

Welcome



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



Artist rendering

Welcome to the Wastewater Treatment Project Community Information Meeting.

Construction is beginning in April 2017 on the McLoughlin Point Wastewater Treatment Plant and undersea pipe between McLoughlin Point and Ogden Point.

Our team is here to provide you with information and respond to your questions regarding construction activities at these locations. Information about other upcoming construction activities for the Wastewater Treatment Project will be available in the coming months.

Wastewater Treatment Project



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In September 2016, the CRD approved the Wastewater Treatment Project Board's proposal for wastewater treatment in the Core Area which would comply with the law and preserve senior government funding for sewage treatment.

The Wastewater Treatment Project consists of three main elements:

MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT

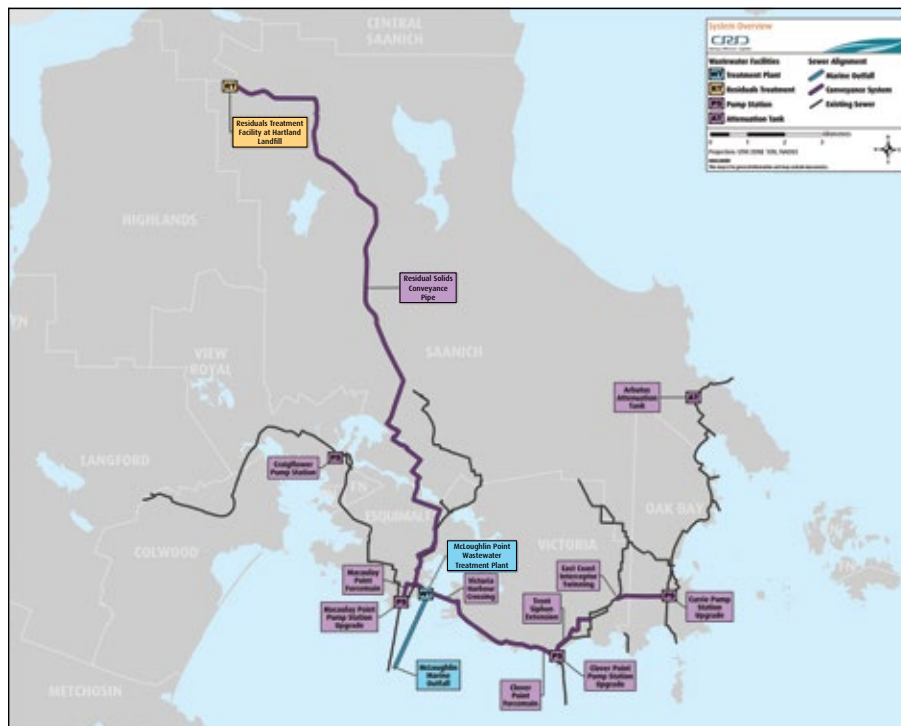
Located at McLoughlin Point, the treatment plant will provide tertiary treatment to the core area's wastewater.

RESIDUALS TREATMENT FACILITY

Residual solids from the wastewater treatment plant will be piped to 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 send residual solids from the wastewater treatment plant to the Residuals Treatment Facility.



How We Got Here



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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

Project Funding and Approvals



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Wastewater Treatment Project construction will begin in April 2017.

PROJECT FUNDING

The Wastewater Treatment Project costs \$765 million.
The project is 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.

LAND USE APPROVALS

- The Township of Esquimalt approved rezoning for the McLoughlin Point Wastewater Treatment Plant on February 20, 2017.
- The City of Victoria approved rezoning for the Clover Point Pump Station on February 23, 2017.

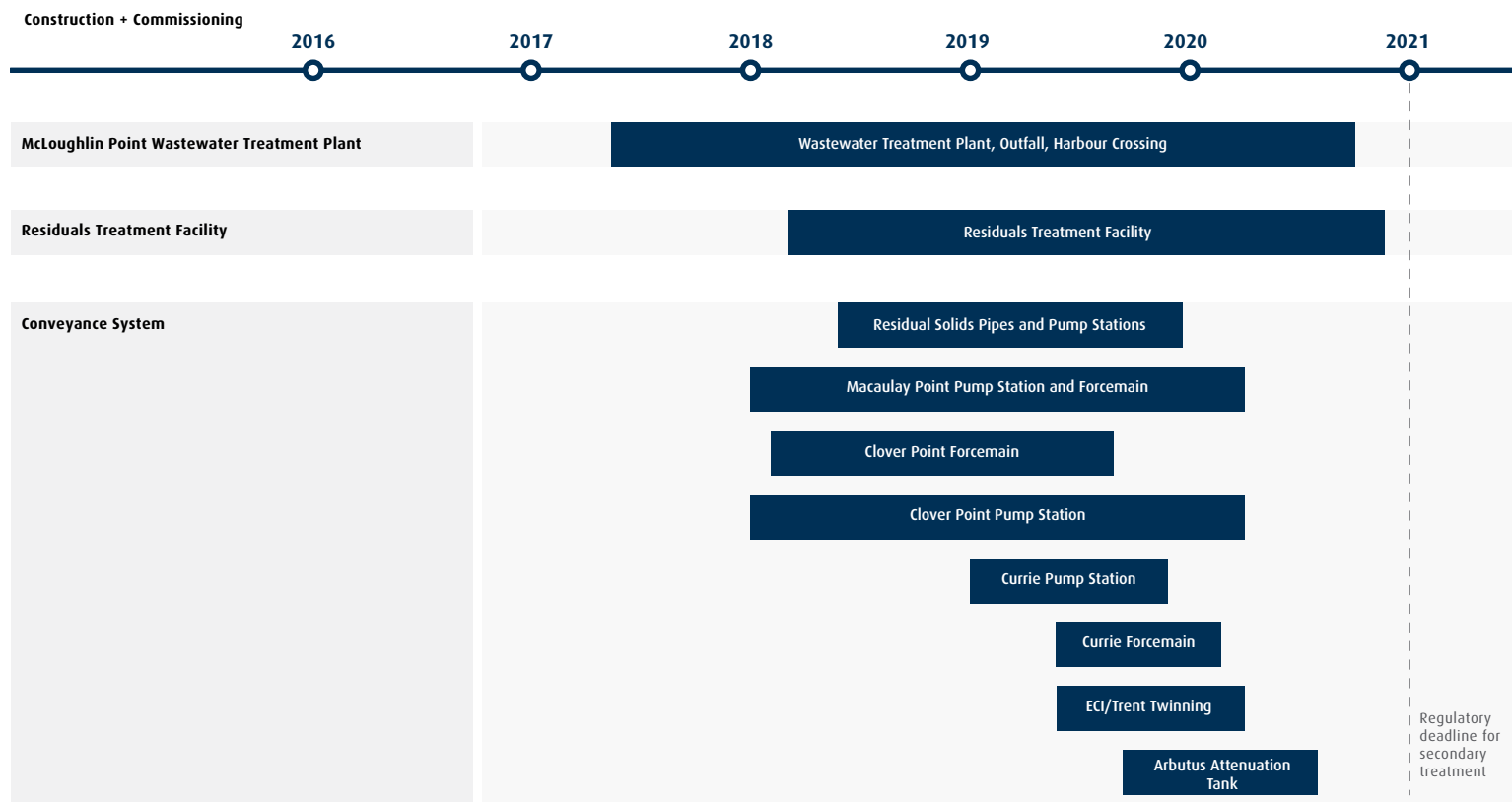


Project Schedule



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.

Wastewater Treatment Project Schedule*



* Schedule subject to updates as project planning progresses.

Ogden Point Construction



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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, and will take place from both sides of Victoria Harbour using a process called horizontal directional drilling. Two drill locations will be used: one at McLoughlin Point, and the second at Ogden Point near the James Bay Anglers Boat Ramp.

Anticipated work hours are Monday to Friday from 7:00 a.m. to 7:00 p.m. and on Saturday from 10:00 a.m. to 7:00 p.m. The boat ramp will be open for use during construction.

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)

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

Ogden Point Noise Mitigation



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Noise wall at Ogden Point Work Site

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.



Street view



Aerial view

McLoughlin Point Construction



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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.

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.*

McLoughlin Point Construction and Staging Areas



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Department of National Defence Lands at Work Point and CRD Lands at McLoughlin and Macaulay Points – approximate location of activities.

Utility and Conveyance Line	Staging Areas
Access Road	CRD Lands
DND Property Boundary	Temporary Relocation Yard
	Statutory Right of Way

0 50 100 150 200 250 Metres

Projection: UTM ZONE 10N, NAD83

DISCLAIMER
This map is for general information and may contain inaccuracies.



Operational Noise



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 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).

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



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.

Odour Control



State-of-the-Art Odour Control

The McLoughlin Point Wastewater Treatment Plant design includes state-of-the-art odour control. While the maximum allowable odour is 5 odour units (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.

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

An 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.

The McLoughlin Point Wastewater Treatment Plant will achieve the following:

- No detectable odour in the surrounding community
- State-of-the-art odour control
- 24-hour odour control monitoring system
- 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



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The McLoughlin Point Wastewater Treatment Plant has been designed so there will be no detectable odour by residents.

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.



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.

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



Draft Traffic Management Plan Map – Esquimalt



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Harbour Resource Partners (HRP), the contractor that is building the McLoughlin Point Wastewater Treatment Plant, has developed a Draft Traffic Management Plan to ensure that all project vendors and suppliers follow designated traffic routes.

The draft plan was developed using the following guidelines:

- Public safety for motorists, cyclists and pedestrians
- Impacts on local community
- Bylaw compliance

To develop the draft plan, HRP defined the type and flow of construction traffic and then options were evaluated for each type of construction traffic.

The draft Traffic Management Plan has been reviewed by staff from the Township of Esquimalt and will also consider input from communities. The plan is subject to approval by the Township of Esquimalt before it is implemented.



Draft Traffic Management Plan Map – Victoria (Ogden Point Construction)



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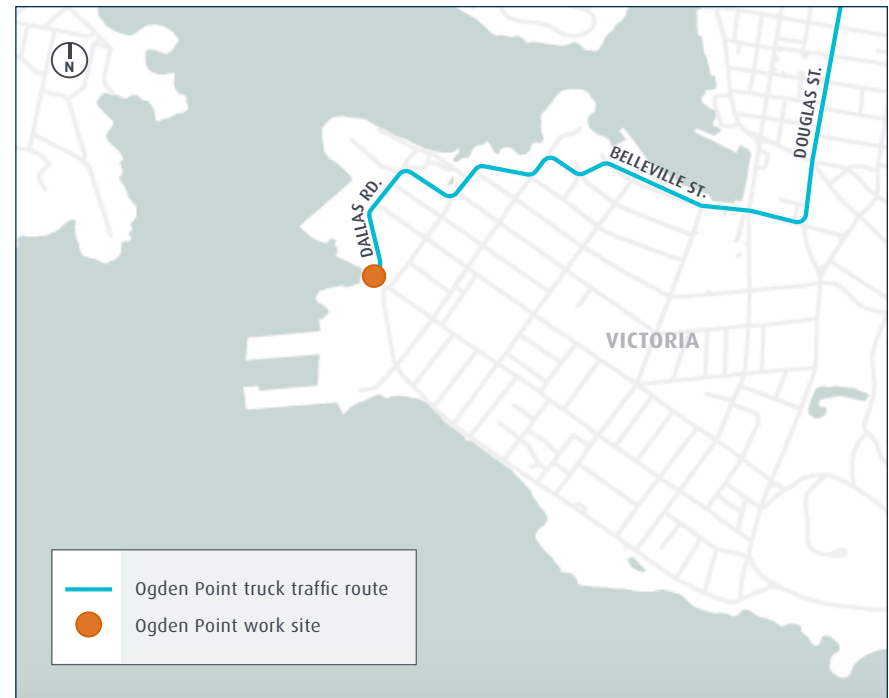
Harbour Resource Partners (HRP), the contractor that is building the McLoughlin Point Wastewater Treatment Plant, has developed a Draft Traffic Management Plan to ensure that all project vendors and suppliers follow designated traffic routes.

The draft plan was developed using the following guidelines:

- Public safety for motorists, cyclists and pedestrians
- Impacts on local community
- Bylaw compliance

This draft Traffic Management Plan addresses the construction at Ogden Point for the horizontal directional drilling. An updated Traffic Management Plan will be developed and brought to the community in advance of the pipe assembly on Niagara Street.

This draft Traffic Management Plan will be reviewed by staff from the City of Victoria, and will also consider input from communities, before it is implemented.



Upcoming Construction Activities



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While construction is beginning at Ogden Point and McLoughlin Point in April, project planning is underway and construction schedules are being developed for the other project components.

Communications and engagement activities will continue 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 liaison committee in Esquimalt will provide a forum for the discussion of issues relating to construction and operation of the McLoughlin Point Wastewater Treatment Plant.

HIGH LEVEL SCHEDULE OF UPCOMING COMMUNITY ENGAGEMENT

APRIL 2017

Victoria & Esquimalt

McLoughlin Point Wastewater Treatment Plant: Ogden Point and McLoughlin Point construction

FALL 2017

Victoria

Public realm improvements for James Bay (the Project Team will support the City of Victoria in its engagement process)

Clover Point Pump Station and public realm improvements

- 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
- Presentation to the City Council at a public meeting at 50% stage

Construction mitigation measures along Dallas Road and Niagara Street

Esquimalt

Macaulay Point Pump Station and Forcemain construction

EARLY 2018

Saanich

Residuals Treatment Facility, pipes and pump stations construction

Communications and Engagement



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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




Artist rendering

Community Meeting Notification



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MEETING NOTICE



Wastewater Treatment Project
Community Information Meetings: April 5, and April 12, 2017
Construction at Ogden Point and Minto Point

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 Saanich Islands.

The Project includes:

- wastewater treatment at Ogden Point and Minto Point
- a sewerage system to transport wastewater from the core area municipalities to the treatment plants
- additional treatment at the Esquimalt and Saanich Islands

The Ogden Point and Minto Point construction will include the installation of a new sewerage system, the installation of a new sewerage treatment plant and the installation of a new sewerage treatment plant at the Esquimalt and Saanich Islands.

You are invited to learn more about the Wastewater Treatment Project and upcoming construction in your area by attending a drop-in Community Information Meeting on:

Victoria
Date: Wednesday, April 5, 2017
Time: 5:00 to 8:00 pm
Location: 1001 Grand Parade, Vancouver Island Ballroom
Address: 463 Belleville Street, Victoria

Esquimalt
Date: Wednesday, April 12, 2017
Time: 5:00 to 8:00 pm
Location: Esquimalt Convention Centre, Esquimalt Branch
Address: 227 Adelaide Road, Esquimalt

For more information, please visit wastewaterproject.ca or email wastewater@crd.ca. Additional information and community engagement about future phases of construction will be posted to the website in the coming months.



Posted on the Wastewater Treatment Project website on March 28, 2017

wastewaterproject.ca



Home delivery via Canada Post

- 7,383 residents in James Bay
- 9,985 residents in Esquimalt



Emails to stakeholder groups and residents who signed up for project updates

NEWSPAPER AD



Wastewater Treatment Project
Community Information Meetings: April 5 and April 12, 2017
Construction at Ogden Point and Minto Point

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 Saanich Islands.

You are invited to learn more about the Wastewater Treatment Project and upcoming construction at Minto Point and Ogden Point by attending a drop-in Community Information Meeting on:

Victoria
Date: Wednesday, April 5, 2017
Time: 5:00 to 8:00 pm
Location: 1001 Grand Parade, Vancouver Island Ballroom
Address: 463 Belleville Street, Victoria

Esquimalt
Date: Wednesday, April 12, 2017
Time: 5:00 to 8:00 pm
Location: Esquimalt Convention Centre, Esquimalt Branch
Address: 227 Adelaide Road, Esquimalt

For more information, please visit wastewaterproject.ca or email wastewater@crd.ca. Additional information and community engagement about future phases of construction will be posted to the website in the coming months.



Victoria Times Colonist
March 25, 2017

Victoria News
March 24 and March 29, 2017

CAPITAL REGIONAL DISTRICT TWITTER



March 29, 2017

April 4, 2017

April 11, 2017