Office of the Chief Administrative Officer

770 Harmston Avenue, Courtenay, BC V9N 0G8
Tel: 250-334-6000 Fax: 250-334-4358
Toll free: 1-800-331-6007
www.comoxvalleyrd.ca

Comox Valley REGIONAL DISTRICT

January 5, 2023

Sent via email only:

Dear Resident:

Re: CVRD Update on Groundwater Protection Measures for Sewer Conveyance Project

We are reaching out to inform you that we are aware of the notice shared by the group known as *Save the Quadra Sands Aquifer* that has circulated within the community as of late December. We feel it is important to reassure you of the protection measures that will be followed throughout design, construction and subsequent operation of the sewer pipeline.

Throughout the Liquid Waste Management Plan (LWMP) process, the Comox Valley Regional District conducted a rigorous consultation process guided by engineering consultants and a technical and public advisory committee, to select a preferred conveyance solution for the Sewage System. Integral to the process was a series of six public engagement sessions with Lazo Hill residents to address questions and concerns about the tunneling portion that was chosen for the final selected sewer conveyance route. The engagement process concluded by issuing a Lazo Hill Groundwater Protection Policy, for construction and operation of the pipeline under Lazo Hill.

The CVRD is designing the pipeline to the most stringent standard to ensure the pipe will not pose a risk to groundwater wells, and will be built to rigorous seismic design standards. The sewer pipe will be installed above, and will not enter, the Quadra Sands Aquifer. There are no stipulated setbacks laid out in the Municipal Wastewater Regulation (70)(3) for sewer conduits. Based on independent professional advice, the CVRD elected to adopt a 20-metre safety setback for this project.

The installation methodology for the Horizontal Directional Drilling (HDD) of the pipeline has been thoroughly researched and assessed. Engineering services conducted geotechnical and hydrogeological assessments in the Lazo Hill area to better understand the ground conditions and groundwater levels to help determine if tunneling could be supported.

Findings from the assessments concluded that the pipe can be operated at a lower pressure with the tunneling option. The key benefits of a tunneled pipe include:

- The line will be 'gravity fed' which means the pipe is not under pressure through this section. This operational parameter further reduces what was already a very low risk of a leak, because there's no pressure on the inside of the pipe.
- The gravity slope allows the route to remain a minimum of 10 metres above the Quadra Sands Aquifer – further protecting this critical water source.
- Because the pipe has to be strong enough to withstand the stress of its installation, the pipe's strength far exceeds what is required for zero-pressure operational flow.
- The pipe material will be High Density Polyethelene (HDPE), which is a preferable material because it is flexible, does not corrode, has better resistance to erosion, and has excellent seismic resilience.

Horizontal direction drilling is used successfully worldwide. The process involves the use of a non-toxic drilling fluid to stabilize the borehole, remove cuttings and protect and cool the drill. The drilling fluid is injected under pressure, which can create the potential for hydrofracture of the drilling fluid to the ground surface along shallower sections of the HDD alignment. To mitigate the risk of hydrofracture, the following measures are employed:

a. a non-toxic bentonite-based drilling fluid keeps the borehole stabilized – the drilling mud is collected and recycled; and
b. drilling fluid pressure is closely monitored and kept to absolute minimum required to return the tailings to the entry/exit pits.

The new pipe will be built from a more robust material, to a higher seismic standard, and there will be leak detection in place to quickly identify a leak in the very unlikely event that one happens. The CVRD is committed to ensuring that – in the extremely unlikely event of a leak - the public is notified immediately.

Any project with a risk of hydrofracture or as a result of a leak from the conveyance pipeline will have a contingency plan. If water from a groundwater well becomes contaminated as a result of the sewer conveyance construction or operations, and is not suitable for domestic use, the CVRD will offer all reasonable assistance to affected residents, as per the Lazo Hill Groundwater Protection Policy.

The CVRD will be preparing for a new series of public engagement opportunities later in 2023 to present the community with detailed information regarding all aspects of project, including installation methodology and construction schedule for each of the forcemain sections along the route and its supporting traffic management plan.

The project team is committed to continued engagement and ongoing communication with residents throughout the entire project construction. I encourage you to reach out to our project team or to myself directly via this email address, should you have any questions or concerns as a result of the recent bulletin from *Save the Quadra Sands Aquifer*, or for any other matter that may arise.

Again, we thank you for playing an important role in this vitally important community development project. We can all take pride in ownership of an upgraded sewer system that will protect our waters and beaches for years to come while also serving the growing population needs of our region.

Sincerely,

Russell Dyson
Chief Administrative Officer