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Kerri Snoddy, Regulatory Compliance Officer, Solid Waste Services

MEMORANDUM

To: Waste Management Advisory Committee
From: Kerri Snoddy, Regulatory Compliance Officer
Date: July 8, 2020
Subject: **Construction and Demolition Recycling Pilot Update**

At the Council Meeting of September 12, 2017 Council adopted the following resolution:

CR2017-756

Resolved That Report **WM 2017-007**, Construction and Demolition Waste Recycling Program, be received;

That the implementation of a construction and demolition waste recycling program as a 22-month pilot to start March 1, 2018 and end on December 31, 2019 as outlined in this report WM 2017-007 at a cost of \$133,500.00 for 2018 and \$155,000.00 for 2019, be approved; and

That staff report back to Council on the success of the construction and demolition waste recycling pilot program by June 30, 2019 with future program recommendations and 2020 budget expectations.

Carried

At the Council meeting of June 18, 2019 Council adopted the following resolution:

CR2019-405

Resolved That Report WM2019-008, **Construction and Demolition Recycling Pilot Results and Recommendations**, be received;

That Council approve an extension of the pilot to December 31, 2020 with an operating budget of \$155,000 in 2020; and

That Staff report back to Council on the success of the construction and demolition waste recycling pilot program by June 30, 2020 with future program recommendations and associated budget.

Carried

This pilot initiative follows the direction outlined in the Integrated Waste Management Strategy (2015-2019), as approved by Council. Specifically, the strategy recommended a Construction and Demolition (C&D) waste recycling program as one of the short term initiatives to be launched in 2018. In the Integrated Waste Strategy (2020-2023) it states that Kawartha Lakes will continue to develop and improve the C&D recycling program pilot by focusing communication efforts to local contractors to increase participation in the program.

Prior to implementing this initiative in 2018, the City retained Reclay Steward Edge (Reclay) to assess the feasibility of a C&D waste recycling program at one or more of our five operating landfill sites and make recommendations on how best to make it a successful program.

As part of the background research Reclay noted that in most municipalities (including the City of Kawartha Lakes (CKL)), the quantity of C&D waste generated far exceeded the amount of municipal solid waste generated. Approximately 40% (or 16,000 tonnes) of waste going to landfill in CKL is C&D. Therefore, diversion of this waste stream from landfill could significantly extend the site life of our landfills. As well, C&D materials are bulky and challenging to compact in a landfill taking up needless volume that could be otherwise purposed for residential or other waste. Furthermore, many materials generated through C&D activities have value and can be recycled for other products or even used as a fuel source.

For all of these reasons, C&D waste is a potential valued resource if managed properly and an important material type to divert from City landfills to extend landfill site life.

As per the Reclay C&D Feasibility Study from 2017, the primary recommendation was for the City to implement a pilot C&D recycling program at both the Fenelon and Lindsay Ops landfill sites. It should be noted that through Reclay's research there is insufficient volumes of C&D waste received at the other landfills (i.e. Somerville, Eldon and Laxton landfills) to justify a business case for C&D recycling at those sites. However, there may be future opportunity to divert C&D waste from these more remote landfills to another site where they can be consolidated for processing or other reuse.

In order to accurately assess the savings of a C&D program and determine how best to implement one, Staff in consultation with Reclay and the Waste Management Task Force, developed and recommended a pilot C&D program. The program and associated budget was approved by Council to run from March 1, 2018 to December 31, 2019 and later extended to December 31, 2020.

A competitive request for proposal (RFP) process was undertaken in January of 2018 to secure a third-party contractor to transport and process the C&D material from Lindsay ops and Fenelon landfills. The RFP requested quotes and a plan for containing, transporting, and processing wood, drywall, or a mixed bin of C&D materials which would include wood waste, drywall, aggregates, glass and shingles. Unfortunately, the City received no submissions for the RFP. The likely reason was that in the current market, quantities and commodity pricing

for the C&D materials was not high enough to justify transportation costs for end use processing.

The city continued to look for opportunities to divert C&D waste and had undertaken pilot related work:

- In 2018 the City began separating and chipping wood waste at the Lindsay Ops Landfill to be used as cover and as road base at the landfill
- In April of 2019 the City contracted Durham Disposal to transport and recycle clean wood waste. This program ran successfully for 6 months at the Lindsay Ops landfill and resulted in diverting 45.54 tonnes of material from landfill. The program was neutral as it cost \$150/tonne to the contractor and at the same time saved the cost of landfill space at \$150/tonne
- In the spring of 2019, the City contracted a company for drywall recycling. The contractor charged \$50 per tonne for processing and the City also paid for transportation of this material at \$650 per bin. This program ran successfully at both the Lindsay Ops and Fenelon landfills, diverting approximately 3.43 tonnes from Fenelon and 30.9 tonnes from Lindsay Ops. The total cost of this program was \$5,643.15 however the savings in landfill space offset the cost by approximately \$5,149.50.
- In December of 2019, Staff sent out a request for quote for a clean wood recycling program to run for the duration of 2020. Unfortunately, no bids were received for this work. Staff reached out to the previous contractor Durham Disposal to ask why they did not bid and in further negotiations and an alternative more inclusive agreement was made. Instead of just clean wood waste the contractor was interested in transporting and processing mixed construction and demolition material (including clean wood waste drywall and other materials) from the Lindsay Ops landfill for \$150 per tonne. This agreement was based on tonnages received as is able to run for the duration of 2020, or until the budget is depleted.
- On June 1, 2020, the mixed Construction and Demolition recycling program started running at Lindsay Ops. The start of this program was delayed due to the pandemic state, and the landfills being closed to the public. After starting on June 1st, after the first two weeks, over 15 tonnes of material were diverted from the Lindsay Ops landfill.

As this recent opportunity starting June 1/2020, to divert large amounts of C&D material from the Lindsay Ops landfill has started, there is great potential for this program to be get more efficient and save landfill space.

As this program was delayed in starting due to the pandemic state, and as there are limiting factors (such as the allowance of only ten vehicles onsite at a time), staff feel that this program has not been able to fully represent the large amount of diversion it could bring to the Lindsay Ops landfill. Therefore, staff are recommending a further extension on this pilot program, to gather a full year's information. The current 2020 budget could allow up to 1000 tonnes of material being diverted from the Lindsay Ops landfill. Staff feel that another year of data would give a much better indication of how the City should proceed in the future, and the budget that would be required.

The quantity of C&D waste generated continues to far exceed the amount of municipal solid waste generated. As well, C&D materials are bulky and are challenging to compact in a landfill. For these reasons it is important to continue exploring options for C&D diversion from the landfill in order extend the life of the City's landfills.

Due to the delay in the 2020 program starting, Staff are recommending the following:

That Council approve an extension of the pilot to December 31, 2021 with consideration of an operating budget of \$155,000 in 2021; and

That Staff report back to Council on the success of the construction and demolition waste recycling pilot program by June 30, 2021 with future program recommendations and associated budget.

Staff are requesting council to consider operating budget approval of \$155,000 for the Lindsay Ops landfill in 2021 for continuance of this pilot program to December 2021. The cost of the program has the potential to be offset by deferral of capital due to landfill space savings.

With the diversion program, a load of construction and demolition material arrives and is diverted. The City is cash negative by \$30, being the cost of diversion (\$150) minus the tipping fee (\$120). However, the City remains capital positive by \$150, since the landfill space is unused. Therefore, the City's total asset value is also negative \$30.

So, without diversion the City has a capital expense of \$30 tonne, whereas with diversion the City has a cash expense of \$30 tonne. Therefore, the diversion program is neutral from a total "asset value" perspective.

The following is a table representing the amount of materials that have been diverted from landfill since the pilot program started:

Year	Material	Tonnages Diverted from Landfill
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2018	Clean Wood Waste	0 (Volume of the material was decreased)
2019	Clean Wood Waste	45.54
	Drywall	34.33
2020	Mixed Construction/Demolition Materials	15 to date (Possibility of diverting up to 1000 tonnes)