



Committee of the Whole Report

Report Number: WM2021-008
Meeting Date: May 4, 2021
Title: Bulky Plastic Recycling Program
Description: Review the feasibility and cost implications of a bulky plastic recycling pilot program
Author and Title: David Kerr, Manager of Environmental Services

Recommendation(s):

That Report WM2021-008, **Bulky Plastics Recycling Program**, be received;

That Council approves the implementation of a two-year (2022-2023) bulky plastic recycling pilot program at the Lindsay Ops landfill; and

That staff bring a Pilot Program Evaluation report back to Council by the end of Q2, 2023

That these recommendations be brought forward to Council for consideration at the next Regular Council Meeting.

Department Head: _____

Financial/Legal/HR/Other: _____

Chief Administrative Officer: _____

Background:

One of the initiatives in the Integrated Waste Management Strategy is to develop a recycling program for bulky plastics generated within the municipality. Bulky plastics is a category for waste items including lawn chairs, damaged recycling/waste bins or carts, toys, laundry hampers, hangers and more. Boat and bale wrap are not included in the bulky plastics category for waste streams. Staff are currently exploring options with the Waste Management Advisory Committee to manage boat and bale wrap separately.

The majority of bulky plastics have historically been landfilled in Kawartha Lakes, taking up needless space and shortening the lifespan of our landfills. It demonstrates responsibility and good government to investigate feasible alternatives to enhance diversion of these items from City landfills.

At the Council meeting on November 19, 2019, Council adopted the following resolution:

CR2019-641

That Report WM2019-012, Making Waste Matter: Integrated Waste Management Strategy Update, be received;

That Council approves the integrated waste management strategy update for implementation with the following accelerated amendments;

That an immediate focus be placed on public education;

That an immediate enhanced online presence be implemented regarding recycling;

That a \$10/ton increase to the tipping fees be implemented in January 2020 and the increase in revenue be used to offset additional operating costs to enhance diversion; and

That the by-law for allowable recyclables in waste be amended to reduce the amount from 20% to 10% starting in early 2020.

This report addresses that direction, being action that was recommended within the Integrated Waste Management Strategy.

Rationale:

Currently, the City offers bulky plastic recycling four times per year at the environment round up days. A consistent market to accept large volumes of bulky plastics from municipalities was not in existence until more recently. Historically, the City does not have a setup at our landfills to specifically separate out bulky plastics. As well, the markets have not been historically robust for bulky plastics. As a result, the cost to recycle them has been higher than the revenue received. However, it appears there is the beginning of a sustained market for recycling these items and when factoring in the savings in landfill space there is a strong business case to divert bulky plastics from landfill. In addition, it is good public perception for our municipality to demonstrate how we are a leader in environmental practice and endorse programs that turn waste into useable products.

Based on the data obtained from the environment round up days and previous waste composition studies, there is the potential to divert an estimated 40 tonnes of bulky plastics from our landfills each year. To evaluate the effectiveness and cost of a diversion program, Staff are recommending a trial period or pilot to develop, operate and optimize a program at the Lindsay Ops Landfill. The layout at Lindsay Ops will allow additional drop-off bins whereas there are space restrictions at other landfills. In addition, the majority of the bulky plastics generated within the city will end up at Lindsay ops so this is the chosen location to evaluate a potential program.

The City is proposing to run a pilot program for the years of 2022 and 2023. This would require an estimated budget of \$50,000 in its first year (2022), to cover the cost of transportation, processing and procurement of three (3) additional 40-yard roll off bins. These bins are required to provide storage and a means of transporting the materials to the recycling processing facility. Although the City already owns a number of these bins, they are currently used for other diversion programs. The estimated budgeted costs required for the pilot program in 2023, would be approximately \$20,000.

A pilot program would allow the City to review costs, feasibility and the success of this program. The plan would be to bring a report back to Council by the end of Q2 in 2023 to provide recommendations on the future viability for diversion of the waste stream.

Staff currently anticipate pilot costs to be offset by the diversion savings of the program. The weight of an estimated 40 tonnes of bulky plastic occupies approximately 980m³ of landfill space. This space could hold 685 tonnes of normal residential waste

compacted to a density of 0.700kg/m³ (the average compaction for most residential waste). Based on previous reports prepared for the City, landfill space is valued at \$150 per tonne. This would bring to our municipality an annual capital deferral savings of approximately \$100,000 (685 tonnes at \$150 per tonne) in equivalent landfill space and thereby extending the life of the landfill. If the market value of waste bulky plastics increased and/or the volume brought to the landfill increased, our savings would further increase. Our current contracted MRF (Material Recovery Facility) will process bulky plastics for \$50/tonne.

Staff have consulted with the Waste Management Advisory Committee, the Lindsay Ops Landfill Public Review Committee, and the Fenelon Landfill Public Review Committee regarding the pilot program and all committees have been supportive of this recommendation.

At the Waste Management Advisory Committee meeting on March 15, 2021 the following resolution was made:

Moved By Councillor Yeo

Seconded By Councillor Veale

Resolved That the Waste Management Advisory Committee supports the two-year bulky plastic recycling pilot program at the Lindsay Ops landfill.

Carried

At the Lindsay Ops Landfill Public Review Committee meeting on March 10, 2021 the following resolution was made:

Moved By C. Appleton

Seconded By L. Scrivens

Resolved That the Lindsay Ops Landfill Public Review Committee supports the two-year bulky plastic recycling pilot program at the Lindsay Ops landfill.

Carried

At the Fenelon Landfill Public Review Committee meeting on March 25, 2021 the following resolution was made:

Moved By Julia Taylor

Seconded By Robert Coleman

Resolved That the Fenelon Landfill Public Review Committee supports the two-year bulky plastic recycling pilot program at the Lindsay Ops Landfill.

Carried

Other Alternatives Considered:

Council could decide not to pursue a bulky plastic recycling pilot program however this would not be in line with council's approval of the Integrated Waste Management Strategy.

Alignment to Strategic Priorities

The bulky plastic recycling program would be in line with the Strategic Priority of, A Healthy Environment. One of the main items under this priority, is to 'increase waste reduction and diversion'. With the implementation of a bulky plastic recycling pilot program, the City has the opportunity to divert at least 40 tonnes per year, which would directly correlate with this priority's objectives.

Financial/Operation Impacts:

The City has reviewed the most cost-effective way to provide a bulky plastic recycling pilot program at the Lindsay Ops landfill. The budgeted costs would cover storage, transportation and processing of the collected material.

For adequate storage, the City would need to procure three (3) additional 40-yard roll off bins. This would be a one-time cost of approximately \$30,000. If the pilot program were not to proceed beyond the 2-year pilot program, these bins could easily be utilized for other waste diversion programs currently being employed i.e. Construction Demolition diversion, metals diversion, etc.

For transportation, the City has estimated a total of 50 trips will be required to transport the material to the City's contracted Material Recovery Facility (MRF) in Oshawa. Based on an estimate of \$342.15/trip, as per staff research, the annual cost for transportation is \$17,107.50. The processing costs are \$50/tonne and based on 40 tonnes collected

per year, the annual processing cost is \$2,000. The following table outlines the expenses and net savings to the city in each year of the 2 years of the pilot program:

	Annual Expenses/budget	Annual landfill Capital Deferral	Overall Annual Cost Avoidance
2022	\$50,000	\$100,000	\$50,000
2023	\$20,000	\$100,000	\$80,000

*Numbers have been rounded for simplicity

Therefore, the total operational cost of the pilot program would be approximately \$50,000 in 2022 and \$20,000 in 2023. As shown in the table the annual savings through capital deferral of landfill space far outweigh the cost of each year of the pilot program. These estimated costs will be monitored and a report will be brought back to council with recommendations on how to proceed for future years.

Consultations:

Corporate Services-Treasurer
Waste Management Operations Supervisor
Miller Waste Inc.
GFL

Department Head email: brobinson@kawarthalakes.ca

Department Head: Bryan Robinson, Director of Public Works