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## **Staff Report PW2021-024**

**Title of Report:** PW2021-024 CIF 4 Season Waste Audit  
**Department:** Public Works  
**Branch:** Waste Resources and Diversion Management  
**Council Date:** June 2, 2021

### **Recommendation:**

**Be it resolved that** Council receive Staff Report PW2021-024 for information.

### **Background:**

At the January 16, 2019, Council Meeting, PW Staff Report 2019-007 Continuous Improvement Fund (CIF) Waste Composition Study Project Agreement was presented and approved by Council.

The Township received the CIF Project Letter of Agreement on December 24, 2018, which will provide 100% funding through CIF and Stewardship Ontario (SO) for recycling and waste audits for a 4-season study, CIF Project #1045. The studies will be completed by third party contractors for single and multi residential collections. The Township will assist on coordinating collection locations, provide space for audit sorting at the Egremont Landfill site and a wheel loader with operator when required. The Township will receive audit findings and study results after completed.

One of the conditions of the agreement was that the Municipality shall recognize and state in an appropriate manner, the support offered by RPRA and Stewardship Ontario, through the CIF, concerning the study in any related publication(s). The following statement shall be incorporated into any publication involving the information: This Project has been delivered with the assistance of the Resource Productivity and Recovery Authority's (RPRA), Continuous Improvement Fund, a fund financed by Ontario municipalities. Notwithstanding this support, the views expressed are the views of the author(s), and the Resource Productivity and Recovery Authority and the individuals and organizations represented on the CIF Committee accept no responsibility for these views.

The third-party audit study for 4 seasons was conducted by AET Group Inc. Southgate staff provided 10 grouped household locations in 10 different road sections in all 4 collection zones, with the same locations audited in all 4 seasons. This was a diversified approach mixing rural/ farm/estate residential roads and streets in Holstein, Dundalk and in new development areas. The auditors gathered cart set out materials for both waste and recycling weeks collections and then took them to the Egremont Transfer Station for sorting and compiling data.

**Staff Comments:**

The first audit was in the Summer of 2019, then Fall of 2019, and Winter 2020. Due to the COVID-19 pandemic delays in the last audit were encountered until a safe approach and protocols for all was put into place and was conducted in Summer, June 2020. With the pandemic, some of the Southgate WRDM programs were suspended at the transfer stations and could have impacted some of the collection streams.

Some of the information taken from the findings and reports are:

The participation rates for each season of 100 households was:

Summer 2019	Fall 2019	Winter 2020	Summer 2020
72%	74%	72%	74%

The participation rates remained relatively close in all 4 seasons, perhaps some households can go more than 2 weeks before cart is full enough to set out again in the bi-weekly collection cycles. Some places have more than 1 cart for tipping, and a few carts were tipped by our drivers, forgetting audit was happening. There were 7 households that did not have any collections set out in any of the 4 audits. Six are rural farm properties.

Materials Difficult to Recover refer to recyclable materials in a grocery bag, Co-joined or nested materials includes as an example cans nested within other cans or boxes, paper inside boxes and Soiled packaging & printed paper, pizza boxes containing leftover pizza or more than 10% of the package volume containing product.

Materials Difficult to Recover (Recycling)	Summer 2019	Fall 2019	Winter 2020	Summer 2020
Bagged materials	4.35%	6.51%	8.17%	11.89%
Co-joined or nested materials	0.92 %	0.16%	2.81%	0.75%
Soiled packaging & printed paper	4.42%	3.73%	1.08%	5.7%
Total percentage	9.69%	10.4%	12.05%	18.34%

This data suggests that recycling materials were contaminated with unacceptable or uncleaned product, making it difficult for sorting and processing at a Material Recovery Facility (MRF). Also noted that the Baseline Audit of the Summer of 2019, 1 year later, the total materials difficult to recover had doubled in increase, which was 3.74 kilograms/household/week (Kg/hh/week).

The audit had a very detailed comprehensive breakdown of recycling categories of materials. Printed Paper – 6 groups, Paper Packaging – 19 groups, Plastics – 43 classifications, Metals – 12 groups, Glass – 7 groups, Municipal Hazardous and Special Waste (MHSW) – 2 classifications, coffee pods – 9 groups, and all other materials, textiles, footwear, toys, etc. lumped together.

The table below breaks out the main categories and seasonal waste & recycling collections in Kg/hh/week

Material category	S/19 Garb	S/19 Recy	F/19 Garb	F/19 Recy	W/20 Garb	W/20 Recy	S/20 Garb	S/20 Recy
Printed paper	0.07	0.54	0.08	0.61	0.08	0.57	0.29	0.41
Paper packaging	0.27	1.09	0.30	1.01	0.29	0.80	0.38	1.21
Plastics	0.87	0.72	0.83	0.60	0.67	0.53	0.99	0.86
Metals	0.33	0.30	0.32	0.27	0.14	0.27	0.26	0.27
Glass	0.10	0.48	0.10	0.31	0.11	0.39	0.04	0.45
MHSW	0.01	0.00	0.01	0.00	0.01	0.00	0.01	0.00
Other	5.22	0.40	5.73	0.35	5.39	0.16	5.35	0.55
Coffee Pods (units)	1.42	0.57	1.09	0.00	1.22	0.47	1.21	0.20

The Top 10 Materials by Category for Recycling for each audit season have been attached to the report. There are some fluctuations of recyclable materials found in the carts audited, but overall, the percentages of these products are fairly consistent. Non-PPP are printed paper/packaging materials that include office paper, books, photographs, tissue paper and paper plates, etc. that are non-obligated meaning not necessarily included in Blue Box stream that producers fund for residential collections.

## **Findings / Conclusions**

- Some rural/farm properties appear not to be participating in curbside waste or recycling collections.
- Empty and rinse recyclables need to be communicated for more efficient processing for recovery of materials, as MRF's do not necessarily wash products, thus materials are landfilled and in turn increased processing costs are charged back to the municipality.
- There is a lot of bagged recyclables in the stream, residents need reminded that the Southgate cart system is designed for loose materials and these materials cause problems at the MRF for sorting and processing.
- Indications that there are more recyclables in waste stream that could be diverted to recycling stream.
- There was no MHSW in recycling, and a very small amount in the garbage stream, indicating Township residents are using the Orange Drop, to properly dispose of MHSW and protect the environment.
- Due to timing of audit and the pandemic, there was no opportunity to get out into the public with promotion and education / outreach to better inform residents and school children on how to be a "Smart Recycler".
- As most Ontario municipalities are finding, Blue Box diversion rates are somewhat flat and stalled, some is due to lighter weight packaging, and wish-recycling which then becomes an unacceptable material, contaminating the recycling stream.
- Continuation with Promotion and Education programs is key to Sort Today Save Tomorrow as we say in Southgate.

**Financial Implications:**

CIF, RPRA and SO provide 100% funding for the audits, the Township had minimal costs which were covered in the operational budget.

**Communications & Community Action Plan Impact:**

Goal 5 - Upgrading our "Hard Services"

**Action 5:**

The residents and businesses of Southgate recognize our linear services - roads, bridges, water and sewer works, for example - to be a fundamental purpose of municipal government. This infrastructure needs to be serviceable and sustainable so that our businesses and communities can thrive and grow.

**Concluding Comments:**

Staff recommends that Council receive Staff Report PW2021-024 for information.

Respectfully Submitted,

**Dept. Head:** *Original Signed By*  
Jim Ellis, Public Works Manager

**CAO Approval:** *Original Signed By*  
Dave Milliner, CAO

**Attachments:**

Attachment # 1 - Top 10 Materials by Category for Recycling