

Long Term Processing Approach for Peel's Green Bin Organic Material and Yard Waste

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Norman Lee,
Director Waste Management
Region of Peel

Background

Today's report and presentation recommend a new long-term organics diversion plan to meet Peel's goals and objectives:

- 75% 3Rs diversion by 2034
- Provincial organics diversion targets
- Diversion of items like diapers and pet waste
- Significant contribution toward Peel's climate change goals

Green Bin Organics Processing Options

1. Retrofitting /refurbishing/expanding Peel's in-house composting system
2. Merchant capacity: short-term (up to 5-year) contracts
3. Merchant capacity: long-term (20-year) contracts
4. Combination of options 1-3 above

Option: Retrofitting Peel's In-House Processing System for Green Bin Organic Material

Assessment showed that retrofitting in-house processing would:

- Require significant capital investment
- Have overall higher costs
- Require significant space
- Displace transfer capacity and possibly MRF
- Require purchase of land to expand curing facility

Retrofitting Peel's In-House Processing System for Green Bin Organic Material is Not Feasible

Option: Ongoing Utilization of Short-Term Capacity for Green Bin Organic Material

Assessment showed that ongoing utilization of short-term merchant capacity carries a number of risks:

- potentially insufficient capacity over time
- market price and capacity fluctuations
- vendor preference for quality material
- increased transportation costs
- limited ability to specify requirements (e.g. environmental benefits)

Not recommended

Recommendation: Long-Term Processing of Green Bin Organic Material

Competitive Procurement of Merchant Capacity for a 20-Year Term, Split Between Two Vendors

- Required capacity is 90,000 tpy in 2025 growing to 120,000 tpy in 2045
- Having two vendors will significantly reduce risk while only slightly increasing price
- 20 year term allows vendors to finance construction/expansion
- Region can specify additional requirements, but each will add to cost
- Frees up space at Region's facilities for other uses, including expanded transfer capacity
- Implementation will require 3-5 years (longer if site not yet owned)

Recommendation: Interim Processing of Green Bin Organic Material

- Existing merchant capacity contracts end in March 2023
- Sufficient merchant capacity currently exists to replace current merchant capacity and in-house capacity
- Current merchant capacity to be replaced in 2023
- In-house capacity to be replaced over next few years in accordance with implementation plan to be developed by staff

Recommending competitive procurement of short-term merchant capacity as an interim solution

Yard Waste Processing Options

1. Primary processing at the Peel Integrated Waste Management Facility and secondary composting at the Peel Curing Facility
2. Merchant capacity: long-term (10-20 year) contracts
3. Combination of options 1-2 above

Option:

Processing of Peel's Yard Waste In-house

Retrofitting in-house processing to manage 100% of Peel's yard waste would:

- Require significant capital investment
- Have overall higher costs
- Require significant space
- Displace transfer capacity

Processing 100% of Peel's Yard Waste in-house is not feasible, however

Retrofitting in-house capacity to process 50% of Peel's yard waste is feasible and cost effective

Option: Using 100% Merchant Capacity for Yard Waste

Using merchant capacity for 100% Yard Waste to would increase costs and risks:

- more costly, as it would use all available capacity resulting in increase prices and haulage.
- leaves the Region without in-house expertise or emergency capacity.

Using 100% Merchant Capacity for Yard Waste is not recommended

Recommendation: Long-Term Processing of Yard Waste

Process 50% in-house and competitively procure merchant capacity for the balance through 10-20 year contracts

- 50% (up to 35,000 tpy) in-house
 - Pre-process (grinding only) at PIWMF and haulage to redeveloped PCF
 - Short-term capacity will be needed while in-house system is retrofitted
- Merchant capacity for balance through a 10-20 year long-term contracts
- Retains in-house expertise
- Retains in-house contingency processing capacity
- Results in lowest overall cost

Risks

- Careful consideration was given to maintain or improve the reliability of Peel's processing systems, which have a direct impact on the reliability of Peel's collection systems
- Maintaining some in-house capacity improves staff knowledge and improves ability to manage unexpected surges.
- Requiring at least two long term vendors significantly reduces risk.
- Supply chain risks persist and may impact the implementation of the recommended long-term solutions as vendors currently have a heightened awareness of risk. Staff also has a heightened awareness and will work with the vendor community through the procurement process to manage risks.

Implementation Next Steps

- Competitively procure long-term processing capacity for green bin organic material
- Competitively procure long term processing capacity for yard waste
- Competitively procure interim processing capacity for green bin organics and yard waste
- Develop and report back with an implementation plan to transition to recommended long-term solutions

Thank you

Contact info:

Region of Peel

Norman Lee

Director, Waste Management

10 Peel Centre Drive

Brampton, Ontario L6T 4B9

905-791-7800 ext. 4703

norman.lee@peelregion.ca

