Core Area Wastewater System

Community Update

Capital Regional District | June 2024

Background

The Capital Regional District (CRD) is responsible for operating the McLoughlin Point Wastewater Treatment Plant (MPWWTP) in Esquimalt and the conveyance system that directs wastewater to the treatment plant and connects it to the Residuals Treatment Facility.

The CRD continues to optimize the treatment plant and conveyance infrastructure to minimize any impacts to the community. Additionally, the CRD monitors odour on a daily basis and responds to any community odour concerns received.

McLoughlin Point Wastewater Treatment Plant Information & Updates

- In 2017, in accordance with the Community Impact Mitigation & Operating Agreement between the Township of Esquimalt and the CRD, the Wastewater Treatment Project (WTP) established the Esquimalt Liaison Committee (ELC) to provide a forum for the discussion of issues relating to the wastewater infrastructure. Since its inception, the ELC has been engaged and provides continual feedback on the Plant's odour mitigation strategy and ongoing odour concerns. The next ELC meeting is July 11, 2024.
- MPWWTP was designed in accordance with the Project Agreement to treat all odour-laden air before discharge. The Plant has a sophisticated air collection and handling system, with carbon treatment to manage odour-laden air from the process systems.
- During regular operation all exhausted air at and beyond the Plant boundary property line and the shoreline meet the maximum odour concentration of five odour units per cubic meter.
- An internal audit of the odour collection and treatment systems, as well as an analysis of previous odour concerns has been completed. This audit will help shape future odour mitigation strategies.
- Elements of the audit included an odour assessment using dispersion modelling, odour collection upgrades, revisions to plant maintenance procedures and a recommendation for further review of findings to validate the odour mitigation strategy.
- CRD staff continue to log and investigate all odour concerns from the community. This information is used to further refine odour modelling and understand the impacts of maintenance activities on odour dispersion in and around the plant.
- Odour mitigation projects completed in 2023 include:
    1. New H2S sensors to improve data collection
    2. Atmospheric dispersion modelling
    3. Updated Plant maintenance procedure
    4. Odour collection study to inform system upgrades in 2024

- System upgrades scheduled for 2024 include:
  1. Secondary odour control system upgrades
  2. Primary treatment process improvements
  3. New process tank covers to reduce maintenance project timelines and associated odour impacts

  Note: All upgrades will improve system performance and reduce odour emissions

Conveyance System Information & Updates

- The odour control systems for the Residual Solids Conveyance Line (RSCL) are also fully functional and operate as per design specifications during regular operating conditions. Like MPWWTP, the CRD continues to monitor the performance of these odour control systems and optimizes odour removal where possible.
- The odour control system at Macaulay Point Pump Station is being investigated to ensure optimal odour removal prior to being emitted from the station.
- The CRD investigates every odour concern it receives to determine if the odour is related to the Plant. Several recent investigations that utilized data such as location, time of day, wind direction and Plant operational activities, indicate that there may be other potential sources of odour near the Plant that are not related to the Plant.
- Reminder: many sewage-like smells can be caused by non-CRD sewage infrastructure, the natural ebb and flow of the ocean in the inner harbour and potentially nearby businesses.
- CRD staff are committed to investigating all odour concerns and if an investigation reveals that the source of the odour is not coming from the plant, the CRD will communicate that information to the public.
- Testing has revealed that there are 16 properties that may have their sewer drainage connected to the City of Victoria's storm drain system. This means that sewage and waste are likely being discharged from the identified properties into municipal storm drainpipes. Municipal drainpipes have little to no water flow in the summer months due to a lack of rainfall. Lack of water flow in municipal storm drains means that waste would accumulate causing significant odours.
- Bacteriological testing has confirmed discharges through an outfall at Barnard Park into West Bay. The testing indicates significantly elevated levels of wastewater contamination which could be causing odours in and around the identified area.
- Elevated levels of hydrogen sulfide have been confirmed at two storm drain manholes on Hereward Road, which indicates wastewater exists in the storm drain system.

Odour Advisory & Maintenance Activities

- The carbon that captures odours at various points in the system is nearing the end of useful life expectancy and is currently being replaced. When carbon is nearing the end of its useful life, odours may increase. All carbon in the system will be replaced on or before August 2. Please note, that the replacement of the carbon in the system may generate intermittent odours.
- Current weather conditions are favourable to complete the above scheduled maintenance. Should weather conditions change substantially, maintenance will be re-rescheduled.

Update July 17, 2024

The carbon material used in our odour control systems at McLoughlin Wastewater Treatment plant is approaching the end of its useful lifespan. On July 15 crews began scheduled maintenance to replace the carbon as previously communicated in the Core Area Wastewater System Community Update. On the morning of July 16, during the routine replacement of the carbon, a section of pipe came loose. The loose pipe resulted in the need for emergency repairs. To keep Operators safe and facilitate the emergency repairs, the Plant was required to shutdown a portion of its odour control system. During the emergency repairs, elevated odours were observed in the communities surrounding McLoughlin Point. All possible steps were taken to accelerate the repair and prioritize mitigation of odour impacts to community residents. The odour control system is now online.

The routine replacement of the carbon is a three-step process, after each step is complete, noticeable odours are minimized. Step one of the process is expected to be to be complete by July 20; step two is expected to be complete by July 27 and step three is expected to be complete by August 2. The remaining maintenance should have minimal odour impacts. Once the three-step process is complete and the carbon has been fully replaced, intermittent odours from the Plant should no longer be detectable.

How to Report an Odour Concern

If you experience an unpleasant odour which you believe is coming from the Core Area Wastewater Treatment System, call 250.940.7400 or email wastewater@crd.bc.ca. Please include time of day, location and as much pertinent information regarding the odour as possible, as this information will help assist us in determining whether the odour is related to the Plant.

For more information on the Core Area Wastewater Treatment System visit www.crd.bc.ca/wastewater

Residuals Treatment Facility

- In late March, annual cleaning of a Residuals Treatment Facility (RTF) digester and receiving tank commenced and continued through mid-April. This required maintenance had the potential to be odorous, so an odour advisory was issued proactively. Although odours were noted on-site, monitoring did not detect significant off-site odours. No odour complaints related to this work were received.
- The annual RTF dryer maintenance shutdown is scheduled for mid-June. During this time, the facility will not be loading out dried biosolids.

Biosolids Beneficial Reuse

- Delivery of Class A biosolids to the Lafarge cement kiln in Richmond (the preferred option under the Biosolids Beneficial Use Strategy) is currently paused. Lafarge has not been able to receive biosolids for the majority of 2023 and into 2024. One shipment of biosolids was shipped to Lafarge at the end of May before an equipment malfunction forced the plant to shutdown for repairs. These repairs are expected to be complete by late-June.
- The CRD has met with executives from Lafarge to discuss any process improvement that might be implemented to improve the reliability of shipments to the cement kiln.
- While the cement kiln has been unavailable, Class A biosolids have been managed by mixing with sand at Hartland, then shipping to a gravel quarry near Cassidy, BC, where they are currently being stored under cover before being used to reclaim the site.
- When the gravel quarry is unavailable, landfilling is the only option. Biosolids have not been landfilled since the end of March.
- Management of biosolids at the Cassidy quarry and Hartland Landfill are not anticipated to have any environmental implications due to the controls that are in place (storage under cover, leachate control) to ensure the protection of adjacent ground and surface water resources.
- Best management practices are implemented during the hauling, blending and application of biosolids as BGM and landfilling to ensure effective dust control.

Long-term Biosolids Management Strategy

- On June 12, 2024, the Capital Regional District Board approved the final Long-term Biosolids Management Strategy. This strategy outlines a sustainable approach to managing biosolids produced within the region and consists of a portfolio of options that prioritize advanced thermal processing while also considering out-of-region and in-region contingency options to ensure regulatory compliance and adaptability.
- The Long-Term Biosolids Management Strategy is subject to provincial approval as part of the CRD's commitments under the Core Area Liquid Waste Management Plan.
- Monthly biosolids production reports are available online and you can find out more information on the Biosolids Beneficial Use Strategy at www.crd.bc.ca/biosolids.