegetation, potential erosion, and traffic impacts. There will be extensive engineering work completed prior to the start of construction to ensure that construction does not compromise the bluffs along Dallas Road.

Geotechnical investigations and monitoring will take place along Dallas Road with an enhanced focus on the shoreline and bluffs prior to, during and after the construction of the Clover Forcemain. The geotechnical investigations will include a series of test holes drilled along the pipe alignment to establish existing geological conditions and to collect samples for laboratory testing and use in establishing geotechnical design parameters for the pipe and bluff stability analysis. The geotechnical monitoring will include the installation of instruments near the bluffs and along the pipe alignment. Recordings from these instruments will be used to monitor conditions during the construction and post-construction phase of the project.

A plan will be prepared to mitigate any impacts on the bluffs during construction. Reports detailing the results of the geotechnical investigations and the indicative alignment will be complete in the fall of 2017. The Project Team will report on these to the public at one of its regular community information meetings, to the James Bay Neighbourhood Association and to Victoria City Council. Results will also be posted on the Project website.

For more information, please visit: https://www.crd.bc.ca/project/wastewater-treatment-project/news-and-information/community-questions .

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.

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 T: April Media Release - Residuals Treatment Facility Proponents Shortlisted for the Wastewater Treatment Project: April 10, 2017

Residuals Treatment Facility Proponents Shortlisted for the Wastewater Treatment Project

Apr 10, 2017

Victoria, BC– Three qualified teams have been shortlisted to participate in the next stage of the competitive selection process to design, build, partially finance, operate and maintain the Residuals Treatment Facility over a 20-year term for 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. These biosolids are a high quality by-product safe for further use.

Seven submissions were received in response to the Request for Qualifications (RFQ) which closed on February 9, 2017. The following three teams have been selected to move forward to the Request for Proposals stage:

Harbour Resource Partners

- AECOM Capital Inc.
- AECOM Canada Ltd
- Graham Capital Partners LP
- Graham Infrastructure LP
- SUEZ Canada Inc.
- SUEZ Water Environmental Services Canada LP

Hartland Biosolids Partners

- Acciona Agua, S.A..
- Acciona Infrastructure Canada Inc.
- Axium Intrastructure Inc.
- Brookfield Financial Securities LP

Hartland Resource Management Group

- Bird Capital Limited Partnership
- Bird Design-Build Construction Inc.
- Maple Reinders Constructors Ltd.
- Maple Reinders PPP Ltd
- Synagro Technologies Inc.

Proponents will submit their technical proposals by early fall and the Wastewater Treatment Project Team expects to execute a contract and begin construction in early 2018. The Residuals Treatment Facility will be complete in late 2020.

The Residuals Treatment Facility is being funded by P3 Canada, the Government of British Columbia and the CRD.

As we get closer to construction of this segment of the Project, a robust community and engagement plan will ensure the surrounding communities have advance notice of construction activity and an opportunity to engage with the Project team. Broad outreach to stakeholders will include residents, businesses, schools, day cares, recreational groups, transportation providers, tourism groups and other organizations. Communications 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.

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 Wastewater Treatment Project, to be completed by the end of 2020, 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 treatment plant, and residual solids to the Residuals Treatment Facility. For more information, please visit www.crd.bc.ca/project/wastewater-treatment-project.

Appendix U: April Media Release - McLoughlin Point Wastewater Treatment Plant Contract Awarded: April 5, 2017

McLoughlin Point Wastewater Treatment Plant Contract Awarded

Apr 05, 2017

Victoria, BC– The first construction contract for the Wastewater Treatment Project has been awarded. Harbour Resource Partners has been awarded a $272 million contract to build the wastewater treatment plant at McLoughlin Point, which includes the construction of three main components:

- A 108 MI/d tertiary wastewater treatment plant located at McLoughlin Point;
- a cross-harbour undersea forcemain between Ogden Point and McLoughlin Point; and
- a marine outfall for treated wastewater at McLoughlin Point.

Harbour Resource Partners were selected by the Wastewater Treatment Project through a competitive selection process and is a consortium of experienced firms including AECOM Canada, Graham Infrastructure, HDR|CEI, SUEZ, Graham Capital and Michels Canada.

Construction will begin in April on the McLoughlin Point Wastewater Treatment Plant. This component of the Wastewater Treatment Project is being funded by the Government of Canada, the Government of British Columbia and the CRD core area municipalities.

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 Wastewater Treatment Project will be complete 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 treatment plant, and residual solids to the Residuals Treatment Facility.

Appendix V: May Media Release - RFQ released for the Macaulay Point Pump Station and Forcemain: May 24, 2017

Request for Qualifications released for the Macaulay Point Pump Station and Forcemain

May 24, 2017

Victoria, BC–- The Wastewater Treatment Project has issued a Request for Qualifications (RFQ) inviting interested contractors to submit their qualifications to design and build the Macaulay Point Pump Station and Forcemain. From the submissions, a shortlist of up to three qualified proponents will be invited to participate in the next stage of the competitive selection process, the Request for Proposals (RFP).

The Macaulay Point Pump Station and Forcemain are integral components of the Wastewater Treatment Project. As part of the overall conveyance system, the pump station will pump wastewater to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment. The forcemain is the pipe that will connect the Macaulay Point Pump Station to the McLoughlin Point Wastewater Treatment Plant.

It is anticipated that the pre-qualified proponents will be selected in summer 2017 and the final preferred proponent chosen in early 2018. Construction on the Macaulay Point Pump Station and Forcemain will be complete by spring 2020.

The new pump station will be constructed adjacent to the existing pump station at Macaulay Point. The new pump station will pump wastewater to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment during normal flows and continue to provide bypass pumping to the existing Macaulay Point outfall during storm events.

The Wastewater Treatment Project, including the conveyance system components, is being funded by the Government of Canada, the Government of British Columbia and the Capital Regional District (CRD).

To access the RFQ please visit the CRD's current opportunities page https://www.crd.bc.ca/about/contracts-rfps/current and BC Bid (bcbid.gov.bc.ca).

Wastewater Treatment Project
Treated for a cleaner future

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 Wastewater Treatment Project, to be completed by the end of 2020, 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 treatment plant, and residual solids to the Residuals Treatment Facility. For more information, please visit www.wastewaterproject.ca.

Appendix W: May Media Release - Clover Point Pump Station Proponents Shortlisted: May 25, 2017

Clover Point Pump Station Proponents Shortlisted

May 25, 2017

Victoria, BC–- The Wastewater Treatment Project has issued a Request for Proposals to three qualified proponents as part of the competitive selection process for the contract to design and build the expanded Clover Point Pump Station. The shortlisted proponents are:

- BIRD Construction Inc.;
- Kenaidan Contracting Ltd.; and
- Maple Reinders Inc.

Proponents are scheduled to submit their proposals this summer and the Wastewater Treatment Project Team expects to award a contract in late fall 2017. Construction on the Clover Point Pump Station is anticipated to begin in early 2018 after the design has been completed. The Clover Point Pump Station will be complete in 2020.

The Clover Point Pump Station was built in the 1970s and is owned and operated by the Capital Regional District (CRD). The current pump station pumps wastewater directly into the ocean. The expanded pump station will pump wastewater to the McLoughlin Point Wastewater Treatment Plant for tertiary treatment during normal flows and provide bypass pumping to the existing Clover Point outfall during storm events.

The Clover Point Pump Station expansion will be primarily underground and below the grade of the adjacent section of Dallas Road. The expanded facility will use materials that will allow it to blend with the existing facility and surrounding area. It will also include upgraded odour and noise control features.

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 Wastewater Treatment Project, to be completed by the end of 2020, 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 treatment plant, and residual solids to the Residuals Treatment Facility. For more information, please visit www.wastewaterproject.ca.

Appendix X: April Correspondance - Response to Resolutions from the Integrated Resource Management Advisory Committee's April 12th 2017 Meeting, 2017 Meeting

Making a difference...together

Capital Regional District
625 Fisgard Street, PO Box 1000
Victoria, BC, Canada V8W 2S6

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www.crd.bc.ca

May 5, 2017

File: 0220-20
Core Area Wastewater Treatment Project Board

Dear CRD Chair & Directors,

RE: Resolution from the Integrated Resource Management Advisory Committee

On behalf of the Core Area Wastewater Treatment Project Board ("**Project Board**"), I am writing to you regarding the following resolution from the Integrated Resource Management Advisory Committee's April 12, 2017 closed meeting (the "**Resolution**"):

That the IRM proposals be sent to the Project Board for their information and request:

1. that the Project Board review the IRM timelines and see how the IRM project can be aligned with what the Project Board is doing;
2. that the Project Board evaluate the proposals;
3. that the Project Board review elements of the applications with a view towards controlling the total costs on the region, maximizing possibilities for resource recovery and streamlining processes; and
4. that the Project Board consider up to 100% raw sewage and owned finance options

During its meeting on May 2, 2017, the Project Board considered the Resolution, and the Project Board's role in the IRM planning process being led by the CRD. The Project Board is unable to act on the Resolution because the requests are not within the scope of duties defined in the Project Board's terms of reference. Further background to the Project Board's response follows.

1. Funding Agreements

As you are aware, the Wastewater Treatment Project ("**the Project**") consists of three main elements:

- the McLoughlin Point Wastewater Treatment Plant,
- the Residuals Treatment Facility, and
- the Conveyance System.

The Project cost of $765 million is being funded by the federal and provincial governments, and the CRD.

EXLT-1618883951-3476

The Government of British Columbia will provide up to $248 million towards the three components of the Project and P3 Canada will provide up to $41 million towards the Residuals Treatment Facility. The funding by P3 Canada and the Government of British Columbia is intrinsically linked to the entire Project. The construction of the Residuals Treatment Facility cannot be extracted without placing the entire funding amounts from these funding partners at risk.

2. Regulatory Context

The Project must satisfy the regulatory requirements applicable to wastewater treatment. The funding agreements, as expected, require the Project to comply with all applicable laws as a condition of the funding.

The CRD is legally obliged to treat wastewater, and those legal obligations extend to the treatment biproducts, including biosolids. Federal and Provincial regulatory requirements apply to biosolids quality, the environmental implications, and the management of wastes. In British Columbia, the Organic Matter Recycling Regulation applies to the production, distribution, storage, sale, and use of biosolids and compost.

The inclusion of the Residuals Treatment Facility in the Project as part of the solution for treating the Core Area's wastewater satisfied the regulatory requirements, and therefore the funding partners. The processing of sewage sludge into Class A biosolids is part of the approved Core Area Liquid Waste Management Plan (**"CALWMP"**) Amendment 11. In addition, the Minister of Environment's approval of the CALWMP Amendment 11 is conditional upon the CRD submitting a definitive plan for the beneficial reuse of biosolids by June 30, 2019 and to ensure the definitive plan for beneficial reuse of biosolids is supported by an assessment of the full spectrum of beneficial uses and integrated resource management options available for the Class A biosolids that will be produced.

3. Operational Context

Biosolids comprise only a small proportion of the total combined biosolids, organics and municipal solid waste streams that must be integrated to create an effective IRM plan. As a result, the potential for IRM in the Core Area will be predominantly driven by the solid waste streams. Thus, IRM planning properly resides within the Solids Waste Management Plan rather than as a separate aspect of wastewater treatment within the Liquid Waste Management Plan.

The Residuals Treatment Facility and the chosen site of Hartland landfill optimises the integration of biosolids with the current and future solid waste program. Hartland landfill receives about 140,000 tonnes of municipal solid waste per year and offers operational synergies and IRM opportunities with biosolids processing.

4. Residuals Treatment Facility

Given the above, there is no conflict between the IRM planning process and the construction and operation of the Residuals Treatment Facility. The Project Board, as part of the liquid waste management planning, has ensured that the Project provides the CRD the flexibility and the ability to accommodate an IRM planning process either now or in the future. As discussed in greater detail in the Core Area Wastewater Treatment Program Business Case dated September 7, 2016, that was approved by the CRD Board on September 14, 2016, the Project Board considered a wide spectrum of biosolids treatment technologies in its analysis. In recommending the production of class A biosolids at Hartland landfill, the Business Case recognised that the biggest opportunity for IRM at the CRD exists with the potential integration of the various waste streams that may be available at the Hartland Landfill.

Furthermore, the Project Board have structured the Residuals Treatment Facility contract to ensure that up to 50% of raw residuals produced at the McLoughlin Point Wastewater Treatment Plant can bypass the Residuals Treatment Facility. As noted in the April 12, 2017 report entitled 'Advanced Integrated Resource Management – Next Steps', that the Project Board received for information, this contractual and operating flexibility supports the viability of IRM solutions that rely upon the incorporation of both raw residuals and class A biosolids.

The Project Board appreciates the work of the IRM Committee in leading the planning and development of a comprehensive IRM plan. The Project Board is maintaining the alignment by ensuring that, through the CRD Chief Administrative Officer, the CRD IRM Advisory Committee is aware of the Project's activities, specifically as they relate to the production of biosolids.

I trust that the above information provides useful background and explains the Project Board's complementary functions.

Yours truly,

Robert (Bob) Lapham, MCIP, RPP
Chief Administrative Officer

cc: Core Area Wastewater Treatment Project Board
Dave Clancy, Project Director, Core Area Wastewater Treatment Project

Appendix Y: June Correspondance - June 2, 2017 Letter from Mayor Richard Atwell on behalf of the Bicycle and Pedestrian Mobility Advisory Committee

District of Saanich – Legislative Division
Bicycle and Pedestrian Mobility Advisory Committee
770 Vernon Ave.
Victoria BC V8X 2W7

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saanich.ca

Saanich
LEGISLATIVE SERVICES

June 2, 2017

CAWTP
JUN 05 2017
Received

Jane Bird
Chair, Core Area Wastewater
Treatment Project Board
Capital Regional District
510 – 1675 Douglas Street
Victoria BC V8W 2G5

Dear Jane Bird:

SEWAGE CONVEYANCE NEAR INTERURBAN RAIL TRAIL

At the May 18, 2017, Bicycle and Pedestrian Mobility Advisory Committee meeting, committee members discussed potential trail improvements along the Interurban Rail trail from Hartland Avenue to Interurban Road when the CRD installs sewage conveyance pipeline in the area. The following motion was made:

> **"That the Bicycle and Pedestrian Mobility Advisory Committee write to the CRD Wastewater Treatment Project Board to inquire about the proposed sewer pipeline conveyance route as it travels through Saanich, and the proposed consultation timeline for this project."**

Any information that you could provide regarding the proposed timeline, and the details of the sewage pipeline conveyance route would be most appreciated.

Yours truly,

Mayor Richard Atwell, Chair
Bicycle and Pedestrian Mobility Advisory Committee

/td

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Appendix Z: June Correspondance - Response to June 2, 2017 Letter from the Bicycle and Pedestrian Mobility Advisory Committee

Wastewater Treatment Project
510-1675 Douglas Street
Victoria, BC, V8W 2G5

T: 250.360.3002
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www.wastewaterproject.ca

Wastewater Treatment Project
Treated for a cleaner future

July 18, 2017

Mayor Richard Atwell
Email: mayor@saanich.ca

District of Saanich
Bicycle and Pedestrian Mobility Advisory Committee
770 Vernon Avenue
Victoria, BC V8X 2W7

Dear Mayor Atwell:

RE: Response to June 2, 2017 Letter from the Bicycle and Pedestrian Mobility Advisory Committee

Thank you for your letter of June 2, 2017 noting the motion passed at the Bicycle and Pedestrian Mobility Advisory Committee meeting. This letter is in response to the request for information regarding the conveyance route from the McLoughlin Point Wastewater Treatment Plant to the Residuals Treatment Facility at the Harland Landfill, and proposed timeline for engagement with residents of Saanich. The Project Board received and discussed your letter at its meeting of July 4, 2017.

The following information provides an overview of the Project and our current plans regarding alignment, design, and community engagement in the District of Saanich.

Project Overview
The Project is being built to meet the provincial and federal regulations for treatment of the Core Area's wastewater by December 31, 2020.

The Project consists of three components:

1. A 108 megalitre per day tertiary treatment plant at McLoughlin Point in Esquimalt;
2. A conveyance system for piping the wastewater to the plant and the residual solids to the Residuals Treatment Facility; and
3. A Residuals Treatment Facility at Hartland landfill to produce Class A biosolids.

The $765 million project cost is shared by the Government of Canada (up to $120 million through the Building Canada Fund; $50 million through the Green Infrastructure Fund; and up to $41 million towards the Residuals Treatment Facility through P3 Canada), the Province of BC (up to $248 million towards the three project components), and the Capital Regional District (CRD) ($306 million for the three project components).

The overall project scope, schedule and cost reflect federal and provincial laws and regulations; requirements of First Nations, local governments and communities; and, conditions of senior government funding agreements. The project is highly integrated with the planning, construction,

operation and funding of each of the three components being technically and commercially contingent upon each other.

Construction Underway in Victoria and Esquimalt
Construction is underway on the McLoughlin Point Wastewater Treatment Plant (WWTP) 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. 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.

Competitive selection processes are underway for contractors to build the Residuals Treatment Facility (RTF), and upgrades to the Clover Point and Macaulay Point Pump Stations and the Forcemain.

The Residuals Treatment Facility at Hartland Landfill and Related "Pumps and Pipes"
This facility will convert the residual solids that are piped from the WWTP into Class A biosolids. Concurrent with the construction of the Wastewater Treatment Project, the CRD is developing a comprehensive integrated resource management plan. This plan will include management of the CRD's solid and biosolid waste streams. The plan will ultimately address how the Class A biosolids produced at the RTF will be beneficially-reused.

The 'pumps and pipes' - or the "conveyance system" includes two components in Saanich:

1. The Residual Solids Pipes and Pump Stations will connect the WWTP to the RTF, and include two pipelines and four or five small pumping stations. The two pipelines will be installed in a common trench (where possible).
2. The Arbutus Attenuation Tank which, as you know, was designed as part of the earlier program. As part of the construction of the Tank, the CRD will make improvements along the south side of Arbutus Road including a road widening to accommodate a bike lane and sidewalk, as well as storm drainage improvements.

Alignment Design
The Project Team has held meetings with staff at the District of Saanich and established a technical working group to finalize the indicative design for the alignment of the pipe route from the WWTP to the RTF at Hartland.

The design for these components of the Project is not as advanced as for the wastewater treatment facility, as construction of these components is not scheduled to start until 2018 or later.

Community Engagement
Community Engagement to date has been focused on the communities in Victoria and Esquimalt due to the location of construction of the early components of the Project. It will be moving to Saanich in the fall.

The Project Team has offered to support the District of Saanich staff in seeking public input on the final design for the finished surface along the alignment, above the pipes. The nature and extent of this consultation will be driven by the District of Saanich due to the need for the decision

regarding the finished surface to integrate with the District's broader planning initiatives, such as the Centennial Trails. The Project Team will support the District's consultation, in the same way it is supporting the City of Victoria's consultation around public realm improvements along the Dallas Road multi-use trail.

Our current plan is to hold information meetings and meetings with community associations in Saanich in the fall of this year, in advance of the start of construction (anticipated to be the spring of 2018). The Project Team plans to coordinate these meetings with Saanich staff and the Saanich Community Advisory Network, Willis Point, Todd Creek, and Peninsula Streams. The purpose of these meetings would be to share the indicative design for the pipe alignment and to seek public input that could be considered, along with technical and financial considerations, in finalizing the design.

Before and during the construction phase of the Project components located in Saanich, the Project Team will engage with nearby communities to plan communication activities and develop plans to mitigate construction impacts. The team will also provide information about communication tools and will seek feedback about the most effective ways to communicate with Saanich communities during construction.

The Project Team have discussed with Saanich staff the establishment of a Liaison Committee, as has been formed in Esquimalt. It is anticipated that a Saanich Liaison Committee would be made up of members of Saanich community associations, and/or the Saanich Community Association Network. The Project Team anticipates establishing this committee by the end of this year, prior to construction in the spring of 2018.

Subject to the input of the Liaison Committee, construction communications outreach will include residents, businesses, schools, day cares, recreational groups, transportation providers, tourism groups and other organizations. Communication tools will include the 24 hour information line phone number, email, social media, website, community updates, construction bulletins and traffic media updates.

I trust this information is helpful for the Bicycle and Pedestrian Mobility Advisory Committee.

Sincerely,

for Jane Bird, Chair
Core Area Wastewater Treatment Project Board
CRD Wastewater Treatment Project

JB:dd

WWTP-1302841000-106

Wastewater Treatment Project
Treated for a cleaner future

Appendix AA: Quarterly Cost Report

WTP QUARTERLY COST REPORT
as at June 30, 2017

Project Component	Control Budget	COST EXPENDED				COMMITMENTS			FORECAST		VARIANCE	
		Expended to March 31, 2017	Expended over reporting period (Q2 2017 April - June)	Expended to June 30, 2017	Expended to June 30, 2017 as a % of Control Budget	Remaining (Unexpended) Budget at June 30, 2017	Total Committment at June 30, 2017	Unexpended Commitment at June 30, 2017	Uncommitted Budget at June 30, 2017	Forecast to Complete	Forecast at Completion	Variance at Completion $	Variance at Completion as a % of Control Budget
McLoughlin Point Wastewater Treatment Plant [1]	317	14	24	38	12%	279	306	268	11	279	317	-	0%
Residuals Treatment Facility [1]	147	7	0	7	5%	140	7	-	140	140	147	-	0%
Conveyance System [1]	141	20	0	20	14%	121	20	-	121	121	141	-	0%
Project Management Office													
Project Management Office ("PMO")	71	4	6	10	14%	61	42	32	28	61	71	-	0%
Common Costs													
BC Hydro	12	-	0.3	0.3	3%	12	2	2	10	12	12	-	0%
Third Party Commitments	8	1	1	2	25%	6	6	4	2	7	8	-	0%
Program Reserve and contingencies	69	-	-	-	0%	69	-	-	69	69	69	-	0%
Total Costs	765	46	32	78	10%	687	384	306	381	689	765	-	0%

1 - Excluding PMO, Common Costs and contingency

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

Appendix BB: Monthly Cost Report

ASSET MANAGEMENT COST REPORT
as at June 30, 2017

Project Component	Control Budget	COST EXPENDED					COMMITMENTS			FORECAST		VARIANCE	
		Expended to May 31, 2017	Expended over reporting period (June 2017)	Expended to June 30, 2017	Expended to June 30, 2017 as a % of Control Budget	Remaining (Unexpended) Budget at June 30, 2017	Total Committment at June 30, 2017	Unexpended Commitment at June 30, 2017	Uncommitted Budget at June 30, 2017	Forecast to Complete	Forecast at Completion	Variance at Completion $	Variance at Completion as a % of Control Budget
McLoughlin Point Wastewater Treatment Plant ^	378	26	17	43	11%	335	333	290	45	336	378	-	0%
Residuals Treatment Facility ^	195	10	-	10	5%	185	16	6	179	186	195	-	0%
Conveyance System ^	192	24	1	25	13%	167	35	10	157	167	192	-	0%
Total Costs	**765**	**60**	**18**	**78**	**10%**	**687**	**384**	**306**	**381**	**689**	**765**	**-**	**0%**

A - Including PMO and Common Costs
* Values presented in $millions, results in minor rounding differences