



The Corporation of the City of Courtenay

# Staff Report

**To:** Council

**File No.:** 5340-03

**From:** City Manager (CAO)

**Date:** September 11, 2024

**Subject:** Non-Enforcement of “Sanitary Sewer Use, Extension and Connection Bylaw No. 1327” - Update

## PURPOSE:

The purpose of this report is to seek Council approval for the temporary non-enforcement of the Sanitary Sewer Use, Extension, and Connection Bylaw No. 1327, Section 2.3.2 to allow for the Comox Valley Regional District (CVRD) to discharge water produced during the excavation of the wet well at the new sanitary lift station on Comox Road into the City sanitary collection system.

## BACKGROUND:

The CVRD is undertaking excavation for the wet well of the new Regional Lift Station on Comox Road between the end of July and the end of October 2024. The timing of the work aligns with the driest time of the year, thereby limiting the amount of groundwater or storm water intrusion into the wet well excavation site. The dewatering plan includes a network of wells to temporarily lower the water table of the site. The flows from these wells and the dewatering flows of the main excavation site will be piped into an on-site settling and filtration bin with the primary discharge back to the environment or into the roadside swale.

In the event the settling and filtration equipment becomes overloaded, the discharge is too turbid or the chemical makeup of the water is such that it cannot be discharged to ground, the CVRD has requested the authorization to discharge dewatering flows into the City’s sanitary collection system, see Attachment 1. The current Sanitary Sewer Use, Extension, and Connection Bylaw No. 1327, Section 2.3.2 states “*No person shall cause or permit any storm water or uncontaminated water<sup>1</sup> to be discharged to the sanitary sewer*”. Council approval is requested to allow for non-enforcement of this clause.

The period of non-enforcement would commence in late July until late October. If construction is complete prior to the expected end date the authorization would terminate at that time.

The proposed secondary disposal option requires the use of manhole 4-001 located to the west of the construction site. The transmission main from this manhole crosses under Comox Road for a distance of 32 meters before reaching the Courtenay Pump Station. As provided by the CVRD, the maximum possible daily discharge would be 10,833 m<sup>3</sup>/day with a maximum instantaneous peak flow rate of 126 L/s. It is understood that the current pumping capacity of the Courtenay Station is to a maximum sustained flow of 300 L/s.

To aid staff in the review and facilitate this request for non-permitted use of the City’s sanitary sewer system for the purpose of construction (ground) water discharge, the City requested water quality analysis data from samples obtained during the drilling stage of the construction project.

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<sup>1</sup> “Uncontaminated water” means any wasted water not contaminated with wastewater and which is suitable for discharge to storm sewers.

“Wastewater” means the water-borne wastes of the community derived from human or industrial sources including domestic wastewater and industrial wastewater, but does not include rainwater, groundwater or drainage of uncontaminated water.

**DISCUSSION:**

The CVRD's Construction Environmental Management Plan, summarizes the regulatory requirements for environmental monitoring, permitting, and mitigation measures during the project, see **Attachment 1**.

The CVRD's construction management team completed the requested groundwater sampling at 1992 Comox Road (the proposed site of the new Courtenay Pump Station) during the drilling process. Sampling was completed for turbidity, pH, temperature, benzene, toluene, ethylbenzene, xylenes (BTEX), volatile petroleum hydrocarbons (VPH), light/heavy extractable hydrocarbons (LEPH/HEPH), polycyclic aromatic hydrocarbons (PAH), total metals, and total suspended solids (TSS). A memorandum summarizing the testing results in comparison to the required parameters for discharge water in City of Courtenay Bylaw No. 1327 was provided by the CVRD, see **Attachment 2**.

The water within the test pit was measured to have a turbidity between 14.4 and 29.5 NTU, a pH of 4.18, and temperature of 20.3 °C. Bylaw No. 1327, Section 2.2.1 dictates that no discharge to the sanitary system is allowed for waters having a pH factor lower than 5.0 or higher than 9.5. BTEX, VPH, LEPH/HEPH and PAH results were below the laboratory's detection limits. Metals and TSS were detected above the laboratory's detection limits, but below the Bylaw No. 1327 limits.

Based on the testing results and in response to the aforementioned groundwater samples that failed to meet the City's bylaw requirements, the CVRD has a few forward options; provide further testing from across the site as recommended by the July 31<sup>st</sup> technical memorandum and/or introduce a pre-treatment process for the collected groundwater, see **Attachment 3**. In short; the proposed pre-treatment process suggests for low pH the addition of sodium hydroxide or lime using an injection system at the influent port of the settlement tank and for high pH bubbling with carbon dioxide within the settlement tank. These treatments will effectively adjust the pH levels to within bylaw compliance requirements prior to discharge.

**POLICY ANALYSIS:**

The City of Courtenay adopted the Bylaw Compliance Strategy in 2023, classifying environmental protection as a level one priority item.

Regional Growth Strategy: 2B-1 Local governments should work together to adopt consistent actions and policies for environmental and natural resource protection, through OCP's, zoning and other mechanism, that promote the principles of precaution, connectivity and restoration.

**FINANCIAL IMPLICATIONS:**

The CVRD will ensure that any flows conveyed are captured through a meter installed at the discharge point. These volumes will be subtracted from the City's billed flows into the Courtenay Pump Station.

**OPTIONS:**

1. THAT Council approve the CVRD's request to discharge excavation water into the City of Courtenay sanitary sewer system as part of the Courtenay Pump Station project up until December 15<sup>th</sup>, 2024 under the following conditions:
  - that the water quality parameters have been qualified through further testing or on-site pre-treatment process has been effectively deployed and the CVRD has provided documentation that all regulatory assurances have been met before discharging into the sanitary collection system; and,
  - an Indemnification Agreement has been executed by both parties.

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2. THAT Council deny the request and advise the CVRD of this decision.
3. THAT Council provide alternative direction to Staff.

**ATTACHMENTS:**

1. 2024-05-29 Comox Valley Sewer Conveyance CEMP
2. 2024-07-31 Memorandum: Groundwater Sampling for Discharge – Courtenay Pump Station
3. 2024-08-27 Memorandum: Adjusting pH for Dewatering Activities – 1992 Comox Road, Proposed Courtenay Pump Station
4. 2024-07-17 Staff Report: Non-Enforcement of "Sanitary Sewer Use, Extension and Connection Bylaw No. 1327"

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