



Silverhill Institute of Environmental Research and Conservation

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MEMORANDUM

TO: **Vincent Sferrazza**, Director, Policy & Planning - Solid Waste Management
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FROM: Peter Homenuck, Silverhill Institute of Environmental Research and Conservation

DATE: April 10, 2013

SUBJECT: The Plastic Bags Debate – Silverhill Institute Analysis

The Silverhill Institute of Environmental Research and Conservation is a registered charitable foundation that has as one of its central tenets the provision of factual, balanced, reliable, and evidence-based information to individuals and organizations.

Our institutional objectives include:

- To support and carry out research on environmental issues of the day. Specifically, to focus on applied research activity that would have benefits for communities and their residents.
- To develop environmental and conservation materials for the general public and for use in school curriculum.
- To support wetland protection and restoration in order to conserve and contribute to the diversity and the protection of groundwater and surface water resources.
- To support projects that develop, maintain and preserve wood lots.

Attached is our summary analysis of the plastic bags issue in Toronto.

Please do not hesitate to contact me with any questions or concerns.

Regards,

Peter Homenuck, R.P.P.
Silverhill Institute of Environmental Research and Conservation



SILVERHILL INSTITUTE OF ENVIRONMENTAL
RESEARCH AND CONSERVATION

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The Plastic Bags Debate - Our Analysis

There should be no fees for plastic bags. Rather, there needs to be a range of options that include recycling and reuse with great emphasis on recycling. The argument that the ban will reduce the waste stream is not accurate when one considers:

- a. Most plastic bags are biodegradable.
- b. Reusable bags end up in the waste stream.
- c. Plastic bags contribute from 0.3% to 0.6% of the total weight of all Toronto's garbage headed for the landfill. They are highly reused and are recyclable in Toronto.

EDUCATION AND SHARED RESPONSIBILITIES

We recommend an educational campaign to address proper use, handling and disposal of reusable, plastic, compostable and biodegradable bags. Education should be a part of ALL the options that the city decides on. We emphasize education because our research has confirmed people's confusion about proper use of plastic and reusable bags and Toronto waste processing facilities.

Reuse

- From Silverhill's 2011 survey of 110 Toronto residents, 39% toss their reusable bags into the garbage. Only few are recyclable and compostable.
- Reusable bags also pose a health risk. According to the 2011 survey, 46% admitted to never washing their reusable bags. This encourages growth of bacteria that can cause food poisoning. They are also breeding grounds for yeast and mold, especially when left in a car on a hot day (Sporometrics, 2009).
- The grocery stores need to be responsible for an education campaign to inform people about the proper use of reusable bags, like proper washing after each use.
- Single use plastic bags are more hygienic and can be reused for other non grocery store needs (e.g. packing and storing of items, picking up after dogs etc.).

Recycle

- Single use plastic bags should simply be recycled at/by the retailers. Retailers in many jurisdictions currently provide this service.
- If not recycled, the plastic film can be sold.
- There is still scientific uncertainty about polyethylene bags' larger impact on the environment, as compared to paper or compostable plastic bags.
- Boustead Consulting & Associates (2007) concluded that polyethylene bags have the least impact (in terms of total energy usage, fossil fuel use, municipal solid waste, GHG emissions, and fresh water usage), when considering the Life Cycle Analysis.

Bag Ban

- A ban on plastic bags would actually encourage increased garbage volume as people would have to switch to large garbage bags off the shelves (ie: kitchen catchers), which are thicker, posing an associated environmental impact and added cost for the City.
- Although some jobs may be created in the paper industry, there are other costs to consider: There may be increased use of paper bags, which are heavy and cannot be re-used easily. The retail paper bags go straight to the garbage after only one use because they fall apart as soon as you get home. Consequently, an increase in garbage volume (and the associated transportation emissions and city cost) is expected.
- It is also added cost for the consumer (including a disproportionate impact on lower-income families) who will then have to 'buy' plastic bags for their garbage and green bin.
- It has the potential to lower household green-bin divergence as people will not purchase biodegradable bags for their bin whereas now they can use plastic bags (which are recycled).
- It deters Torontonians (especially those living in high rise buildings including condos) from separating their garbage, increasing the garbage load in the landfill.

Conclusion

- Toronto should encourage retailers to provide biodegradable bags.
- Charging for bags punishes and removes flexibility from consumers.
- A plastic bag ban is not an environmental solution to any environmental problem.