

**REPORT TO ENVIRONMENTAL SERVICES COMMITTEE  
MEETING OF WEDNESDAY, JUNE 19, 2024**

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**SUBJECT**     **Biosolids Beneficial Use Options - Request for Expressions of Interest**

**ISSUE SUMMARY**

The Capital Regional District (CRD) must develop biosolids management options in accordance with the Long-term Biosolids Beneficial Use Strategy.

**BACKGROUND**

The Capital Regional District (CRD) has been responsible for the beneficial use of Class A biosolids produced at the Residuals Treatment Facility since the commissioning of the core area wastewater treatment project in 2020. Currently, the CRD is operating under the Short-term Biosolids Management Plan (2020-2025), with the primary beneficial use options being incineration as an alternative fuel in a cement manufacturing plant in Richmond, BC, and integration with landfill cover systems as contingencies. When neither of these options are available, landfilling biosolids at Hartland Landfill has been the only alternative.

In 2011, the CRD Board passed a resolution to ban the production and land application of biosolids at CRD facilities and parks, and on farmland in the CRD; however, in 2023, given the operational and logistical challenges with the short-term plan, the CRD Board amended its position to allow limited non-agricultural land application of biosolids as a contingency option. The CRD has secured the use of biosolids for industrial land reclamation at a quarry near Cassidy, BC. Staff continue to seek additional short-term beneficial use contingency options, in order to limit or avoid landfilling of biosolids when the other options are not available.

On June 12, 2024, the CRD Board approved a long-term biosolids beneficial use strategy (strategy), which outlines and prioritizes how biosolids will be beneficially used in the coming years. As directed by the BC Ministry of Environment and Climate Change Strategy, the strategy was submitted for provincial review on June 18, 2024, with the intention that it will be implemented by January 1, 2025. The strategy indicates a tiered approach to biosolids management options, with Tier 1 indicating a preference for, and commitment to, developing advanced thermal processing of biosolids in the region. The strategy indicates Tier 1 will require 7-10 years to pilot technology and, if successful, then procure, commission and permit a full-scale advanced thermal facility. Therefore, the strategy includes creating a portfolio of out-of-region options (Tier 2) that the CRD will utilize to ensure regulatory compliance is continuously achieved to bridge the biosolids management program as the CRD pursues Tier 1 options.

As previously reported to the Board in the Monthly Short-term Biosolids Management Plan updates, the contingency mine reclamation project in Cassidy, BC, may also reach capacity in 2024 and therefore does not provide sufficient, reliable viability under current conditions. In addition, staff will be meeting with LaFarge senior staff to assess next steps in improving the reliability of the Richmond cement kiln incineration project. Additionally, staff recognize that landfilling biosolids is not a beneficial use accepted under current provincial regulations and utilizes much needed airspace at the Hartland landfill.

Considering these factors, staff are recommending a Request for Expressions of Interest (RFEOI)

process to identify partners with an interest in biosolids management, with the intention of creating a portfolio of options. The scope of the RFEOI would align with Tier 2 of the Long-term Management Strategy, such that:

Options explored must be out-of-region, and can include:

- (i) Industrial land reclamation, such as mine and quarry sites
- (ii) Forest fertilization
- (iii) Production of biosolids growing medium and/or feedstock in soil production
- (iv) Partnerships with established biosolids programs
- (v) Fuel combustion in cement manufacturing facilities
- (vi) Additional industrial partners interested in combustion

Upon concluding the RFEOI process, staff will present outcomes to inform next steps.

## **ALTERNATIVES**

### *Alternative 1*

The Environmental Services Committee recommends to the Capital Regional District Board: That staff be directed to issue a Request for Expressions of Interest for biosolids management under Tier 2 of the Long-term Biosolids Beneficial Use Strategy

### *Alternative 2*

That this report be referred back to staff with alternate direction.

## **IMPLICATIONS**

### *Financial Implications*

The current options that are available under Tier 2 are limited to conventional thermal (combustion) and land application. Through the research by the CRD's technical consultant during the biosolids long-term plan development, Tier 2 options will likely be similar (<\$300 per tonne). A caveat for any combustion options is that the cost of implementation would be higher if significant capital investment is required for specialized receiving, storage and handling of biosolids.

### *Service Delivery Implications*

A portfolio of options is required to ensure redundancy and resiliency of the biosolids management strategy. Previous experience with the CRD, as well as a jurisdictional review, has indicated that relying on a single or very few options and single contingency is not suitable to maintain service delivery and regulatory compliance. The CRD is at risk to landfilling biosolids under an emergency situation, if additional options cannot be procured before the end of July. This would be out of line with regulatory requirements and may have serious consequences for delivery of the solid waste service, as airspace is currently limited in cell 3 of the landfill while cell 4 is under development.

### *Alignment with Board and Corporate Priorities*

Procurement of Tier 2 options under the Long-term Biosolids Management Strategy aligns with the 2023-2026 CRD Corporate Plan goal of *Management of wastewater and treatment residuals*, and the initiative to *Develop and implement a long-term Biosolids Management Plan*. The Strategy also supports the initiative under this goal to *Update the Liquid Waste Management Plans for the*

*Saanich Peninsula and Core Area* with regards to complying with the commitment to beneficially use the biosolids generated from the wastewater treatment plants.

*First Nations Implications*

First Nations are seeking a more respectful, reciprocal government-to-government relationship with the CRD related to service delivery and service delivery impacts in their traditional territories. The CRD will continue to explore beneficial use opportunities with those Nations that express interest. The CRD will also listen to any concerns Nations may have regarding the beneficial use options and is committed to working with individual Nations to address their concerns.

*Intergovernmental Implications*

As specific options are identified, CRD staff will provide advanced communication to local governments in jurisdictions where out-of-region options are being contemplated or procured. Due to the nature of some of the beneficial use options and in order to have a portfolio of options that ensures redundancy and flexibility, it is not unusual for local governments to have biosolids management programs that extend beyond the jurisdictional boundaries of the local government in terms of processing and end use, particularly in areas that are more urban and those that produce larger volumes of biosolids.

CRD staff do not anticipate a need to amend the current Short-term Biosolids Management Plan (2020-2025) in order to implement additional beneficial use options during the provincial review of the long-term strategy submission.

**CONCLUSION**

On June 12, 2024, the CRD Board approved a long-term biosolids beneficial use strategy that outlined and prioritized how biosolids will be beneficially used in the coming years. The strategy includes creating a portfolio of out-of-region compliance options that the CRD will utilize to ensure regulatory compliance is continuously achieved until the preferred option (advanced thermal processing) is available. Staff have also identified an immediate need for additional contingency capacity for biosolids management and have identified an out of region option that aligns with the Board's strategy and will meet regulatory requirements. Staff are seeking approval to pursue a contract to address the immediate need for biosolids management and Issue a Request for Expressions of Interest for biosolids management under Tier 2 of the Long-term Biosolids Beneficial Use Strategy.

**RECOMMENDATION**

The Environmental Services Committee recommends to the Capital Regional District Board: That staff be directed to issue a Request for Expressions of Interest for biosolids management under Tier 2 of the Long-term Biosolids Beneficial Use Strategy.

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