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Parks, Recreation & Environmental Services

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February 19, 2026

File: 0220-20
General Correspondence
5200-30
Biosolids

Deb Hopkins
Director of Corporate Services
Township of Esquimalt
Via email: deb.hopkins@esquimalt.ca

Dear Deb Hopkins:

RE: INNOVATING WASTEWATER TREATMENT: TRANSFORMING BIOSOLIDS TO BIOCHAR

The purpose of this letter is to update you on plans for thermal processing technology to be introduced at the Residuals Treatment Facility at Hartland Landfill to transform biosolids from core area wastewater treatment into carbon-rich biochar. This would be the first system of its kind in Canada and builds on the Capital Regional District's (CRD) strategic investments in wastewater treatment to maximize resource recovery.

As you are aware, the CRD has been pursuing sustainable, cost-effective options to use biosolids for community benefit since wastewater treatment was introduced in the core area in 2020. Although the CRD's class A biosolids meet provincial standards, the CRD Board has been responsive to community concerns about "forever chemicals" like per- and polyfluoroalkyl substances (PFAS), and microplastics and has prohibited the application of biosolids on land within the region since 2011. Rising annual costs for transporting biosolids for use outside the region are rising, creating challenges for managing the biosolids as leftover residuals from wastewater treatment.

In 2024, the CRD decided to explore thermal processing technologies, such as carbonisation, as a long-term approach to converting biosolids to biochar - a stable, carbon-rich product offering a variety of potential benefits across construction, industrial, agriculture, and forestry sectors. Pyrocal PTY Ltd., the Australian-based technology vendor with a demonstrated commercially operating facility, was selected in June 2025 as the preferred proponent as the CRD explores integration of carbonisation technology into the Residuals Treatment Facility at Hartland Landfill.

Introducing the added carbonisation step to wastewater treatment is expected to be cost-competitive with current practice, and would significantly reduce volumes, destroy contaminants of concern like "forever chemicals" and microplastics, and lock in carbon. There is no anticipated increase in odour, noise, or trucking activity should the CRD implement the new technology. In fact, it is expected it would reduce the volume of residuals by half, meaning fewer trucks coming and going.

Air quality safeguards will be incorporated at every stage of the project, from the selection of the technology to the way the facility would be operated and monitored. The project benefits from the real-world operating experience of a comparable facility in Logan, Australia, which uses the same carbonisation technology selected by the CRD. The City of Logan's results provide a strong

reference point and will help inform design and performance expectations. At this early stage, the CRD does not yet have the detailed design information required to complete air-dispersion modelling or submit a Waste Discharge Authorization application. As the project advances, air-dispersion modelling will be completed using project-specific inputs, including local meteorology, terrain, facility design, operating conditions, and nearby land uses, in accordance with provincial air quality objectives and standards. This information will be shared with regional municipalities, the public and First Nations as part of the provincial permitting process.

Public consultation informed the short and long-term biosolids management strategies, and this next step builds upon what has been heard previously. As we move through a phased planning process, with clear decision points for the CRD Board and opportunities for input from First Nations, residents, and neighbouring community organizations, we want to share upcoming opportunities to learn more about plans to introduce carbonisation technology to the Hartland Residual Treatment Facility. There are several ways to learn more and provide input:

- Visit: www.GetInvolved.crd.bc.ca/biochar
- Attend an open house and tour of the Residuals Treatment Facility on:
Saturday, February 28, 2026 from 10 am - 2 pm
Pre-registration for the tour is required
- Complete the online survey by Thursday, March 5, 2026
- Ask questions or share feedback at: biochar@crd.bc.ca

Please feel free to share this information through your networks. All feedback received during this early phase of engagement will be summarized in a “*What We Heard*” summary report and presented to the Core Area Liquid Waste Committee and the CRD Board later this spring.

If you have any questions, please contact biochar@crd.bc.ca.

We look forward to keeping you informed and hearing your feedback as the project advances.

Sincerely,



Rory Tooke, Ph.D.
Senior Manager, Environmental Innovation