



City of
Peterborough

To: Members of the General Committee

From: Jasbir Raina, Commissioner of Infrastructure and Planning Services

Meeting Date: February 13, 2023

Subject: Waste Management Master Plan Update, Report IPSES23-001

Purpose

A report to provide Council with an overview of the 2022 Waste Management Master Plan Update for adoption as the financial, planning and operating guideline for the City of Peterborough's Waste Management Program over the next five-year period.

Recommendations

That Council approve the recommendations outlined in Report IPSES23-001, dated February 13, 2023, of the Commissioner of Infrastructure and Planning Services as follows:

- a) That the City of Peterborough Waste Management Master Plan Update, as prepared by EXP Services Inc., dated October 31, 2022, and attached as Appendix A to this report, be adopted; and
- b) That the following summary of recommendations from the Waste Management Master Plan report to guide the work plan for the Waste Diversion Section be approved:
 - i. Clear bag garbage collection to encourage residents in complying with recycling and organic waste separation guidelines that supports the WMMP waste diversion goal;
 - ii. Every-other-week collection of residential garbage pick-up commencing Tuesday October 31st, 2023 as a result of the Source Separated Organics program diverting organic resources weekly out of the garbage stream, which

will commence, Tuesday October 31st, 2023, reducing the bulk of current garbage eligible material;

- ii. Update the Green Bin program to allow for more types of compostable food and applicable packaging material that can be diverted into the pending GROW Peterborough SSO program;
- iii. Prepare for the Blue Box Transition of producer-responsible paper and 'packaging like' products being provincially regulated with responsibility transitioning to the producer and away from the City of Peterborough effective January 1, 2024;
- iv. A further report to Council to amend the Waste Collection Enforcement By-law to amend the language to include new definitions of the waste stream, collection requirements, and penalties for non-compliance of diverted waste as an option if public education efforts are not effective in changing disposal behaviours, be brought forward; and
- v. Continue exploration of waste diversion as new markets and partnership opportunities become available.

Budget and Financial Implications

There will be no immediate budget or financial implications to the adoption of the updated 2022 Waste Management Master Plan (WMMP) as proposed in this report. The recommendations offer prudent economic and environmental best practices and can be accommodated in current and future budgets.

Approximately 8% (1,000 tonnes) of material in the garbage stream has been identified (consistently in historic audits of Peterborough residential waste) as targeted blue box material. A transition to a clear bag for garbage will contribute to reduced collection and landfill disposal costs and support longer term landfill capacity. As industry will assume full financial responsibility of residential recycling collection and processing costs for the City of Peterborough effective January 1, 2024, the clear bag and bi-weekly garbage collection will support diversion opportunities and represent savings to the City.

The increase in food waste diversion from landfill through the Green Bin (GROW Peterborough) project currently underway will result in the diversion of approximately 5,000 tonnes of residential organic material (per year from the City of Peterborough) being deposited in landfill and extend the capacity of the landfill accordingly.

Additionally, given that the moisture from the organic portion of the waste (garbage) stream contributes extensively to the production of greenhouse gases and leachate, the reduction of this material in the landfill will result in reduced detrimental environmental impacts and leachate treatment costs.

Weekly garbage and organics collection is not recommended due to the detrimental environmental and economic impacts; they would require additional equipment and staffing. It is estimated that increasing garbage collection to a weekly schedule would require an additional capital expense of approximately \$3.2M, and annual increased operating expenses of approximately \$1.6M per year indefinitely. Curbside collection of garbage under a manual system utilizing clear bags offers substantial time-in-motion efficiencies over bins or automated cart-based programs in addition to substantial operating and capital cost savings. Therefore, collection of residential garbage every-other-week as well as weekly Source Separated Organics collection as recommended in the WMMP can be completed by existing City of Peterborough Public Works collection fleet and staffing at no additional cost.

Background

Municipal solid waste collection, diversion and disposal operations are the responsibility of municipal governments in Ontario. The City of Peterborough currently executes garbage collection, and will add Source Separated Organics collection using existing City fleet and staffing. The City of Peterborough's current solid waste management system was substantially developed in the late 1980s and has grown and evolved extensively since then. The last WMMP was completed in 2012. Considering the age of this plan and the developments in waste diversion technologies since that time, a review of the City's waste management systems, and plan update was required.

In the fall of 2021 Exp Services were retained after the completion of a competitive process under RFP-18-21. They undertook an extensive review of the 2012 WMMP, industry best practices, proven diversion opportunities, and public consultation. In October 2022, staff received the 2022 WMMP update to guide the municipality in achieving its long-term waste management goals.

The update assessed the relevancy of actions outlined in the 2012 WMMP and identified additional opportunities to further improve waste diversion rates through added activities. The review affirmed that the 2012 WMMP goals of maximizing waste diversion, minimizing waste generation, and maintaining fiscal responsibility were completed and / or still relevant for the 2022 WMMP iteration. The update revealed that six recommendations were completed and two recommendations from the 2012 WMMP, being increasing the residential diversion rate to 75 percent over 20 years and implementing a Source Separated Organics (SSO) program, continue to be pursued by the municipality.

The review evaluated the waste disposed from 2012-2020, and a decrease of 3.7 percent in the amount of residential waste sent to landfill or 1,489 tonnes was observed. Diversion of materials away from the landfill recorded a rise of 0.7 percent or 126 tonnes despite the continuing decrease in the overall weight of blue box material available for collection despite the light weighting of packaging (i.e., glass to plastic) and

the continued transition from a print media (i.e., newspaper) to digital (i.e., social media).

The 2012 WMMP diversion goal had identified 75 percent by 2030. The updated evaluation determined that an achievable residential diversion rate in Peterborough is between the range of 76 to 83 percent with the implementation of the recommendations within this report. In 2021, the total residential waste collected by the waste management system was 35,760 tonnes which diverted 52 percent or 18,525 tonnes of waste diverted from the landfill. Achieving the 76 to 83 percent diversion goal will be realized through the collective implementation of the SSO food diversion program, identified as GROW Peterborough. The transition to a clear garbage bag program and the transition to an alternating frequency (bi-weekly) collection of garbage.

A comprehensive review of waste management best practices and extensive public consultation identified the following proven diversion opportunities for the 2022 WMMP update:

- i. **Clear bag garbage collection** to encourage residents into complying with recycling and organic waste separation guidelines that supports the WMMP waste diversion goal. Within the City, residential waste audits undertaken through 2021 / 2022 have identified up to 8% of material placed in the garbage stream is applicable to the residential blue box;
- ii. **Every-other-week collection** of residential garbage pick-up as a result of the SSO program diverting organic resources weekly out of the garbage stream, reducing the bulk of current garbage eligible material;
- iii. **Implementation of the Green Bin program** targeting compostable food material diversion (i.e., GROW Peterborough) into the SSO program will increase residential waste diversion by an incremental 15 to 20%;
- iv. **Blue Box Transition** under full extended producer responsibility (EPR) of producer-responsible paper and 'packaging like' products being provincially regulated with responsibility transitioning to the producer and away from the City effective January 1, 2024;
- v. **Update the waste collection enforcement by-law** to amend the language to include new definitions of the waste stream, collection requirements, and penalties for non-compliance of diverted waste as an option if public education efforts are not effective in changing disposal behaviours, and
- vi. **Continue exploration of waste diversion** as new markets and partnership opportunities become available in Peterborough for other existing hard to recycle materials (i.e., carpets, bulky items, etc.).

In addition to these added waste initiatives, the 2022 WMMP update will continue with existing diversion programs offered by the city.

Two public meetings were held in March 2022 and May 2022, as well as public surveys to provide residents with the opportunity to understand current programs, new diversion opportunities and provide input to the WMMP update. City staff and the expert consultants received wide public involvement from a variety of City and County stakeholders from the residential, commercial, academic, and non-government organization (NGO) sectors. All feedback was reviewed, evaluated, and incorporated in the updated WMMP report.

Summary

A Waste Management Master Plan is essential for developing a municipality's long-term strategy for optimizing current and future residential solid waste programs. Council endorsement of a current WMMP has been identified by Waste Diversion Ontario (WDO) as one of the "Best Practices" for municipalities providing recycling services, which translates to maximized funding available through the WDO. Accordingly, it is recommended that Council adopt the WMMP as set out in Appendix A to this report as the guide for the City's Waste Diversion Program.

Submitted by,

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Attachments:

Appendix A - Waste Management Master Plan Update: Summary Report