



## MINUTES OF THE JOINT BIOSOLIDS ADVISORY COMMITTEE

HELD APRIL 10, 2024 AT 10:00 AM  
REGIONAL COMPOSTING FACILITY

**PRESENT:** Kelowna Councillor Gord Lovegrove  
Kelowna Councillor Mohini Singh – *via zoom*  
Vernon Mayor Victor Cumming  
Vernon Councillor Brian Guy, Chair

**ABSENT:** Kelowna Councillor Loyal Woodridge

**STAFF:** Mac Logan, General Manager of Infrastructure, Kelowna  
Kevin Van Vliet, Utility Services Manager, Kelowna  
Scott Hoekstra, Landfill and Compost Manager, Kelowna  
Jose Garcia, Biosolids Supervisor, Kelowna  
Chris Ovens, General Manager, Public Works, Vernon  
Serge Kozin, Manager, Water Reclamation Centre, Vernon  
Jennifer Pounder, Committee Clerk, Vernon

### ORDER

The Chair called the meeting to order at 10:02 a.m.

### ADOPTION OF AGENDA

Moved by Councillor Lovegrove, seconded by Mayor Cumming:

THAT the agenda for the April 10, 2024 Joint Biosolids Advisory Committee meeting be adopted.

**CARRIED.**

### ADOPTION OF MINUTES

Moved by Mayor Cumming, seconded by Councillor Lovegrove:

THAT the minutes of the October 25, 2023 Joint Biosolids Advisory Committee meeting be adopted.

**CARRIED.**

**UNFINISHED BUSINESS:****BUSINESS ARISING FROM THE MINUTES**

- Mayor Cumming brought forward the following:
  - Clarification was requested as to why Lake Country sends their biosolids to the Ingerbelle Compost Facility (ICF).
    - It is assumed it is due to cost.
  - The City of Vernon's Fleet Management team have been reviewing experiences on electric delivery trucks in Portland, Oregon. They are finding short distance electric delivery trucks cost less than diesel overall, with a savings of approximately 23%; they can travel 400km on a single charge.
- The Chair asked if there was an update on the price structure change mentioned in the October 23, 2023 meeting, to incentivize more people to buy product.
  - We have had other variables affecting those numbers which will be clarified in today's update.
  - It was confirmed that a contractor was hired for leachate hauling.
- It was also confirmed that the Ministry of Environment and Climate Change Strategy is planning on releasing an Organics Matter Recycling Regulation update in Q2 (April, May or June, 2024).

**2023 UPDATE**

Jose Garcia, Biosolids Supervisor, provided a presentation on the 2023 Update, which included Leachate Management, Odour Management and Regulatory Update (Attachment 1). The following comments/questions were received:

- It was asked why Kelowna is diverting their biosolid waste to the third-party Ingerbelle compost facility near Princeton.
  - Confirmed it was due to capacity. Dealing with a lot of surplus material. A large amount of finished product has been moved to the Glenmore Landfill for Kelowna sales but is also our backup for storage of surplus compost.
  - To accommodate growth, we need to divert or expand. A strategic review a few years ago determined expanding this facility is not feasible. Brenda Renewables would be the closest diversion facility when it is operational but prefer other types of organics (biosolids less so). The Utility Planning Group conducted a due-diligence review of options and were not comfortable diverting to closer, smaller facilities.
- Confirmed the Regional Composting facility has an allowable operating capacity of 36,400 WMT, however it is more practical around the 33,000 WMT range.
- A trade agreement is in place with Tolko Industries. We trade clean, ground dimensional lumber from the Glenmore Landfill in return for hog fuel. We are trying to use more of what we have available (ie. ground branches from the Glenmore Landfill) to curb costs.

- There were ideas of expanding our sensor system, however, the subscription costs far outweigh the benefit.
- Discussed recent review by CFIA (Canadian Food Inspection Agency) regarding dioxins & furans .Ultimately, CFIA determined Ogogrow met current requirements and was cleared for sale. An unfavorable scenario related to regulatory changes and emerging contaminants of concern need to be considered as a risk to the feasibility of the operation.
  - The City of Kelowna is a member of the Compost Council of Canada and staff reached out to consult them on this matter.; they were not aware CFIA was doing this but will be asking questions within their networks.
  - Councillor Guy reminded the Committee that the percentage of Ogogrow used to grow food versus the amount used for landscaping is likely much less. Even if CFIA were to deem levels to be unacceptable for food production, Ogogrow could still be sold and used for municipal landscaping and other applications unrelated to food production.

**NEW BUSINESS:**

**DRAFT REGIONAL  
BIOSOLIDS JOINT  
OPERATING  
AGREEMENT**

The draft Regional Biosolids Joint Operating Agreement was presented to the Committee. Discussion ensued and proposed changes were agreed upon, a summary of which is attached to these minutes as 'Attachment 2'.

Moved by Mayor Cumming, seconded by Councillor Singh:

THAT the Joint Biosolids Advisory Committee approve the Regional Biosolids Joint Operating Agreement as presented and amended through discussion.

**CARRIED.**

**STRATEGIC PLAN  
OUTLINE**

The Strategic Plan Scope of Work draft was presented to the Committee, a copy of which is attached to these minutes as 'Attachment 3'.

Conversation commenced and the following points were noted:

- Product marketing, new revenue opportunities and risks should be explored. How is the impact of the infilling going to affect sales of compost in the long-term?
- Need to identify regulatory risks (ie. what is the minimum biosolid waste this facility needs to receive to stay viable?).
- An Asset Management Plan is recommended to keep track of renewals, maintenance and replacement of equipment.

Moved by Mayor Cumming, seconded by Councillor Lovegrove:

THAT the Joint Biosolids Advisory Committee recommends to respective Councils of the City of Vernon and City of Kelowna, that staff be directed to return to this Committee with an annotated first draft of the Regional Compost Facility Strategic Plan in October, 2024, with the final draft being brought in April, 2025.

**CARRIED.**

**MEETING  
ATTENDANCE**

The Chair requested that all members attend future meetings in person rather than via Zoom. While virtual meetings have served us well during challenging times, there are distinct advantages to meeting face-to-face. In the event of preserving quorum, exceptions will be made.

**NEXT MEETING**

The next meeting is scheduled for **October 9, 2024 at 10:00 a.m.**

**MOTION TO ADJOURN**

Moved by Mayor Cumming, seconded by Councillor Lovegrove:

THAT the meeting of the Joint Biosolids Advisory Committee be adjourned.

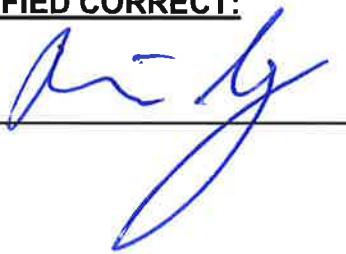
**CARRIED.**

**ADJOURNMENT**

The meeting of the Biosolids Advisory Committee adjourned at 12:24 p.m.

**CERTIFIED CORRECT:**

Chair



Attachment 1

# JOINT BIOSOLIDS ADVISORY COMMITTEE MEETING

APRIL 10, 2024



City of  
**Kelowna**



# AGENDA

## Unfinished Business

- ▶ 2023 Update, including:
  - ▶ Leachate Management
  - ▶ Odour Management
  - ▶ Kelowna & Vernon Biosolids Updates
- ▶ Regulatory Update

## New Business

- ▶ Draft Joint Operating Agreement
- ▶ Strategic Plan Outline

## RBCF 2023 - BIOSOLIDS

- ▶ Processed 29,740 wet metric tonnes of biosolids
- ▶ ~5% total decrease in biosolids received
- ▶ Kelowna diversion, Vernon digester, LC diversion, special projects (mix building)
- ▶ Biosolids received, wet metric tonnes:

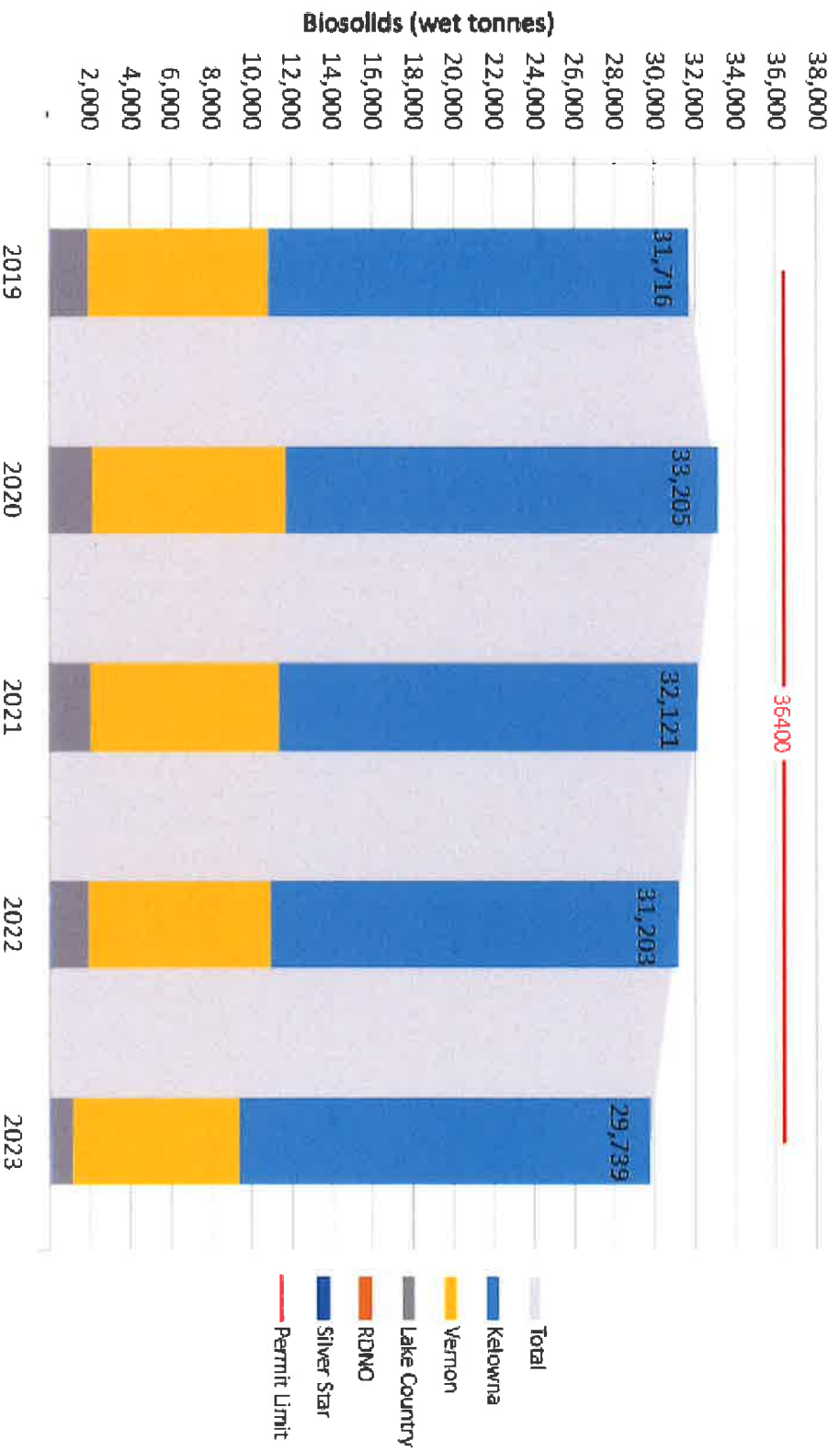
	Kelowna	Vernon	Lake Country	SilverStar
<b>2022</b>	20,314	8,925	1,833	131
<b>2023</b>	20,370	8,161	1,104	104
<b>% difference</b>	+3%	-9%	-40%	-21%

## RBCF 2023 - COMPOST SALES

- ▶ 31,850 m<sup>3</sup> of OgoGrow sold
- ▶ \$228,650 in sales revenue
- ▶ ~ 30% decrease from 2022
  - ▶ Flattened price in May 2023
  - ▶ CFIA concerns post wildfire resulted in “halting of sales” of OgoGrow (see below)
- ▶ No bulk sale in late 2023



## Biosolids Composted Last 5 Years



## 2023 FINANCIALS - OPERATING

- ▶ Payroll and Expenses within budget
- ▶ Payroll expense \$937,024
  - ▶ Budget: \$1,059,386
- ▶ Other expenses \$1,533,514
  - ▶ Budget: \$1,676,108

## 2023 FINANCIALS - CAPITAL

- ▶ **\$202,289 spent on 5 capital projects**
  - ▶ Pavement repairs, ongoing
  - ▶ Pump kiosk, complete
  - ▶ Water lines & curb-stop repairs, complete
  - ▶ Mix building envelope renewal, complete
  - ▶ Mix building air filtration, ongoing

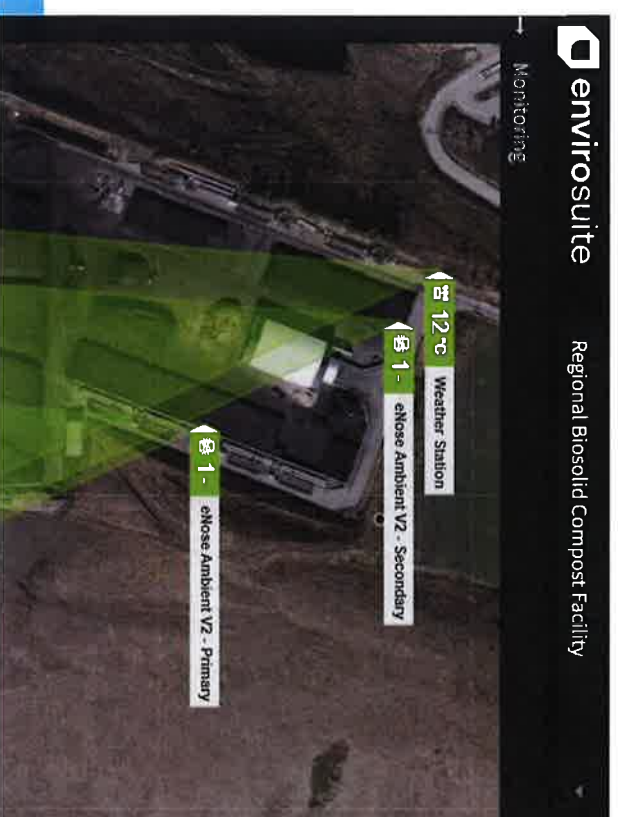
## LEACHATE MANAGEMENT

- ▶ High-strength leachate hauled to Vernon Water Reclamation Centre (1,637m<sup>3</sup>)
- ▶ Low-strength leachate (run-off) pumped to CoV's MackKay Reservoir (78,427m<sup>3</sup>)



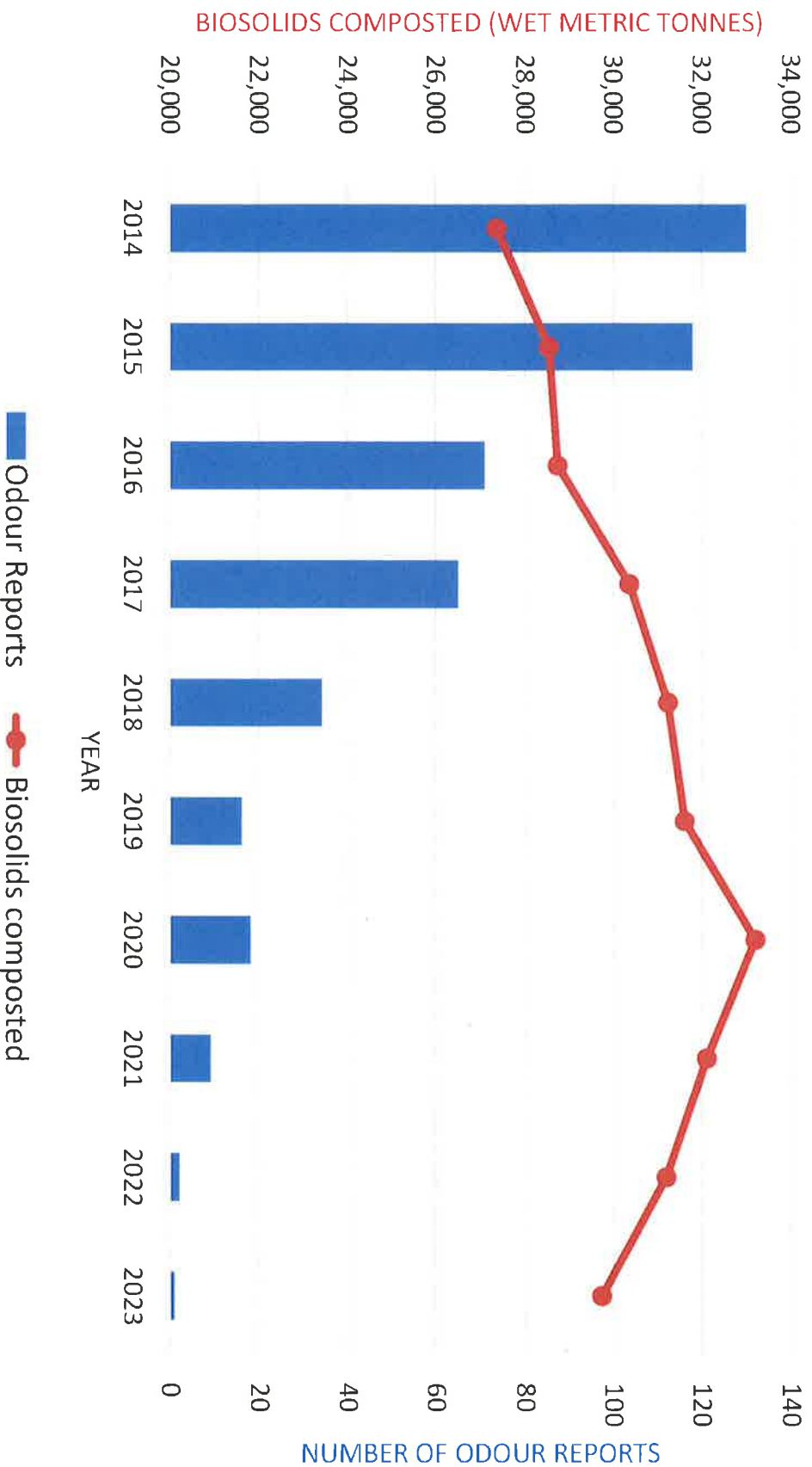
## ODOUR MANAGEMENT UPDATE

- ▶ Updating odour management plan
- ▶ Continued focus on best practices
- ▶ Mistig system (May-Oct)



# ODOUR REPORTS

Odour report vs. biosolids composted



## BIOSOLIDS UPDATES

- ▶ Kelowna
  - ▶ Continue diverting to Ingerbelle facility (Princeton)
  - ▶ Digester conceptual design
- ▶ Vernon
  - ▶ High-Rate Anaerobic Digester
- ▶ Lake Country
  - ▶ 50% of biosolids sent to Ingerbelle facility

## REGULATORY UPDATE

- ▶ ENV still targeting 2024 for amendments to OMRR
- ▶ Canadian Food Inspection Agency (CFIA)
  - ▶ Regulate compost market under *Fertilizer's Act*
  - ▶ Post wildfires CFIA decided to sample for dioxin/furans
  - ▶ Results exceeded CFIA numerical standard
    - ▶ Sales put on hold pending evaluation
  - ▶ Criteria risk calculations use assumptions, average compost parameters over 45 consecutive years applied
  - ▶ Worked with CFIA to evaluate feedstocks and use actual data (density, moisture, recommended application rates)
- ▶ Letter of Release received allowing sales of existing piles



## JOINT OPERATING AGREEMENT UPDATE

- ▶ [Link to table summary](#)
- ▶ [Link to final draft of agreement](#)

## STRATEGIC PLAN SCOPE OF WORK

- ▶ [Link to Strategic Plan SOW Document](#)

Proposed Amendments to the Regional Biosolids Compost Facility's Joint Operating Agreement

July 2024

Section	Current Wording	Proposing	Reason for Change	Amended
<p><b>1 - c. Nature of Agreement and Schedules</b></p>	<p>c. The following schedules shall form part of, and be incorporated into, the terms of this agreement:                      Schedule A: Commonage Compost Site Equipment Allocation                      Schedule B: Vernon Fees and Charges Bylaw No. 3909                      Schedule C: Criteria Agreement</p>	<p>c. The following schedules shall form part of, and be incorporated into, the terms of this agreement:                      Schedule A: Commonage Compost Site Equipment Allocation                      Schedule B: Fire Protection Terms of Service</p>	<p>Schedules B and C were not included in our original PDF copy of the agreement.                      We propose removing Schedule B: Vernon Fees and Charges Bylaw (See Section 6 below) and replacing it with Schedule B: Fire Protection Terms of Service.                      Schedule C is effectively replaced by regulatory requirements in Permit and Regulation.</p>	<p>Y</p>
<p><b>2. Terms</b></p>	<p>a. Both Kelowna and Vernon agree to participate in the operation of the Facility and be bound by this agreement until at least December 31, 2018 and continuing after that date unless either Municipality withdraws in accordance with</p>	<p>a. Both Kelowna and Vernon agree to participate in the operation of the Facility unless either Municipality withdraws in accordance with section 3 or this agreement is terminated in accordance with section 2. c. or</p>	<p>Clarifies that agreement remains in place in perpetuity unless either party withdraws in</p>	<p>Y</p>

	<p>section 3 or this agreement is terminated in accordance with section 2. c. or section 21 below.</p> <p>b. The effective date of this agreement is November 1, 2011.</p> <p>c. This agreement will remain in effect until terminated by mutual agreement or until either Kelowna or Vernon wish to withdraw from the Facility as detailed in section 3 below.</p> <p>d. Kelowna and Vernon agree to enter into negotiations to renew or extend this agreement at least one year in advance of December 31, 2018.</p> <p>e. Vernon agrees and acknowledges that Kelowna is the day to day "Operator" of the Facility.</p>	<p>section 21 below.</p> <p>b. The effective date of this agreement is November 1, 2011.</p> <p>c. This agreement will remain in effect until terminated by mutual agreement or until either Kelowna or Vernon wish to withdraw from the Facility as detailed in section 3 below.</p> <p>d. Vernon agrees and acknowledges that Kelowna is the day to day "Operator" of the Facility.</p>	<p>accordance with Section 3</p>	
<p>4-a</p>	<p>a. The Facility is located within the Regional District of North Okanagan ("RDNO") approximately 3.4 km southwest of the intersection of Bench Row Road and Commonage Road.</p>	<p>a. The Facility is located within the Regional District of North Okanagan ("RDNO"), Electoral Area B, approximately 3.4 km southwest of the intersection of Bench Row Road and Commonage Road.</p>	<p>Specified electoral area</p>	<p>y</p>

<p><b>5 - d. Lease and Ownership</b></p>	<p>d. Vernon and Kelowna acknowledge and agree that they are also both parties to an option to purchase and right of first refusal agreement dated for reference September 23, 2005 and registered against title to Lot A-2 as charge no. KX149500 (the"Option/RRR").</p>	<p>Delete sub-section d.</p>	<p>Remove d. as charge is no longer on title</p>	<p>Y</p>
<p><b>6 - g. Operation of the Facility</b></p>	<p>g. Other equipment required in the future either as a change in operations, as a required component due to "contracting in" or as a result of expansion will be deemed Facility operational requirements and be purchased and maintained by Kelowna. The Facility will pay either an annual equipment fee for equipment reserve and maintenance to Kelowna or actual operating costs depending on the mutual agreement of both parties prior to the purchase.</p> <p><i>The three loaders currently used at the Facility will continue to be charged out at actual cost and their debt repayment will be provided for in the operating budget of the facility.</i></p> <p>A copy of the annual operating budget for the Facility will be provided for review and approval by Vernon at least 30 days prior to submission to Kelowna</p>	<p>g. Other equipment required in the future either as a change in operations, as a required component due to "contracting in" or as a result of expansion will be deemed Facility operational requirements and be purchased and maintained by Kelowna. The Facility will pay an equipment fee to Kelowna for equipment reserve and maintenance on an ongoing basis or actual operating costs depending on the mutual agreement of both parties.</p> <p>A copy of the annual operating budget for the Facility will be provided for review and approval by Vernon at least 30 days prior to submission to Kelowna City Council. Should Vernon have questions regarding the annual operating budget for the Facility, Vernon may request that the Kelowna Utilities Services Manager or designate, present the annual operating budget for the Facility to</p>	<p>Reserve contributions are now made quarterly. The contribution amount and schedule are subject to change based on current best practices in Fleet Services and Financial Services, and we propose amending the language to allow for this.</p> <p>We also propose including the front-end loaders in Schedule A, which includes the list of equipment eligible for the equipment reserve. The reserve contribution would be reconciled through</p>	<p>Y</p>

<p>City Council. Should Vernon have questions regarding the annual operating budget for the Facility, Vernon may request that the Kelowna Utilities Services Manager or designate, present the annual operating budget for the Facility to Vernon and be available to answer questions.</p>	<p>Vernon and be available to answer questions.</p>	<p>quarterly operating invoices.</p>	
<p><b>6 – h.</b> Operation of the Facility</p> <p>[Sub-section not included in original contract]</p>	<p>h. The three loaders currently used at the Facility will be included in Schedule A.</p>	<p>h. A list of the heavy equipment currently included in use at the Facility will be included in Schedule A. Schedule A may be amended from time to time based on agreed operating and capital budgets between the two municipalities.</p>	<p>Y</p>
<p><b>6 – k.</b> Operation of the Facility</p> <p>k. Vernon will provide reclaimed water from the VWRC to the Facility for the term of this agreement. The annual fee for the supply of reclaimed water to the Facility will be as per the Vernon Fees and Charges Bylaw No. 3909, a copy of which is attached to this agreement as Schedule B.</p> <p>For billing purposes, the Facility will be classified as a commercial operation with an equivalent irrigated area of 2.0 Ha.</p>	<p>k. Vernon will provide reclaimed water from the VWRC to the Facility for the term of this agreement. The annual fee for the supply of reclaimed water to the Facility will be as per the Vernon Fees and Charges Bylaw No. 3909.</p> <p>For billing purposes, the Facility will be classified as a commercial operation with an equivalent irrigated area of 2.0 Ha.</p>	<p>Schedule B was not included in our copy of the original agreement. We propose the agreement include a hyperlink to the bylaw, which may change over time.</p>	<p>Y</p>

<p><b>7. Decision Making</b></p>	<p>a. Unless otherwise indicated in this agreement, and without fettering the discretion of either Municipality's councils, the parties shall co-operate and agree on all major decisions and significant matters for the Facility including any matters relating to the lease, the RFR, the Option/RFR, land acquisition, any contracts or expenditures exceeding <b>\$10,000</b>, and any borrowing or any agreements where a liability is incurred for more than 5years.</p>	<p>a. Unless otherwise indicated in this agreement, and without fettering the discretion of either Municipality's councils, the parties shall co-operate and agree on all major decisions and significant matters for the Facility including any matters relating to the lease, the RFR, the Option/RFR, land acquisition, any contracts or expenditures exceeding <b>\$100,000</b>, and any borrowing or any agreements where a liability is incurred for more than 5years.</p>	<p>Increase the amount from \$10,000 to \$100,000 to be more in-line with current practices.</p>	<p>Y</p>
<p><b>8-d</b></p>	<p>d. The Criteria for material acceptance and processing is set out in a separate "Criteria Agreement" between the Facility and the WVRC and WWTP attached to this agreement as Schedule C.</p>	<p>d. The Criteria for material acceptance and processing is set out in the Facility's ENV Permit 108537 and BC's <i>Organic Matter Recycling Regulation</i> under the Environmental Management Act.</p>	<p>Schedule C was not included in the agreement on file and was effectively replaced by the ENV Permit in 2017, which outlines the criteria for material acceptance and processing at the Facility.</p>	<p>Y</p>
<p><b>20 - a. Insurance</b></p>	<p>a. Both parties will obtain, maintain and pay for during the term of this agreement the following insurance:  i. Comprehensive Public Liability and Property Damage in the amount of \$5,000,000;  ii. Automobile Insurance (owned and</p>	<p>a. Both parties will obtain, maintain and pay for during the term of this agreement the following insurance:  i. Comprehensive Public Liability and Property Damage in the amount of \$5,000,000;  ii. Automobile Insurance (owned</p>	<p>Kelowna's Risk Management group recommend keeping coverage of i, ii and iii at \$5,000,000, and adding Environmental Liability Insurance in an amount that is to be determined.</p>	<p>Y</p>

	<p>non-owned) in the amount of \$5,000,000;</p> <p>iii. Professional Liability of \$5,000,000.</p>	<p>and non-owned) in the amount of \$5,000,000;</p> <p>iii. Professional Liability of \$5,000,000.</p> <p>iv. Environmental Liability in the amount of \$5,000,000, minimum.</p>	
<p><b>23. Fire Protection</b></p>	<p>a. Vernon's Fire Rescue Services will provide emergency response services to the Facility site. The level of service will be consistent with the Vernon Fire Rescue Services Emergency response policy. The cost of this service will be based on the assessed value of the site and invoiced annually to the Facility.</p>	<p>a. Vernon's Fire Rescue Services will provide emergency response services to the Facility site. The level of service will be consistent with the Vernon Fire Rescue Services Emergency response policy. The cost of this service will be based on the cost of service and included in the operating budget. For the Service, Kelowna agrees to pay to Vernon the fees and charges as contained in Schedule B attached hereto and forming part of this Agreement.</p>	<p>Revise wording to match current practice and refer to a new Schedule B – Fire Protection Terms of Service.</p>
<p><b>24. Notices</b></p>	<p>a. Any notice that either Municipality may be required or may desire to provide to the other Municipality will be deemed to have been delivered and received, if delivered personally on the date of such personal delivery or if mailed, on the third business day after mailing in British Columbia by pre-paid post addressed to either Municipality at its City Hall</p>	<p>a. Any notice that either Municipality may be required or may desire to provide to the other Municipality will be deemed to have been delivered and received, if delivered personally on the date of such personal delivery or if mailed, on the third business day after mailing in British Columbia by pre-paid post addressed to either Municipality at its</p>	<p>Remove names and update titles</p>
			Y



	<p>address, and to the attention of the following persons or their successors:</p> <p>Don Degen Utilities Services Manager Kelowna</p> <p>Shirley Koenig Operation Services Manager Vernon</p>	<p>City Hall address, and to the attention of the following or their designates:</p> <p>Utilities Services Manager City of Kelowna</p> <p>Director of Operations City of Vernon</p>		
<p><b>Schedule A</b></p>			<p>Replace Table SA-1 with Table SA-2 to include the 3 Front-End Loaders in asset renewal program.</p>	<p>Y</p>
<p><b>Schedule B</b></p>			<p>Replace Schedule B with a new Schedule B – Fire Protection Terms of Service</p>	<p>Y</p>

Table SA-1 (current)

**Schedule A Equipment**

Vehicle #	Description	Category	Original Cost
V6384	2007 McCloskey Trommel Screen	(Trommel)	418,170
V6481	2009 Supreme 900ST Enviroprocessor	(Mixer)	236,000
V6511	Supreme EnviroProcessor 900 ST Compost Mixer	(Mixer)	209,000

Table SA-2 (proposed)

**Schedule A Equipment**

Vehicle #	Description	Category	Original Cost (\$)
V6384	2007 McCloskey Trommel Screen	Trommel	418,170
V6481	2009 Supreme 900ST Feed Mixer	Mixer	236,000
V6511	2009 Supreme 900 ST Feed Mixer	Mixer	209,000
V6831	2016 Volvo L110H Front End Loader	Loader	403,100
V6881	2018 CAT 950M Front End Loader	Loader	463,390
V6963	2020 Volvo L110H Front End Loader	Loader	453,030

**Schedule B – Fire Protection Terms of Service**

The Facility (Customer) shall pay to the City of Vernon (Service Provider) an annual fee for each year of the Term (the "Annual Fee"). The Customer shall pay the Annual Fee for the first year of the Term upon execution of this Agreement in the amount of \$20,000.00. On each anniversary of the date of this Agreement during the Term, the Annual Fee shall be invoiced to the Customer and the rate per Service Site shall increase by three percent (3.0%) compounded.

<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>
\$ 20,000.00	\$ 20,600.00	\$ 21,218.00	\$ 21,854.54	\$ 22,510.18	\$ 23,185.48	\$ 23,881.05	\$ 24,597.48	\$ 25,335.40	\$ 26,095.46
<b>2033</b>	<b>2034</b>	<b>2035</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>
\$ 26,878.33	\$ 27,684.68	\$ 28,515.22	\$ 29,370.67	\$ 30,251.79	\$ 31,159.35	\$ 32,094.13	\$ 33,056.95	\$ 34,048.66	\$ 35,070.12

**2043**

\$36,122.22

# Strategic Plan Scope of Work

## 1. Introduction

In the Joint Biosolids Advisory Committee (JBAC) meeting from October 25, 2023, the JBAC passed the following motion:

“THAT the JBAC recommends to respective Councils of the City of Vernon and City of Kelowna, that staff be directed to return to the Committee with a compiled background, and action plan, budget outline, and a process of delivery that ultimately provides the facility with a Draft Strategic Plan.”

The purpose of this is to develop a comprehensive Draft Strategic Plan for the facility, encompassing a background compilation, an action plan, a budget outline, and a process of delivery of service and evaluate and develop a future growth strategy.

The scope would result in the creation of a strategic framework that addresses the operational and financial aspects of the facility, ultimately guiding its future direction and development.

## 2. Background

### Values

Both Municipalities have overarching corporate values that are the foundation for the Regional Biosolids Compost Facility (RBCF). These base values include:

- Responsible waste management;
- Sustainable long term operations;
- Recognizing the nutrient component back to the earth in organics recovery; and
- Maintaining composting best management practices.

### Vision Statement

The RCBF is leading composting facility, managing biosolids to minimize environmental impact and maximize organic and nutrient recovery for the benefit of the communities we serve.

### Current State of Affairs

Since 2006, the RBCF has processed dewatered biosolids primarily from the City of Kelowna, the City of Vernon, and the District of Lake County to produce OgoGrow, a biosolids compost product marketed and sold in the Central and North Okanagan. The facility operates under an operating permit issued by the BC Ministry of Environment and Climate Change and is

regulated under the Organic Matter Recycling Regulation (OMRR). The facility has a permitted capacity of 36,400 wet tons of biosolids per year, but operational constraints limit the actual maximum to approximately 33,000 wet tons annually. The composting process is an aerobic process where biological activity is optimized to break down organics, destroy pathogens, and reduce vector attraction, creating a nutrient-rich, OMRR-compliant Class A Compost that serves as an excellent soil amendment.

### **Other local governments**

To understand the current market and potential shifts in biosolids management in the Okanagan Valley, staff polled other Government agencies.

- **Composting:** Some regions are engaged in advanced composting techniques where biosolids are converted into Class A compost for use in city parks, projects, and commercial sale. This involves contracting composting facilities or using regional compost facilities.
- **Hauling and Landfilling:** In several areas, biosolids are transported to local landfills where they are mixed with yard waste for land reclamation purposes.
- **Diverse Facilities:** A few regions use a combination of local and regional facilities for handling biosolids, including septic waste from portable toilets, which are sometimes processed at designated composting sites or diverted to specific facilities for further management.

### **Future Changes (Next 10 Years):**

- **Infrastructure Development:** Plans include constructing new facilities specifically for composting a broader range of organic materials including biosolids, with enhanced focus on odour control and environmental impact models. Investments are being considered in the magnitude of tens of millions for these expansions.
- **Continuity and Adaptation:** Most regions do not intend significant changes but are prepared to adapt based on upcoming regulatory updates and market conditions. Some are considering the possibility of public tenders for alternative management solutions.
- **Local Solutions and Digesters:** A few areas are exploring local solutions, including the development of biosolids digesters, though this is not a universally adopted approach. The focus remains on leveraging existing facilities and potentially expanding composting practices.

### 3. Action Plan

#### Key Performance Indicators (KPIs)

- **Tonnes of Biosolids Processed/Diverted from Landfills:** This KPI measures the facility's success in recovering valuable nutrients and organics from biosolids, which would otherwise be lost in landfills. By diverting biosolids from landfills, the facility contributes to a more sustainable and circular economy.

Trigger: When reaching 31,000 Wet Metric Tonnes of biosolids processed in a year, the facility will consider expanding diversion unless there are other viable options for the biosolids or the end-product, such as forestry and mine reclamation or special projects.

- **Number of odour reports:** This KPI is crucial for maintaining community satisfaction and identifying potential operational issues. Effective odour management is essential for preserving the facility's reputation and public trust.

Trigger: Odour reports prompt an internal investigation checking odour monitoring records, odour management systems, review of recent incidents or trends, and general operations. Trends are investigated and mitigation measures enacted where feasible.

#### Gaps and Challenges

- Identification of gaps in current operations and potential challenges
- Sourcing of reliable and consistent woody feedstocks
- Public perception and expectations for value for residents
- Ensuring sufficient outlet for material, including storage, transport and additional handling costs. Some of these costs for offsite management are not easily recorded in these ledgers or transferred back to the RBCF.
- Impacts to operations from changing regulatory regime and updates to OMRR
- The RBCF has an Emergency and Contingency plan specific for the operations of the facility. This has been historically vetted by the Vernon Fire Department, and is reviewed annually for updates and with staff to ensure adequate emergency responses are in order.
- In addition, each Municipality's Wastewater Treatment Plants have contingency plans in place for continuous operations and Continuity of Business for the disposal or recovery of the biosolids if the RBCF shuts down due to Emergency Responses or becomes inaccessible.

## **Decommissioning Plan**

The final closure and decommissioning plans will be developed in accordance with the requirements of the Permit and Organic Matter Recycling Regulation (OMRR) as amended by the Province. Currently, these requirements are summarized as:

- *Permit Section 3.7 - Before closure of the facility, the Permittee must apply or distribute all compost in accordance with the Organic Matter Recycling Regulation, and all unprocessed organic matter must be removed from the facility and dealt with in accordance with the Environmental Management Act.*

*A final closure plan must be submitted 90 days prior to deactivation of the site to the Director for review and approval. The final closure plan and associated engineered closure works must be compatible with the planned end-use of the compost facility.*

The RBCF will develop a final closure plan at least one year before the planned closure.

## **Annual Capacity Target**

- The optimal volume of incoming biosolids is targeted at 27,000-29,000 wet metric tonnes (WMT). This allows for consistent operational placement and closely matches market demand for Ogogrow sales.
- When receiving volumes exceed 31,000 WMT, operations are impacted significantly when there are system failures. This creates storage capacity issues and asset service and repairs.

## **Value-Added Focus and Direction for the Future (10 to 20 Years)**

- Organics procurement to secure woody feedstocks
- Soil production business plan in development
  - Business Plan/Feasibility study in early stages
  - Glenmore Recreation Park, Kelowna
  - Golfview Park, Kelowna
- Published list of third-party haulers who deliver (service upgrade)

## **Engagement and Research Opportunities**

Engagement and research opportunities are evaluated on a case by case basis. The RBCF has and will continue to undertake in working with educational institutions for research into waste reduction, novel uses of materials, and scientific development not only when the project benefits the RBCF, but when the knowledge expansion may benefit the communities at large.

Staff will continue to work with Industry Groups and Associations to promote responsible management of organic materials, and actively donates Ogogrow to charity events and community gardens.

#### **4. Budget Outline**

The average operating budget between 2019 and 2023 was \$2,741,400 with an average spend of \$2,445,086 and compost sales of \$417,700.

It should be noted that the City of Kelowna carries a budget contingency for emergency diversion of product and biosolids.

#### **5. Process of Delivery**

- Outline the steps for delivering the action plan and achieving the vision
- Include monitoring, evaluation, and adjustment mechanisms
- stakeholder engagement and collaboration

#### **6. Conclusion**

- Summary of key points
- Call to action or next steps

#### **7. Appendices/Schedules**

- Permit

#### **List of Historical Documents**

- Ogogrow and Glengrow Marketing Study, Ferrence Weicker & Co Ltd., June 2015
- Strategic Review – Biosolids Management, Opus, 2016
- Operating Permit Authorization 108537- BC Ministry of Environment and Climate Change Strategy, 2017
- RBCF Annual Reports to ENV, CoK, 2017-ongoing (submitted annually)
- Odour Management Plan, WSP, November 2017
- Leachate Management System Plan, WSP, March 2018
- Air Emissions Review Study, WSP, March 2018
- Compost Activities Update, Waterkind, October 2019
- Kelowna Biosolids Feasibility Study (Digester), AECOM, 2020
- Fire Safety and Emergency Contingency Plan, CoK, May 2021 (updated annually)
- ValleyGrow Soil Amendment Trials, Waterkind/CoK, 2021-ongoing