COMMUNITY INFORMATION OPEN HOUSE

Welcome

Wastewater Treatment Project
Treated for a cleaner future

Artist rendering of the McLoughlin Point Wastewater Treatment Plant

Welcome to the Wastewater Treatment Project Community Information Open House.

Construction is underway on the McLoughlin Point Wastewater Treatment Plant in Esquimalt, and the cross-harbour undersea pipe at Ogden Point in Victoria.

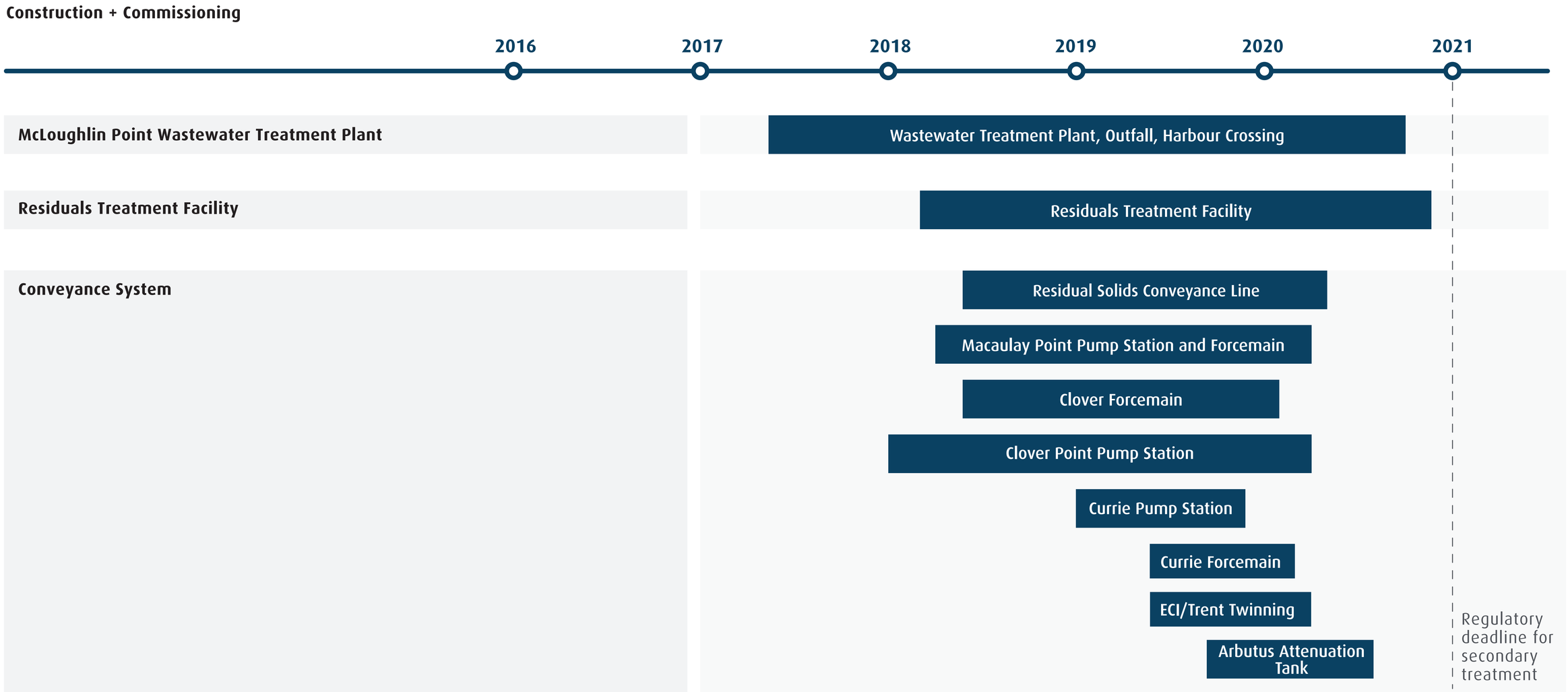
Construction of other Wastewater Treatment Project components, including the Clover Forcemain, Clover Point Pump Station, Macaulay Point Pump Station and Forcemain, Residual Solids Conveyance Line and Residuals Treatment Facility will begin in 2018.

The Wastewater Treatment Project Team is here to provide you with information and respond to your questions regarding construction activities in these locations.

Project Schedule

Wastewater Treatment Project
Treated for a cleaner future

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.

Project Funding

Wastewater Treatment Project
Treated for a cleaner future

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 through the P3 Canada Fund 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.

Artist rendering

COMMUNITY INFORMATION OPEN HOUSE

Communications and Engagement

Wastewater Treatment Project
Treated for a cleaner future

The Wastewater Treatment Project Team is engaging with residents throughout 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

24-7 Phone Line: 1.844.815.6132

HOW TO SIGN UP FOR PROJECT UPDATES

Send an email to **wastewater@crd.bc.ca** to let us know you are interested in receiving construction notices.

HOW TO FIND OUT ABOUT BUSINESS OPPORTUNITIES

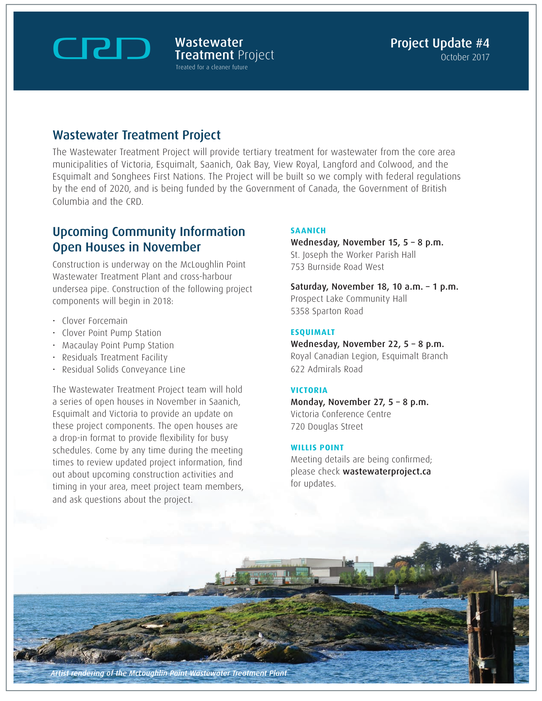
Register on BC Bid (**bcbid.gov.bc.ca**) and the CRD's Business Opportunities Website (**www.crd.bc.ca/about/contracts-rfps/current**) to receive email notifications of any bidding opportunities for the Project and the CRD.

COMMUNITY INFORMATION OPEN HOUSE

Community Meeting Notification

Wastewater Treatment Project
Treated for a cleaner future

MEETING NOTICE



Wastewater Treatment Project
Treated for a cleaner future

Project Update #4
October 2017

Wastewater Treatment Project

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

Upcoming Community Information Open Houses in November

Construction is underway on the McLoughlin Point Wastewater Treatment Plant and cross-harbour undersea pipe. Construction of the following project components will begin in 2018:

- Clover Forcemain
- Clover Point Pump Station
- Macaulay Point Pump Station
- Residuals Treatment Facility
- Residual Solids Conveyance Line

The Wastewater Treatment Project team will hold a series of open houses in November in Saanich, Esquimalt and Victoria to provide an update on these project components. The open houses are a drop-in format to provide flexibility for busy schedules. Come by any time during the meeting times to review updated project information, find out about upcoming construction activities and timing in your area, meet project team members, and ask questions about the project.

SAANICH
Wednesday, November 15, 5 – 8 p.m.
St. Joseph the Worker Parish Hall
753 Burnside Road West

Saturday, November 18, 10 a.m. – 1 p.m.
Prospect Lake Community Hall
5358 Sparton Road

ESQUIMALT
Wednesday, November 22, 5 – 8 p.m.
Royal Canadian Legion, Esquimalt Branch
622 Admirals Road

VICTORIA
Monday, November 27, 5 – 8 p.m.
Victoria Conference Centre
720 Douglas Street

WILLIS POINT
Meeting details are being confirmed; please check **wastewaterproject.ca** for updates.

Artist rendering of the McLoughlin Point Wastewater Treatment Plant

Posted on the Wastewater Treatment Project website on November 2, 2017

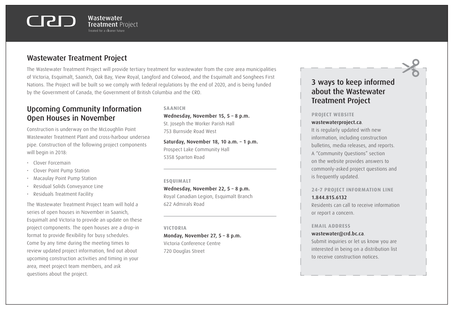
wastewaterproject.ca

Home delivery via Canada Post

- 58,800 residences in Victoria, Esquimalt and Saanich

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

NEWSPAPER AD



Wastewater Treatment Project
Treated for a cleaner future

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3 ways to keep informed about the Wastewater Treatment Project

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

24-7 PROJECT INFORMATION LINE
1.844.815.6132
Residents can call to receive information or report a concern.

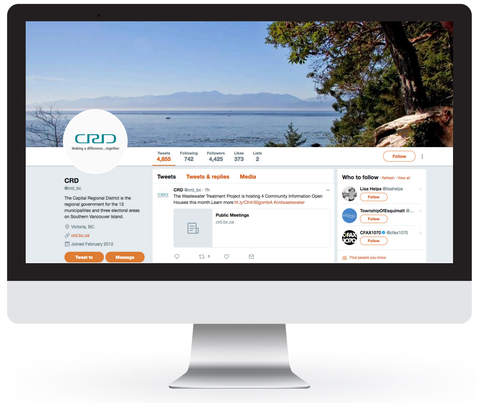
EMAIL ADDRESS
wastewater@crd.bc.ca
Submit inquiries or let us know you are interested in being on a distribution list to receive construction notices.

Peninsula News and Saanich News
November 3, 2017

Times Colonist
November 4, 2017

Victoria News
November 10, 2017

CAPITAL REGIONAL DISTRICT TWITTER



November 8, 2017
November 14, 2017
November 17, 2017
November 21, 2017
November 26, 2017

COMMUNITY INFORMATION OPEN HOUSE

Wastewater Treatment Project

Wastewater Treatment Project
Treated for a cleaner future

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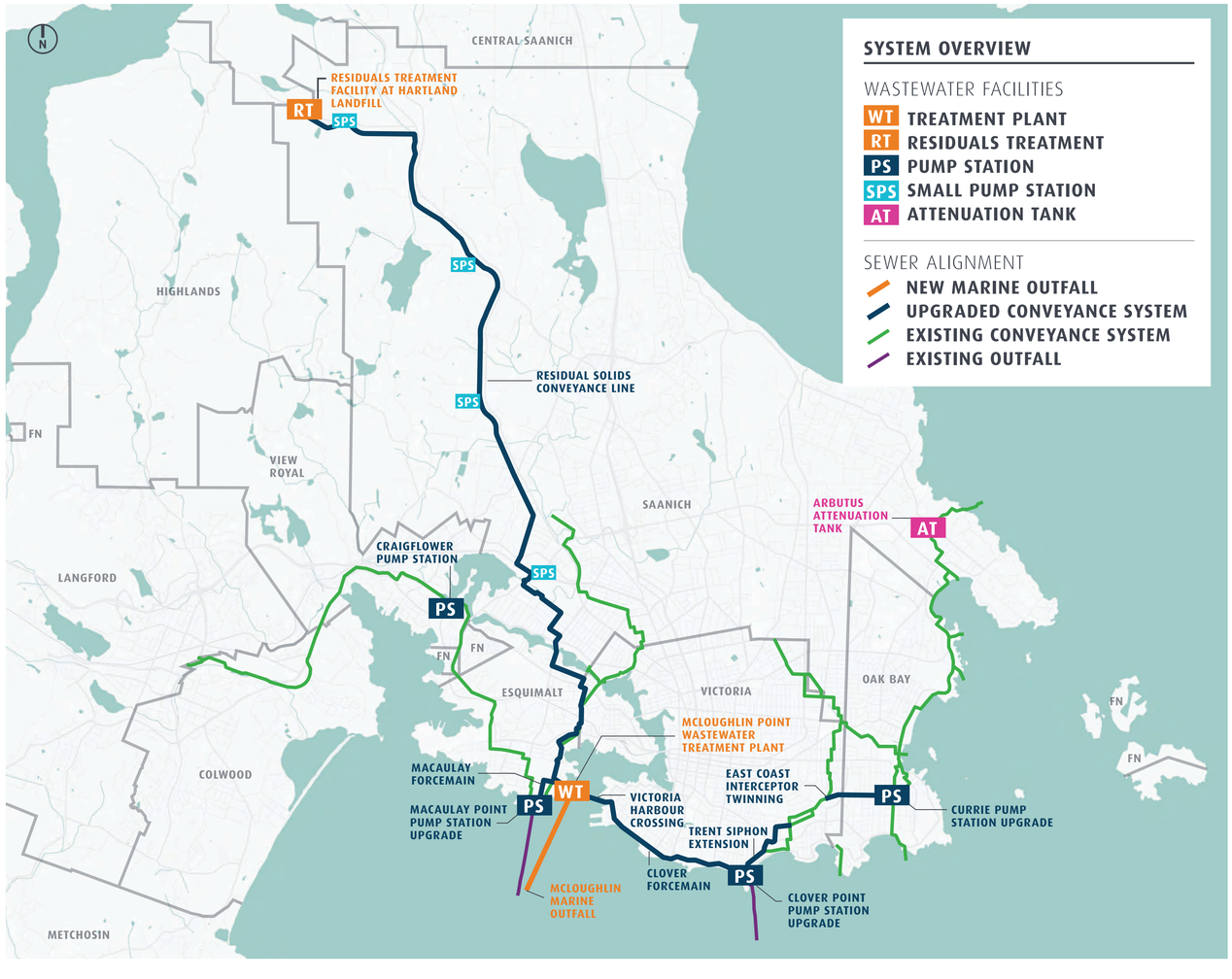


The Wastewater Treatment Project consists of three main elements:

MCLOUGHLIN POINT WASTEWATER TREATMENT PLANT

Located at McLoughlin Point, the wastewater 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 carry residual solids from the wastewater treatment plant to the residuals treatment facility.

COMMUNITY INFORMATION OPEN HOUSE

Residuals Treatment Facility Overview

Wastewater Treatment Project
Treated for a cleaner future

The Residuals Treatment Facility will be located within the footprint of the Hartland Landfill.

It will process residual solids produced by the McLoughlin Point Wastewater Treatment Plant into Class A biosolids, the highest quality product suitable for beneficial reuse.

The Residuals Treatment Facility will be completely enclosed and all treatment processes will be completed within closed containers.

Odour control systems will mitigate any potential odour issues from the facility. Noise from the facility will be minimal and will comply with District of Saanich bylaws.

OPERATION AND MONITORING FEATURES OF THE RESIDUALS TREATMENT FACILITY AND HARTLAND LANDFILL SITE

There will be a robust operations and maintenance plan in place at the Residuals Treatment Facility.

Water quality is regularly monitored by the CRD as part of the environmental monitoring program for the Hartland Landfill both on-site and near the property line, in addition to an annual sampling of residential wells in close proximity to Hartland.

A stringent containment and spill planning and response plan will also be prepared specifically for the Residuals Treatment Facility that will meet federal and provincial requirements for environmental protection and operator protection.

Residuals Treatment Facility

Wastewater Treatment Project
Treated for a cleaner future

The Hartland Landfill site was selected for the facility in 2013 after an assessment of potential sites that included technical, environmental, social and economic considerations.

Key benefits of the Hartland Landfill location include:

- locating the Residuals Treatment Facility next to the existing, active landfill and within the footprint of the landfill allows for future integration between the region's solid waste and liquid waste management plans
- the land is owned by the CRD
- the land is not part of the Agricultural Land Reserve, park or ecological land reserve
- distance from residential neighbours

The Hartland Landfill site was reconfirmed through the Wastewater Treatment Project Board's review in 2016 and approved as part of the Wastewater Treatment Project by the CRD Board in 2016.

Residuals Treatment Facility site within the Hartland Landfill

COMMUNITY INFORMATION OPEN HOUSE

Residuals Treatment Facility Construction Plan

Wastewater Treatment Project
Treated for a cleaner future

Construction is underway at the McLoughlin Point Wastewater Treatment Plant in Esquimalt

Construction is anticipated to begin in summer 2018 and will take approximately 2.5 years to complete.

As construction is confined to the Hartland Landfill, construction impacts to residents are anticipated to be minimal. Truck traffic is not expected to be significant within the capacity of the existing road.

A competitive process is underway to select a contractor to design, build, partially finance, operate and maintain the Residuals Treatment Facility over a 20-year term. The contractor must address community impacts including noise mitigation and dust control, air quality and odour mitigation, traffic management and public access, and safety within and around the construction site.

A Community Information Open House will be held in spring 2018 to provide more information on construction plans.

COMMUNITY INFORMATION OPEN HOUSE

Residual Solids Conveyance Line

Wastewater Treatment Project
Treated for a cleaner future

The Residual Solids Conveyance Line will include two pipes along with four or five small pump stations. The two pipes will be installed in a common trench where possible. Though the design is not complete, it is anticipated that a common trench will be used along the majority of the route.

- The first pipe will be approximately 250mm (10 inches) in diameter and 18.5km long, and will transport residual solids from the McLoughlin Point Wastewater Treatment Plant to the Residuals Treatment Facility for treatment.
- The second pipe will be approximately 350mm (14 inches) in diameter and 11.5km long, and will return the liquid removed from the residual solids during the treatment process to the Marigold Pump Station, from where it will be returned to the McLoughlin Point Wastewater Treatment Plant through the existing conveyance system.

SURFACE RESTORATION

The Wastewater Treatment Project will leave the surface of the conveyance line in as good or better condition than its current state. At the District of Saanich's request, the Project will make improvements to the existing infrastructure, including:

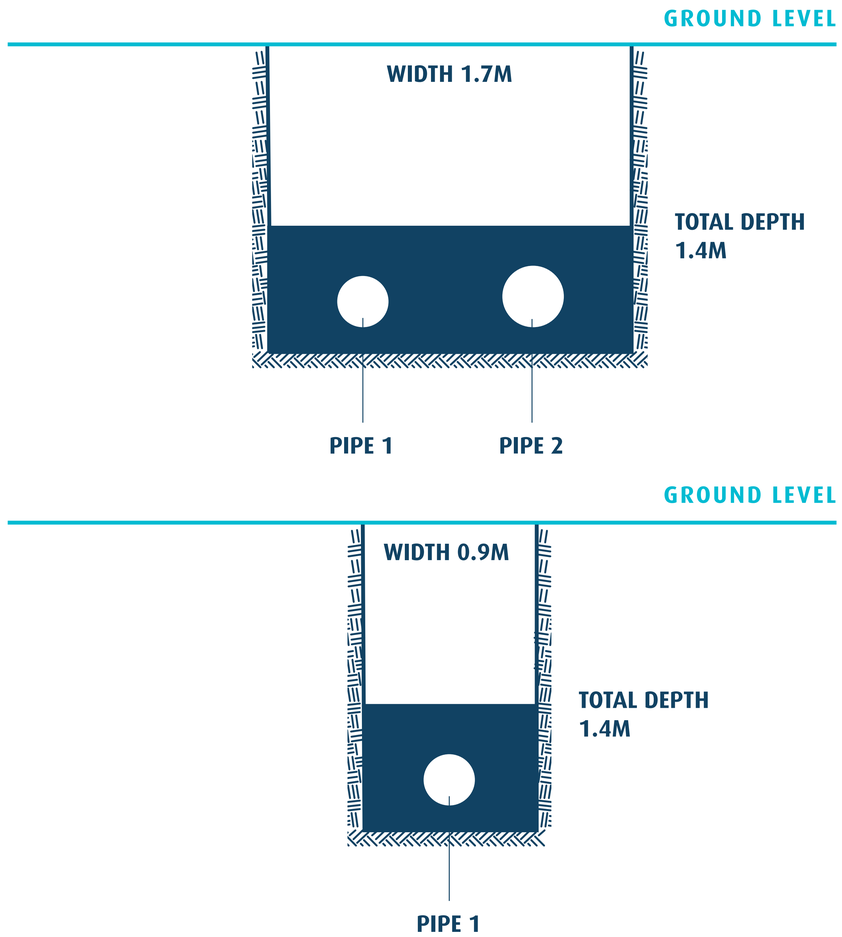
- new concrete curb, gutter and sidewalk on Grange Road which provides connection to three schools in the area;
- new concrete curb, gutter and sidewalk on Esson Road; and
- a new traffic circle at Vincent Avenue / Obed Avenue.

COMMUNITY INFORMATION OPEN HOUSE

Residual Solids Conveyance Line Map

Wastewater Treatment Project
Treated for a cleaner future

CROSS-SECTION OF TYPICAL TRENCH



COMMUNITY INFORMATION OPEN HOUSE

Residual Solids Conveyance Line Route Selection

Wastewater Treatment Project
Treated for a cleaner future

In 2014, alignment options were developed based on technical, environmental, social and economic considerations. The options were evaluated by the CRD, with input from the District of Saanich, Township of Esquimalt and City of Victoria, and a preferred alignment was selected.

The evaluation of the alignment has since been reviewed and validated by the Wastewater Treatment Project Team in consultation with the municipalities. The Project Team is working with the municipalities to ensure technical issues related to the alignment are addressed and, where possible, to coordinate municipal works with construction of the Residual Solids Conveyance Line.

While the route is close to final, it is still subject to input from communities. Feedback we receive during the November meetings will be considered, along with other technical and financial considerations, in finalizing the design. Feedback forms are available at the open houses, or feedback can be provided by e-mailing **wastewater@crd.bc.ca**.

FAVOURABLE CONSIDERATIONS FOR THE ROUTE INCLUDE:

- Shortest of all alignments
- Power available at pump station locations
- Good maintenance access
- No impact on wildlife habitat
- Lowest capital, operating and maintenance costs

COMMUNITY INFORMATION OPEN HOUSE

Residual Solids Conveyance Line Pump Stations

Wastewater Treatment Project
Treated for a cleaner future

EXAMPLES OF EXISTING PUMP STATIONS IN SAANICH

Albina Street Pump Station, Saanich

Pear Street Pump Station, Saanich

Vantreight Pump Station, Saanich

Pump stations are used by the CRD across the conveyance system to move wastewater from a lower to a higher elevation. The pump stations along the conveyance line will be similar to those shown above.

Four or five small pump stations will be built in road right-of-ways along the conveyance line, and where possible, will be located in low visual impact areas. Noise will be minimal and comply with District of Saanich bylaws.

The site of the pump stations depends on the elevation change. Exact locations will be finalized based on hydraulic considerations, and modest refinements may also be made based on public input.

ODOUR CONTROL

Pump stations will be designed with state-of-the-art odour control systems that contain and supress odour so there is no discernible odour in the community.

COMMUNITY INFORMATION OPEN HOUSE

Residuals Solids Conveyance Line Operations

Wastewater Treatment Project
Treated for a cleaner future

Operation and monitoring of the Residual Solids Conveyance System

All of the Wastewater Treatment Project's facilities, including the treatment plant, residuals treatment facility, pump stations and conveyance system, are designed to meet stringent post-disaster design requirements. This means they must be designed to remain operational following a major earthquake.

The Residual Solids Conveyance Line (RSCL) will be made of a highly durable material proven to perform well in earthquake prone areas. The RSCL will be controlled 24 hours a day, 365 days a year. Pipe operation would be automatically halted in the event of an alarm, based on change in flow or pressure, and incident response procedures would be immediately initiated. Pipe operation would only be resumed following investigation.

The CRD and core area municipalities operate over 175 pump stations and 110km of existing sanitary sewer pipe in the core area similar to the RSCL pipe. The CRD has a thorough ongoing operations and maintenance program, as well as a robust spill response plan. The CRD has a 24-7 operations line that residents can call to report a concern: **250.474.9630**.

ENVIRONMENTAL MANAGEMENT DURING CONSTRUCTION

An Environmental Management Plan (EMP) will be prepared to mitigate any potential impacts during construction. The EMP will address:

- Sediment and erosion control
- Stormwater and groundwater drainage control
- Air quality and dust control
- Soil and gravel handling
- Safe storage and handling of fuels, etc.
- Spill prevention and emergency response
- Safe working procedures

COMMUNITY INFORMATION OPEN HOUSE

Residual Solids Conveyance Line Construction

Wastewater Treatment Project
Treated for a cleaner future

Conveyance pipe installation

Conveyance pipe on bridge

Construction is anticipated to begin in summer 2018 and take approximately two years to complete.

The conveyance pipe will be installed in segments in a linear manner, to minimize impacts to residents and traffic. All work will be completed within existing road right-of-ways. This includes all watercourse crossings where the pipe will cross over top of existing culverts or hang underneath existing bridges.

While detailed construction plans will be developed by the contractor, the sequence of construction is anticipated to be as follows:

1. Survey the pipe location and confirm existing underground utilities
2. Install traffic controls and construction signage
3. Cut the pavement
4. Join the pipe and store it on the surface of the ground
5. Dig the trench and place the pipe in the trench
6. Backfill the trench and compact the surface
7. Pave and restore the surface

COMMUNITY INFORMATION OPEN HOUSE

Residual Solids Conveyance Line Construction

Wastewater Treatment Project
Treated for a cleaner future

A key focus of the project will be to ensure people have as much information as possible in advance so they can plan for construction activities.

Communications and engagement activities will keep residents and stakeholders informed of project plans, construction and traffic information. The Project Team will receive and respond to questions and concerns raised by the community.

A Community Information Open House will be held in spring 2018 to provide more information on traffic management and construction plans.

TRAFFIC MANAGEMENT DURING CONSTRUCTION

For the most part, no roads will be closed, but single lane alternating traffic will be required in some sections. Occasionally, local detours will be put in place. Traffic control personnel will direct traffic where required.

The contractor will work with municipal staff to develop a traffic management plan using the following guidelines:

- public safety for motorists, cyclists and pedestrians
- impacts on the local community
- bylaw compliance

DRIVEWAY ACCESS

Access to driveways will be maintained except during short periods when the work is advancing directly in front of a driveway. Access will only be interrupted during working hours and will be restored at the end of each work day. Residents will be informed in advance of construction so alternate access arrangements can be made.

COMMUNITY INFORMATION OPEN HOUSE

Arbutus Attenuation Tank

Wastewater Treatment Project
Treated for a cleaner future

The Arbutus Attenuation Tank is a 5,000m^3 **underground** concrete basin that will temporarily store wastewater during high rainfall events, to reduce the number of sewer overflows.

Once high storm flows have passed, the contents of the tank will empty back into the sewer system and flow to the McLoughlin Point Wastewater Treatment Plant for treatment.

The tank will be kept under negative air pressure to draw air within the tank directly into an activated carbon absorber system that will contain, suppress and treat potential odours. This system has been implemented successfully at the Marigold Attenuation Tank.

HARO WOODS PARK

In July 2013, Saanich Council approved rezoning that enabled a land exchange agreement with the CRD, which allows the Arbutus Attenuation Tank to be installed on lands that are already partially cleared and have been previously disturbed during the construction of the existing sewers. The land exchange secured the long-term preservation of the vast majority of Haro Woods as a nature park, adding 2.8 hectares of land to Saanich's park inventory.

As part of the construction of the Arbutus Attenuation Tank, there will be road frontage improvements including bike lanes, sidewalks and stormwater management.

HARO WOODS AND ARBUTUS ATTENUATION TANK LOCATION

- CRD Owned Lot and site of Arbutus Attenuation Tank rezoned as P-2WL (Utility Wood Land)
- Saanich Owned Lots rezoned as P-4N
- University of Victoria Owned Lot

COMMUNITY INFORMATION OPEN HOUSE

Arbutus Attenuation Tank

Wastewater Treatment Project
Treated for a cleaner future

Construction is expected to begin in 2019 and will take approximately one year to complete.

As a result of community feedback during the rezoning process, a number of key design features were incorporated:

- the tank will be constructed in a partially cleared and previously disturbed portion of Haro Woods
- the design was optimized to reduce its footprint
- the tank was designed to function under most operational requirements without the use of pumps, filling by gravity and draining through the use of a siphon
- the area will be landscaped with native vegetation so that it blends with the natural woodland area
- after construction, access will be maintained through the site to permit movement of the public and wildlife

The Arbutus Attenuation Tank will be located at 2413 Arbutus Road, within Haro Woods

COMMUNITY INFORMATION OPEN HOUSE

What's Next

Wastewater Treatment Project
Treated for a cleaner future

The Wastewater Treatment Project Team will hold another community information meeting in Saanich in spring 2018 to provide more information on the Residuals Treatment Facility, the Residual Solids Conveyance Line, and construction and traffic management plans.

RESIDUALS TREATMENT FACILITY

END OF 2017

Complete site preparation in advance of construction

EARLY 2018

Award a contract to design, build, partially finance, operate and maintain the RTF

SUMMER 2018 TO LATE 2020

Construction

END OF 2020

Comply with federal and provincial regulations for wastewater treatment

RESIDUAL SOLIDS CONVEYANCE LINE

SPRING 2018

Finalize design, following public input

SUMMER 2018 – SUMMER 2020

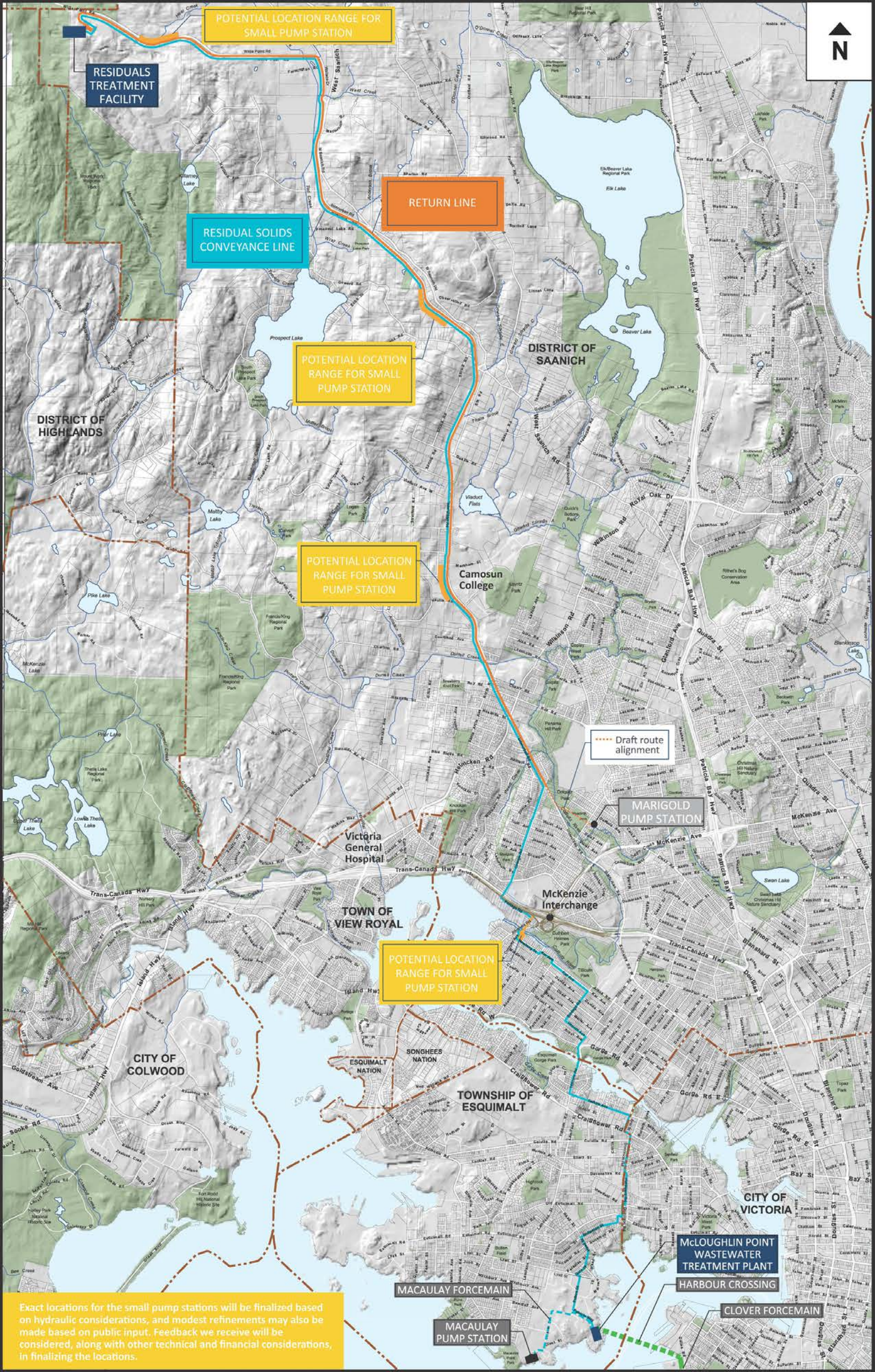
Construction

ARBUTUS ATTENUATION TANK

MID 2019 – MID 2020

Construction

Scope to include road frontage improvements, including a new bike lane and sidewalk


POTENTIAL LOCATION RANGE FOR SMALL PUMP STATION
RESIDUALS TREATMENT FACILITY
RETURN LINE
RESIDUAL SOLIDS CONVEYANCE LINE
POTENTIAL LOCATION RANGE FOR SMALL PUMP STATION
POTENTIAL LOCATION RANGE FOR SMALL PUMP STATION
POTENTIAL LOCATION RANGE FOR SMALL PUMP STATION
N
DISTRICT OF SAANICH
DISTRICT OF HIGHLANDS
Camosun College
Draft route alignment
MARIGOLD PUMP STATION
Victoria General Hospital
McKenzie Interchange
TOWN OF VIEW ROYAL
CITY OF COLWOOD
ESQUIMALT NATION
SONGHEES NATION
TOWNSHIP OF ESQUIMALT
CITY OF VICTORIA
McLOUGHLIN POINT WASTEWATER TREATMENT PLANT
HARBOUR CROSSING
CLOVER FORCEMAIN
MACAULAY FORCEMAIN
MACAULAY PUMP STATION
Exact locations for the small pump stations will be finalized based on hydraulic considerations, and modest refinements may also be made based on public input. Feedback we receive will be considered, along with other technical and financial considerations, in finalizing the locations.