

ADMINISTRATIVE REPORT

TO: Environment and Infrastructure Committee

FROM: B. Newell, Chief Administrative Officer

DATE: July 6, 2023

RE: Organic Waste Treatment and Processing Facility
Proposed Scope and Location

Administrative Recommendation:

THAT (Option 3) an aerated bunker treatment and processing facility be developed at 1313 Greyback Mountain Road for composting yard and food waste; and,

THAT a loan authorization bylaw be authorized to borrow for the local government share, amortized over 25 years, with principal and interest to be recovered by value added tax to cover the cost of construction for the organic treatment and processing facility; and,

THAT the Regional District apply to the Agricultural Land Commission for a non-farm use on the southern portion of 1313 Greyback Mountain Road; and,

THAT the Regional District apply to the province for an extension of the CleanBC – Organics Infrastructure and Collections Program (OICP) grant until March 31, 2025.

Purpose:

To proceed with the construction of a food and yard waste composting facility that will serve Penticton, Keremeos and Electoral Areas B,C,D,E,F,G, and I.

Reference:

Tetra Tech siting study - Nov 2019,
Tetra Tech Waste Composition Study - 2020, 2021
Tetra Tech Organic Waste System Analysis - July 22, 2022
AECOM technical memo - May 25, 2023

Authority/Regulatory:

CMLF Lease Agreement
City of Penticton License to treat biosolids
Organic Matter Recycling Regulation

Background:

The Solid Waste Management Plan (SWMP) has identified organics collection, treatment and processing as the primary means of diverting approximately 40% of waste going to landfills in the RDOS. A diversion potential of 26% of the total waste stream is estimated should a curbside food collection program be put in place. Previous studies have shown that the costs to process wastes through composting are lower than that of landfilling.

A series of siting studies have taken place over the years, the largest hurdle being selection of a site. The Regional District purchased an 80 acre parcel at 1313 Greyback Mountain Road with the aim of establishing an Organics Treatment and Processing facility in 2020. A grant for \$10,984,380 was successfully attained for the construction of the facility, with works to be completed by March 31, 2024. The Greyback Mountain Road property is partially within the Agricultural Land Reserve (ALR) and an application to the ALC to exclude the southern part of the property was denied. The northern 1/3 of the property remains available. An extensive public review process took place. Of the residents who responded to the online survey, 67% of residents were in favor of the project.

The original aim of the project was to compost food waste, yard waste and biosolids at the proposed facility, with the grant available for composting the food and yard waste portion only.

A Tetra Tech study was undertaken in 2021 to identify the most cost effective and environmentally superior method of managing organic wastes, with a peer review by AECOM. The study included options to treat and process organics, including shipping organics out of the region to private composting facilities.

AECOM’s contract was extended in order to determine what type of composting facility could be built and its approximate costs, given the physical restraints of the land.

An estimate to ship, receive and compost biosolids and food and yard waste at an operating facility in Princeton for \$130 per tonne has been obtained. The quote did not include transfer station costs for food and yard waste. This cost is comparable to the 2018 City of Penticton AECOM study to upgrade the existing City of Penticton facility.

Options:

Option	Description	Capital Cost	Capital and Operating Cost per tonne ***
1	Sustainable Generations, bunkers with Gore Cover	\$26.9M	\$109
2	Aerated windrows	\$19.6M	\$78
3	Aerated bunkers	\$17.1M	\$66
3a	Aerated bunkers with biosolids	\$19.0M	\$50

*** Costs do not include revenues from composting sales.

*** All systems have strict odour control systems as part of the design and are housed within a building:

Comparatively, the Campbell Mountain Landfill costs to bury wastes are \$120 per tonne. While we lose revenue due to the diversion of wastes, this will be offset by lower processing costs and reduced annual contributions to closure costs and post closure care reserves due to a longer landfill life. The largest savings will be in the increase in landfill life, as the costs to ship waste out of region will be substantively more.

Preliminary estimates for the cost of the facility are presented but until a preferred option is identified, speculating on the cost of principal and interest payments would not be useful. Costs of construction are volatile and interest rates are still moving. Authority for the borrowing bylaw comes from the Solid Waste Management Plan which provides the assent for the Board to proceed, once knowing the final cost.

Other Options:

Options to develop Regional Composting centers at the Summerland Landfill and Marron Valley were rejected by the Board due to concerns cited by Summerland Council and the Marron Valley residents, respectively.

There are other waste to energy technologies such as Sustane Technology. Tetra Tech writes, *Sustane Technologies uses sorting methods to produce biomass pellets and pyrolysis to produce synthetic fuels. These technologies are not widely used by municipal governments because of high unit process costs (i.e. cost per tonne). The biomass pellets also require an end user (such as a cement kiln) who is authorized to use these pellets as a fuel. The potential revenue from the end products is typically not enough to compete with local landfill disposal costs in RDOS.*

Option 3a, composting, including biosolids, adjacent to the food waste and yard waste site.

With the 2/3 reduction of space available at 1313 Greyback Mountain Road due to the ALC decision,

1. Fitting biosolids treatment within the available land will reduce process efficiency, as the movement of material will be challenging within a now restricted site.
2. To avoid cross contamination, separate pieces of heavy equipment may also be required. Biosolids cannot be included in compost approved as an organic product, thus reducing the market and resale value of the compost.
3. PFAS (emerging chemicals of concern) may severely restrict the end use of biosolids compost in the future.
4. Revenues from food and yard waste composting will be substantively more than that of biosolids as food and yard waste will meet organics standards and can be applied on crops and landscaping.

Penticton:

The proposed Option 3 facility design will accommodate a biosolids composting facility as a second phase to the project. Opportunity to apply for a “non-farm use” on the remainder of the 1313

Greyback Mountain Road property has been confirmed. This will not compromise grant project funding and, ALC permitting, will allow the construction of a biosolids facility in the future. An option to ship biosolids to an existing facility does exist as an interim measure should the closure of the biosolids composting facility at Campbell Mountain facility occur prior to an ALC decision.

The future expansion planning for a biosolids composting facility (bunker) could occur during the predesign process and the RDOS could ensure the final design considers this future expansion as a Phase 2.

Analysis:

There is a limited period of time in which to use the \$10,984,380 grant. There is an existing composting facility at the Campbell Mountain Landfill that the City can continue to operate in the short term, with an option to transport biosolids should that be necessary.

Alternatives:

1. Abandon the project and return the grant

Respectfully submitted:

“Andrew Reeder”

A. Reeder, Manager of Solid Waste

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