



TOWN OF LAKE COWICHAN

Public Works and Environmental Services Committee

Tuesday, August 20th, 2019 at 6:00 p.m. – Council Chambers

AGENDA

1. CALL TO ORDER

Page #

INTRODUCTION OF LATE ITEMS (if applicable)

2. APPROVAL OF AGENDA

3. BUSINESS ARISING AND UNFINISHED BUSINESS

(a) Watermain Upgrades for:

(i) Water Treatment Plant – Tour and Deficiencies-Update.

(b) Ongoing Items Still Being Addressed:

(i) CLEC Water System-Update.

(ii) Directional Signage-Update.

4. DELEGATIONS AND REPRESENTATIONS

(a) Cara Smith re: Composting at the Community Garden

5. CORRESPONDENCE

None.

6. VERBAL COMMENT FROM THE PUBLIC ON A SUBSEQUENT ITEM ON THE AGENDA–

(maximum 3 minutes per speaker and maximum time allotted 15 minutes)

7. REPORTS

None.

8. NEW BUSINESS

(a) Catalyst re: Planned modifications affecting pump station.

(b) In vessel composting system

(c) New hire-Superintendent, Public Works and Engineering Services

3

9. NOTICES OF MOTION

10. PUBLIC RELATIONS ITEMS

11. QUESTION PERIOD (maximum 3 minutes per speaker and maximum time allotted 15 minutes)

- Limited to items on the agenda

12. ADJOURNMENT

Please note: Should this meeting end sooner than 7:00 p.m., the next meeting may start no later than 10 minutes after adjournment of this meeting.

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CASE STUDY

Augustana CAMPUS



THE UNIVERSITY OF ALBERTA AUGUSTANA CAMPUS IN CAMROSE OFFERS UNDERGRADUATE DEGREES IN ARTS, SCIENCE, MUSIC, AND OTHER DISCIPLINES. PRIMARILY RESIDENCE-BASED, THERE ARE OVER 500 STUDENTS LIVING ON CAMPUS CONSUMING ABOUT 1,200 MEALS PER DAY. *The campus literally generates tons of waste each week.*

Over 65% of the campus' waste is organic, and of that, 80% is from the cafeteria. In 2007, Augustana adopted a progressive approach to waste management. The campus began measures to offset the volume of organic waste going to landfills, starting with a sustainable-food policy to reduce pre-consumer waste and then tackling reduction.

The campus tried other initiatives, like transporting organic waste 93 km north to Edmonton for composting. But the costs were high and the process was inefficient; high shipping costs and other hassles made the project unsustainable. That's when Augustana contacted Nioex™.

Enter the BIOVATOR[®]

After researching in-vessel composters, the campus approached Manitoba-based Nioex Systems Inc., and in early September 2011, the campus installed a BIOvator[®].

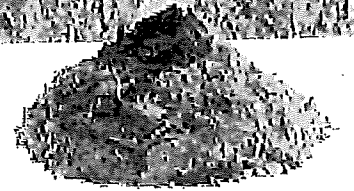
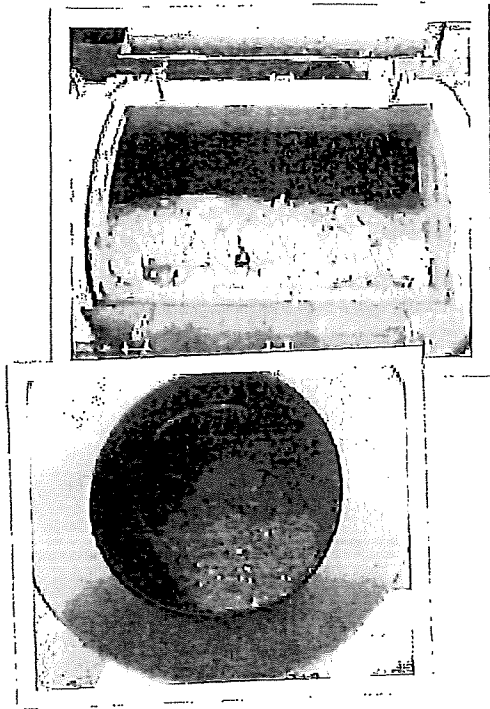
The BIOvator went to work quickly, breaking down over 350 kg of organic waste per day and consolidating over two months of waste into one cylinder. After running into a few snags, the machine was put on half-duty for a short while, as the Nioex team worked to better tailor the unit to the campus' needs.

You Can't Make an Omelet...

Because of the unit's close proximity to residences, odor was a sensitive issue. The source of the smell was from anaerobic bacteria, which would escape when the unit was opened for rotation. The campus was also having problems with compostable bags that were sometimes clogging the unit.

"Shawn worked with us closely to help improve our efficiency. Nioex developed a biofilter for us - an air-intake to foster growth of good bacteria and good microbes to reduce odor." Candice Tremblay, Sustainability Coordinator, University of Alberta Augustana Campus, on Nioex™ customer service.

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Hands-on Troubleshooting

Nioex President Shawn Compton worked with the campus to establish a better oxygen and nitrogen to carbon balance and improved airspace in the system, helping to reduce smell. In addition to a new air-filtration system, Nioex created a chopper-system to break down bags and larger aggregate (potatoes, corn cobs, etc.), which also helped to eliminate odor.

At Nioex, we know that every organization has its own unique sustainability challenges. That's why we believe in working closely with our clients to ensure custom-tailored solutions—troubleshooting problems, streamlining operations, and working toward optimal efficiency.

WITH FIRST-IN-CLASS CUSTOMER SUPPORT service and customized solutions to suit your operation, the BIOvator[®] In-Vessel Composter is the down-to-earth solution for organic waste management.

BIOvator is one of the most cost-efficient waste management solutions on the market today, and is in use by over 200 operations across North America. From markets to military bases, hospitals to universities, BIOvator can save operations money and save waste from landfills.

Find out more at nioex.com or contact us today

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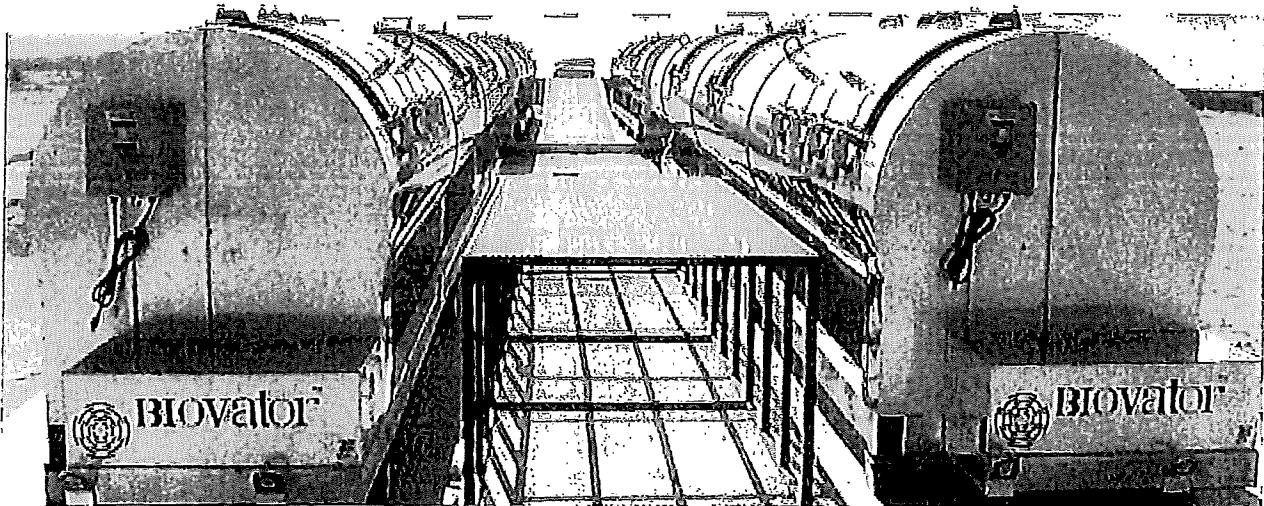


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...and with the option of having multiple units on a site, our BIOvator models can handle any amount of organic waste or mortality.

BIOVATOR™ Features

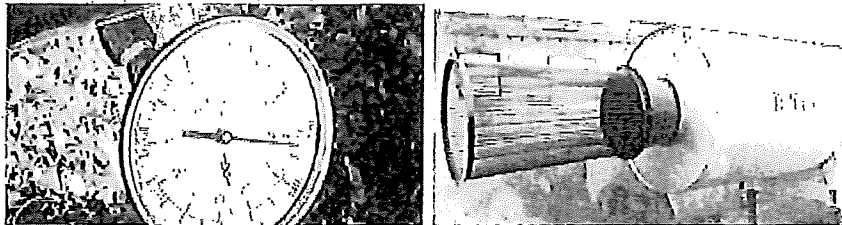
The BIOvator™ is a patented all-steel design, ensuring optimal functionality and longevity. An ideal combination of carbon and stainless steel make it a durable and affordable investment.

Our current BIOvator™ models have the capacity to handle up to 500 lbs. of organic waste or mortality per day, requiring only .05 ft³ of shavings per each pound of waste. This amounts to approximately 3,500

500 → day (190 hrs req

lbs. per week, or 182,000 lbs. of organic waste per year. *And with the option of having multiple units on a site, our BIOvator™ models can handle any amount of organic waste.*

- 4 ft diameter x 30-42 ft long insulated vessel with stainless steel shell, other sizes available.
- Two loading doors 7.5' x 2', inspection openings and one 18" discharge opening.
- Stainless steel paddles mounted on the inside vessel walls.
- Galvanized steel skid, with heavy-duty nylon rollers supporting the vessel.
- Driving system: 1 hp motor – 110.V, 2 gear boxes, heavy duty bearing, sprocket and chain.



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Bringing waste back to life™

CASE STUDY

The FORKS MARKET

THE FORKS MARKET IN WINNIPEG, MANITOBA, IS A BUSY HUB OF CULTURE AND RECREATION: HOME TO DOZENS OF RESTAURANTS AND SHOPS, A LUXURY HOTEL, A THEATRE, TWO MUSEUMS, A SKATEPARK, A LOCAL TELEVISION STATION, NUMEROUS HISTORICAL LANDMARKS AND SCULPTURES, AND ACRES OF PUBLIC SPACE. *With over 4-million visitors each year, the National Historic Site generates a huge amount of garbage.*

FROM 800 to 0

A 1998 audit revealed the site was generating over 800 tons of garbage per year, and just over 500 tons were organic waste. The Forks was spending more than \$30,000 each year on waste management fees. As visitors have increased, the volume of garbage and cost of its disposal has only grown. That's why The Forks developed Target Zero, an initiative aiming for zero garbage, zero water consumption, and zero carbon emissions—a pretty impressive goal.

A New SOLUTION

Nioex™ President Shawn Compton approached The Forks with a novel solution to their organic waste woes — reduce the volume of waste going to landfill, help to meet their Target Zero goals, and actually save money. The solution? The BIOvator®.

Composting was not new to The Forks, however previous composters were not on-site, meaning high costs for waste transport. A BIOvator® was installed in 2010, and operated on a part-time basis as the Nioex™ team worked with The Forks to fine tune the unit. So far, the BIOvator® has been composting everything put into it,

"Very hands-on, very helpful. It's incredible actually - couldn't be any better. It's almost like having an employee on site."

Dave Panco, Manager of Special Projects, The Forks Market, on Nioex™ customer service.

TARGET ZERO in Sight

The Forks is already seeing results: composting hundreds of pounds of organic waste each day (pre-consumer food scraps from restaurants, grass clippings, leaves, etc.), saving thousands on removal fees, and coming closer to meeting their lofty environmental goals — all thanks to the BIOvator®.



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CASE STUDY

As testing continues, The Forks is working to get over 29 food vendors on-board with compostable dishes and takeaway containers, allowing a huge amount of waste to be composted and recycled. With the help of the BIOvator[®], and other green technologies, The Forks is coming closer every day to meeting their goal of only one garbage bag at the end of each week.

DEVELOPED, TESTED, AND PROVEN SUCCESSFUL, THE BIOVATOR[®] IN-VESSEL COMPOSTER IS THE DOWN-TO-EARTH SOLUTION FOR ORGANIC WASTE MANAGEMENT.

BIOvator[®] is one of the most cost-efficient waste management solutions on the market today, and is in use by over 200 operations across North America. From markets to military bases, hospitals to universities, BIOvator[®] can save operations money and save waste from landfills.

*Meet Your Green Initiatives and Save Thousands.
Contact Nioex™ today.*

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and other green technologies,
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to meeting their goal of only one
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Developed, tested, and proven successful in over 150 operations, the BIOvator composter puts control of organic waste and mortality management back into your hands.

The #1 Name for In-Vessel Composting

Let the revolutionary BIOvator™ in-vessel composter put control of organic waste and mortality management back into your hands.

Since its introduction to the market in 2004, the BIOvator™ in-vessel composter has become a widely recognized product of choice for organic waste and animal mortality management. For good reason: incineration is costly and high-maintenance, rendering carries environmental and regulatory risk, and compost buildings require intensive labour and use of space.

The BIOvator™ provides a cost-efficient and environmentally sound solution to organic waste management, and virtually eliminates biosecurity risks of mortality management and reduces many of the concerns associated with more traditional methods of disposal.

BIOvator™ - the only name you want

The BIOvator™ is the only all-steel, in-vessel composter on the market in successful operation in more than 150 locations throughout Canada and the US. Free of any plastic drum material that can warp and wear, choose the tested and proven steel BIOvator™ for unmatched durability and function.

BIOvator™

BrochurePDF (508KB)



BIOvator™

ManualPDF (1.6MB)



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THE BIOVATOR™ OPERATION

- The BIOvator™ is easy to operate. Simply load carcasses and shavings into the vessel, turn it on for a few hours daily, and let nature do the rest for you.
- Our current BIOvator™ models have the capacity to handle up to 500 lbs. of mortality per day, requiring only .05 ft³ of shavings per each pound of mortality. This amounts to approximately 3,500 lbs. per week, or 182,000 lbs. of mortality per year. And with the option of having multiple units on a site, our BIOvator™ models can handle any amount of mortality.
- The BIOvator™ is a continuous operation where mortalities are processed into compost in 4 to 12 days.
- Compared to other composting systems, the BIOvator™ reduces employee operating time and produces a higher quality compost under proper management guidelines and protocols.



Nioex Systems Inc
ENVIRONMENTALLY AND SOCIALLY
ACCEPTABLE SOLUTIONS

BIOvator™

The #1 Name for In-Vessel Composting

Canadian Patent #2465685

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**PROVEN
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IN OVER 150 OPERATIONS,
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PUTS CONTROL OF MORTALITY
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Contact us today to learn more about
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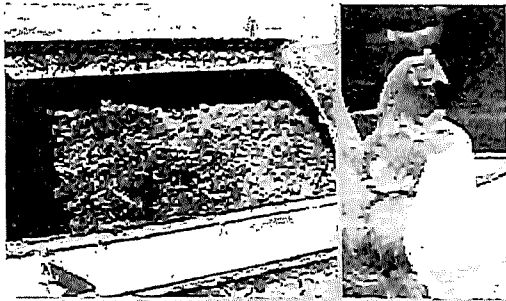
BIOvator™

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The BIOvator™ is an innovative new alternative to traditional mortality management methods. It provides a cost-efficient and environmentally sound solution to mortality management, virtually eliminating biosecurity risks and reducing many of the concerns associated with more traditional methods of disposal. The BIOvator™ exceeds all provincial regulations and requirements for disposal of mortalities.

BIOvator™

The #1 Name for In-Vessel Composting

BIOSECURITY BENEFITS

Third party pick-ups always carry some risk of cross-contamination – the BIOvator™ allows you to control your mortalities on-site, eliminating the risk of disease in your healthy animals. Since the mortalities are fully enclosed, you will be able to control intrusion of wildlife, insects, and rodents.

OTHER BENEFITS OF THE BIOVATOR™

As a bonus, the BIOvator™ produces high and consistent quality compost that can be used as a soil enhancer, fertilizer, bedding material, and to control soil erosion of lagoon banks. Other benefits of the BIOvator™ include:

- Out-of-sight process makes it attractive to neighbours.
- Reduced risk of disease-causing organisms and odour.
- Environmentally friendly – it eliminates leaching and ground contamination, recycles barn air when used with a cold climate hoarding system, reuses finished compost to replace part of new shavings, and reduces energy consumption.
- Removes challenges of winter composting.
- Uses half the shavings required for bin composting.

COST-EFFECTIVE ALTERNATIVE

The BIOvator™ is a continuous process – summer and winter – processing 100% of your barn mortalities right on your own site and under your full control, within an incredibly short time. On the other hand, the cost of owning and operating the BIOvator™ is comparable to, and in many cases less than that of other mortality management options.

The BIOvator™ is manufactured from a perfect combination of carbon and stainless steel to make it durable and affordable.

The BIOvator™ has been certified by a third party independent engineer to have a 15 plus year lifespan.

THE BIOVATOR™ STANDARD FEATURES

- 4 ft diameter x 38-42 ft long insulated vessel with stainless steel shell; other sizes available.
- Two loading doors 7.5' x 2' inspection openings and one 18" discharge opening with removable discharge screen.
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