

# Report to Council



**Date:** February 19, 2018  
**File:** 1880 – 15 Wastewater Planning  
**To:** City Manager  
**From:** Kevin Van Vliet, Utility Services Manager  
**Subject:** Results of Strategic Review - Biosolids Management and the related Community Engagement Process

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## **Recommendation:**

THAT Council receive for information the report from the Utility Services Manager dated February 19, 2018 regarding the results of the Strategic Review for Biosolids Management including the results of the related Community Engagement Process.

## **Purpose:**

**To inform Council on the status of long term planning for biosolids management, the results of the community engagement process on biosolids management and next steps.**

## **Background:**

The City of Kelowna, in partnership with the City of Vernon, compost wastewater solids at the Regional Biosolids Compost Facility located in the Regional District of North Okanagan. That facility is operating at capacity, necessitating decisions on the long term management of our wastewater solids. The City, on behalf of the partnership, commissioned Opus Dayton Knight (later Opus International) to conduct a strategic review of long term options available to the partnership along with a parallel public engagement process to help inform the partners on the best overall solution for our communities.

On April 10, 2017 Council last received an update on the Strategic Review – Biosolids Management Project which included an overview of the pending community engagement process and a summary of the technical work done to date. Unfortunately, due to staff turnover and spring flooding, staff were unable to complete this project until late 2017.

The community engagement was conducted in the spring of 2017 which consisted of a mix of targeted communications and engagement techniques including online and paper-based surveys, meetings with key stakeholders and a community meeting with residents living near the existing compost facility. The

process was well received and a copy of the Strategic Review of Wastewater Solids Management: Engagement Summary report that highlights the results of feedback is attached to this report.

In November 2017, Opus completed the Strategic Review Biosolids Management Summary Report which provided the overall conclusions of the strategic review process. The report summarizes the results of all of the technical work done to date as well as the results of the multiple bottom line analysis and is also attached to this report. Section 6 provides the consultants Conclusions and Recommendations.

The report recommends that the City of Kelowna proceed with preliminary design of biosolids digestion over simply expanding the existing composting facility to accommodate more throughput. The main advantages to this approach include:

1. Significantly reducing the amount of biosolids that leave Kelowna for composting, thereby extending the life of the existing compost facility;
2. Reducing odour at the composting facility as digested biosolids produce significantly less odour;
3. Creating a second processing or disposal outlet option in addition to composting. Digested biosolids can be directly land applied with the appropriate permits. Having a second final processing option (in addition to composting) reduces risks for the municipal owners in the event of problems or downtime at the compost facility.

The digestion process comes at a significant financial cost, estimated between \$30 and \$50 million dollars for the City of Kelowna wastewater treatment plant, depending on the technical details such as location and process. In addition, there is some odour risk potential in digesting biosolids within the City of Kelowna. Expanding the composting facility would also be in the tens of millions of dollars, especially if we are not to increase our generation of odour leaving the site.

The following activities are planned for 2018:

1. Develop a conceptual design and cost estimate for wastewater solids digestion consistent with the report's recommendations. The 2018 capital budget includes \$300,000 for this work;
2. Review and evaluate the potential for a plantation in the Vernon area, possibly using City of Vernon lands, to grow our own wood for both the use of finished compost (to promote growth) as well as potentially growing feedstock for the composting process. This would reduce our reliance on purchased hog fuel and reduce operational risk of losing hog fuel supply. This work will be funded from our existing Biosolids Management budget;
3. Work with the MoE, IHA, the RDCO and our consultant to better understand provincial plans, risks and potential of land application of Class A or Class B biosolids.

A reduction in Biosolids from Kelowna delivered to the regional compost facility will change the ratio of facility funding which would decrease Kelowna's share and increase Vernon's share of facility operating costs. This impact was discussed at the Biosolids Advisory Committee. This report was provided to the City of Vernon for their information.

**Internal Circulation:**

Division Director Infrastructure  
Infrastructure Engineering Manager  
Utility Planning Manager  
Financial Planning Manager

Community Engagement Manager  
Biosolids Supervisor  
Wastewater Treatment Supervisor

**Financial/Budgetary Considerations:**

The 2030 Infrastructure Plan has approximately \$7.8 million allocated in 2020 for expansion of compost capacity. This is a significant shortfall that will have to be addressed once we better understand the scope and options available to us and in any event before wastewater utility rates are set in early 2019.

**Considerations not applicable to this report:**

**Legal/Statutory Authority:**

**Legal/Statutory Procedural Requirements:**

**Existing Policy:**

**Communications Comments:**

**External Agency/Public Comments:**

**Personnel Implications:**

**Alternate Recommendation:**

Submitted by:

K. Van Vliet, Utility Services Manager

Approved for inclusion:

A square box containing a handwritten signature in blue ink, which appears to be 'J. Creron'.

J. Creron, Deputy City Manager

cc:

Division Director Infrastructure  
Infrastructure Engineering Manager  
Utility Planning Manager  
Financial Planning Manager  
Community Engagement Manager  
Biosolids Supervisor