

REPORT TO SAANICH PENINSULA WASTEWATER COMMISSION MEETING OF THURSDAY, JUNE 4, 2026

SUBJECT **Biochar Project Update**

ISSUE SUMMARY

To introduce the Biochar Carbonisation Project and provide a high-level update on the Capital Regional District's (CRD) long-term approach to managing biosolids.

BACKGROUND

The CRD transforms wastewater residuals from the McLoughlin Point Wastewater Treatment Plant into Class A biosolids at the Residuals Treatment Facility (RTF) located at Hartland Landfill. Since 2021, biosolids produced at the RTF have been managed through a portfolio of beneficial use options, including use as an energy feedstock, for land reclamation and non-agricultural soil amendment applications.

In early 2026, the CRD successfully commissioned the receipt of residuals from the Saanich Peninsula Wastewater Treatment Plant at the RTF. These residuals are now processed alongside other regional wastewater residuals and transformed into Class A biosolids, integrating the Saanich Peninsula system into the CRD's regional resource recovery approach.

In March 2025, the Province endorsed the CRD's Long-Term Biosolids Management Strategy, which identifies advanced thermal treatment (such as carbonisation) as the preferred long-term solution for biosolids beneficial use. The strategy is supported by a diversified portfolio of beneficial use options to ensure operational reliability and flexibility.

As part of implementing this strategy, the CRD is advancing the Biochar Carbonisation Project, which would add a new processing step at the Residuals Treatment Facility to convert biosolids into biochar.

Following a competitive procurement process, Pyrocal Pty Ltd. was selected in 2025 as the preferred proponent to supply the carbonisation technology. The project is being advanced in phases, with future decision points for the CRD Board as more information becomes available.

Biochar Carbonisation

The Biochar Carbonisation Project proposes to heat biosolids at high temperatures in a low-oxygen environment to produce biochar - a stable, carbon-rich material, with a wide range of potential applications across environmental, industrial and agricultural contexts.

The project supports several long-term objectives identified through the CRD's planning and engagement processes:

- **Environmental protection:** Further treatment to address contaminants of concern and improve material stability.
- **Climate action:** Biochar sequesters carbon in a stable form, helping reduce greenhouse gas emissions.

- **Long-term reliability:** Reducing reliance on hauling and external markets for biosolids management.
- **Operational flexibility:** Allowing material to be stored and managed over time.

The project builds on the existing beneficial use program, where all biosolids continue to be used in out-of-region, non-agricultural applications.

Consistent with the CRD's staged approach, the initial phase of the project would focus on producing and safely storing biochar while undertaking further testing and research to evaluate appropriate end uses. This approach allows the CRD to confirm material characteristics, ensure regulatory alignment and identify the most suitable beneficial applications over time.

Potential end uses of biochar include:

- **Soil enhancement and agriculture:** Biochar has been shown to improve soil structure, water retention and nutrient availability.
- **Land reclamation and restoration:** Use in mine site disturbed land reclamation to improve soil function and support vegetation establishment.
- **Environmental applications:** Including stormwater filtration, contaminant adsorption.
- **Industrial and construction uses:** As an additive in materials such as concrete or asphalt, or as a component in engineered products.
- **Carbon management:** Long-term carbon storage in soils or materials, contributing to climate change mitigation.

At this stage, no decisions have been made regarding end uses. The CRD anticipates producing and testing biochar to confirm its characteristics, then engaging with the public, First Nations and regulators to help identify the highest and best end uses.

The CRD has undertaken a public engagement process to share information and gather feedback on the proposed project. This included:

- a public information website with project details and frequently asked questions, which received 1,292 unique visitors and generated over 11,000 views across Facebook and Instagram
- a public engagement period in early 2026, including an online survey with 170 participants
- an open house at the Residuals Treatment Facility with 86 participants and six site tours

Engagement focused on topics such as:

- air quality and emissions
- environmental and climate considerations
- biochar characteristics and potential uses
- project costs and overall value

Feedback from the public and stakeholders has been compiled into a Public Consultation Summary Report (Appendix A).

Project Status and Next Steps

The project is currently in the planning and engagement phase. Key next steps include:

- advancing technical design with the preferred proponent
- continuing engagement with First Nations and stakeholders

- completing environmental studies and air quality modelling
- preparing and submitting a regulatory application for provincial approval
- refining project costs and business case

The CRD Board will consider future decisions on the project as more detailed information becomes available. Staff are targeting bringing a final business case to the CRD Board for consideration in early 2027.

CONCLUSION

The Biochar Carbonisation Project is a key initiative supporting the implementation of the Capital Regional District’s Long-Term Biosolids Management Strategy. With the successful integration of Saanich Peninsula residuals into the Residuals Treatment Facility, these residuals are now being transformed into Class A biosolids. The proposed biochar project will add a new treatment process to transform biosolids into biochar, enhancing environmental performance, improving system resilience, and supporting climate objectives. This report is provided for information to support the Saanich Peninsula Wastewater Commission’s understanding of the project and its role in the future of regional wastewater residuals management.

RECOMMENDATION

There is no recommendation. This report is for information only.

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ATTACHMENT

Appendix A: Tavola Strategy Group Public Consultation Summary Report – Transforming Biosolids to Biochar (April 2026)