

RPWCO Position Paper

Biodegradable Plastic Products and Packaging

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Issue/Background:

A growing number and variety of plastic packaging and products claim to be 'biodegradable', 'compostable', or 'OXO degradable'. Currently available are: plastic retail carry out bags, rigid in-store packaging containers (e.g. clam-shells, beverage cups, etc.), utensils and pre-packaged beverage containers (e.g. water, juice and milk bottles) and as well as liner bags for Green Bin kitchen and curbside containers and Leaf and Yard Material.

These packaging materials and products are made from a variety of different resins but all are claimed to be derived, in whole or in part, from plant sources. Often, marketing statements claim environmental, and sometime also health benefits, will result from the use of 'biodegradable' or 'compostable' plastic packaging materials or products. Comment on these claims is beyond the scope of this policy paper. This policy paper considers only the potential impacts of 'biodegradable' or 'compostable' plastic packaging and products on Municipal solid waste diversion programs.

In many cases, the 'biodegradable', 'compostable' or 'OXO degradable' plastic packaging materials or products are virtually indistinguishable from similar-purpose packaging and products made from pre-existing petroleum-based plastic resins. In most cases, these packaging materials are also incompatible with existing processing operations or product markets.

Increasing numbers of these packaging materials in the Municipal diversion programs can be expected to reduce the efficiency of processing operations and the quality of recovered products.

Residents, businesses and brand owners should be discouraged from using or introducing not be encouraged to use 'biodegradable', 'compostable' or 'OXO degradable' plastic packaging and products until end-of-use management strategies are developed. The development of end-of-use management strategies should be industry led and undertaken in cooperation with other public and private stakeholders.

Specific Applications:

Green Bin Programs

The collection and processing operations used by Municipal Green Bin programs varies according to local need. In some cases, Green Bin Material is co-collected with yard waste, in other municipalities source separated green bin material is collected separately and is separately composted aerobically or anaerobically digested. Therefore, the decision to endorse, or restrict the use of certified compostable plastic liners for kitchen containers or curbside bins should be at the discretion of the local municipality.

Leaf and Yard Material Programs

Similar to the issues noted above for Green Bin programs, the operational procedures for Leaf and Yard Materials (L&YM) vary in each Municipality. Therefore, the decision to endorse or restrict the use of certified compostable plastic L&YM bags rests with the local Municipality.

Should Municipalities permit the local use of biodegradable plastic L&YM bags, it is recommended that they be manufactured in a manner which clearly distinguishes them from polyethylene plastic bags.

Blue Box Program

The separation of ‘compostable’, ‘biodegradable’ or ‘OXO degradable’ plastic from similar petroleum-based plastic materials already in Municipal recycling programs (e.g. PET water bottles, film plastic and polystyrene) is expensive, impractical or impossible at this time. If ‘compostable’ or ‘biodegradable’ plastics are not separated from other plastics they will be mixed into the same product stream as those materials they most resemble; for example, ‘biodegradable’ film plastic will be streamed with polyethylene film plastic.

Markets have expressed minimal or zero tolerance for ‘biodegradable’, ‘compostable’ or ‘OXO degradable’ plastic contamination and in most cases, the presence of ‘compostable’, ‘biodegradable’ or ‘OXO degradable’ plastic will compromise the marketability of recovered products and reduce their value.

Additional Points

- The use of biodegradable plastic as an alternative to conventional plastic packaging does not achieve the Municipal source reduction or reuse objectives for packaging products.

- A Canadian certification process for ‘compostable’ film plastic has recently been created and establishes a minimum decomposition rate in aerobic composting conditions. No similar certification exists for other ‘compostable’ plastics, or for ‘biodegradable’ plastics, or for other processes such as anaerobic digestion or landfill.
- In the absence of a suitable certification process, the behavior of plastics claimed to be ‘biodegradable’ or ‘compostable’ in landfill conditions cannot be known, and environmental benefit cannot be confirmed.
- Until proper end-of-use management strategies are implemented, residents, businesses and others receiving Municipal solid waste management services should be directed to dispose of ‘biodegradable’ or ‘compostable’ plastic packaging in the residual waste stream.
- The RPWCO will continue to monitor and review this issue by:
 - liaising and consulting with other municipalities, the Ministry of the Environment and Stewardship Ontario;
 - keeping apprised on research on new separation technologies and the waste management implications for this emerging packaging material; and,
 - liaise with EPIC, NAPCOR, APR and EuPR – each of which has issued similar position papers expressing concern about the incompatibility of biodegradable plastics and recycling.