

Core Area Wastewater Treatment



Commissioning Activities Update

Capital Regional District | July 2021

The Capital Regional District (CRD) is currently carrying out ongoing commissioning activities at the McLoughlin Point Wastewater Treatment Plant (MPWWTP) in Esquimalt, the Residuals Treatment Facility (RTF) located north of Hartland Landfill in Saanich and the Residuals Solids Conveyance pipeline that connects both facilities.

McLoughlin Point Wastewater Treatment Plant

- Maintenance and Commissioning activities at the Macaulay Point Pump Station are generating higher than usual odours. Staff are working to rectify this issue as soon as possible.
- Maintenance activities are occurring in the primary treatment system of the MPWWTP between June 23 and 25 and again between July 12 and 16. These activities, that will occur every 3 months, involve cleaning the primary lamella plate settlers of accumulated solids and will occur during daytime hours. Every effort will be made to minimize odours beyond the Plant boundary during this work.
- Optimization and fine tuning of the odour control system is ongoing. All of the primary and secondary treatment vessels have their head space extracted and scrubbed through odour control units however balancing of these spaces is being fine-tuned to ensure no odour escapes during operation
- Critical maintenance and warranty work on vessels is more prevalent during start-up operations. This work requires covers or vessel lids to be removed in part or entirely which negatively impacts the vessel head space extraction and results in fugitive odours. Efforts continue to be made to minimize the duration that the lids are removed to reduce the negative impact on odours

Residuals Treatment Facility

- Current activities at the RTF include fine-tuning a number of components throughout the facility so that the plant can function as designed
 - Anaerobic digester operations have been stabilized
 - Work on the dryer to achieve consistent operations is ongoing
- Once this work is complete, the Facility will be able to consistently turn residual solids from the McLoughlin Point Wastewater Treatment Plant into dried Class A biosolids
- During this commissioning phase, all dewatered residuals were deposited at Hartland Landfill as controlled waste in accordance with the facility's operational certificate (similar to other sludge historically received at the landfill) while dried biosolids have been mixed with dirt for use as cover material that will eventually be landfilled with other municipal solid waste

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- The disposal of this material is not anticipated to have any environmental or climate implications due to the controls that are in place at Hartland Landfill to ensure the protection of groundwater resources and collection of landfill gas
- The handling and disposal of wastewater residuals at Hartland Landfill does not pose any risk to the public
- The interim disposal process is different than how Class A biosolids will be beneficially used at Hartland Landfill in the future when Lafarge Canada, the cement plant that will be using the CRD's biosolids as an alternate fuel source, is shut down for annual maintenance
- During the annual cement plant shut-down periods (approximately four to six weeks per year) the biosolids will be used at Hartland Landfill as a nutrient additive to improve vegetation growth in areas of the landfill and as an engineered biocover to mitigate fugitive methane emissions
- Staff anticipate Lafarge will be able to start receiving the CRD's Class A biosolids this summer

Residuals Solids Conveyance Pipeline (Esquimalt and Saanich)

- The Residuals Solids Conveyance Pipeline that conveys fluid consisting of 1.5 to 2% concentration of solids from McLoughlin Point WWTP to the RTF includes a series of pump stations that pump the fluid. The pipelines are pressurized (forcemains) between the pump stations and air is relieved from these forcemains at the geographical high points of the pipe. This air is forced through odour control equipment to reduce odours in the vicinity of these air release valves. The chambers in which these air release valves are located appear to be frequently inundated by groundwater rendering the odour control equipment ineffective. Work is being done to reduce the groundwater entering these chambers and thereby optimize the odour extraction equipment.

Conveyance System

- The Arbutus Attenuation Tank is in the commissioning and testing phase
- Final remediation of a manhole, operational fill testing and odour control testing will begin the week of July 19 and these activities have the potential to cause a temporary increase in noise and odour
- Work on the tank is expected to be complete this summer with landscaping and restoration of the site continuing into the fall of 2021

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- Once work is complete, the Arbutus Attenuation Tank will be equipped with odour controls and will be used to temporarily store wastewater flows during high volume storm events to reduce the number of sewer overflows along the coastline

These commissioning activities may result in the generation of intermittent odours near each facility.

Some operating and equipment challenges are not uncommon in the period of time immediately after handover of a facility from a contractor to an operator, as a period of fine-tuning and optimizing operations is to be expected.

CRD staff and facility contractors are making every effort to limit the source and impact of odour around the wastewater treatment facilities and will continue to monitor this issue as work proceeds.

The CRD remains mindful of the impact this has on residents and is grateful to our local communities for their patience and will provide regular updates as we work toward normal operating conditions.

Last updated: July 15, 2021