

Recycling

It's in your hands!

Just taking a few extra minutes to sort and prepare your recyclables properly can make a big difference. It can save you and your recycling program up to \$750,000 annually.

See Inside What You Can Do to Help



Bluewater Recycling Association

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Recycling, It's In Your Hands

Just taking a few extra minutes to sort and prepare your recyclables properly can make a big difference. Think of it as an investment in the health of our environment. And the benefits will last generations – because some of the products we use will sit for hundreds of years in a landfill.

The ultimate goal of recycling is minimizing the need for raw resources in the production of products. Reductions in the mining of raw materials and the production of virgin products often result in substantial energy and emissions savings—as well as cost savings from avoided environmental compliance practices.

Global markets readily gobble up recovered commodities for the manufacturing of new products. Often manufacturers look to recovered materials for cost savings, marketability of an eco-product or to meet emissions compliance requirements.

With the growing number of markets for recovered commodities and the development of new technologies, new opportunities to reduce collection costs and everyone's desire to increase recovery efficiencies, has resulted in the adoption of the single-stream collection methodology for recyclables for many jurisdictions. Recyclables are now collected together in one container and sorted later in an advanced processing facility.



While single-stream collection is much more convenient for residents and results in higher recovery of recyclable materials, challenges remain. The challenges relate primarily to:

- 1) A lack of consideration in the design of materials that are destined to be discards, such as packaging materials and containers, and
- 2) The issue of contamination that occurs as a part of recycling collection activities.

Design is a Producer Responsibility

The design of materials is a challenge that only the manufacturers can address through better producer responsibility. Manufacturers know they can take actions to make their products recyclable but they sometimes chose not to because it does not always meet their economic interests.

For example, in recent years, the wine industry introduced wine boxes instead of the traditional glass bottles. While many factors influenced that decision, one of the reasons was because the LCBO offered more shelf space for those wines than those in glass bottles. Once the wine industry adopted this format to compete at the retailer level the Ontario glass bottle markets disappeared. Now we are left with a multilayer product that is much more difficult to recycle than glass.



Nearly every manufacturer that produces a sustainable environmental report prides themselves of waste reduction through the use of light weighing. This practice involves taking an existing packaging and redesigning it to reduce its weight to claim a successful waste reduction effort. An example of this is the original single serve plastic water bottle introduced in 1978 weighed 28g and felt like a glass bottle. By 2000, it weighed 18.9 g but today it weighs a mere 7.95 g and feels almost like a plastic bag ready to collapse in your hand.

While it is good that we use fewer resources to make the same products, this action has consequences. A flimsier water bottle means it is more likely to get flattened and hide within the paper rather than being recycled with other water bottles, which causes contamination and lost revenue. Furthermore, our processing lines are designed to process a certain volume of materials. In the last five years we saw material density decline by 30% meaning that we can process 30% less materials today than we could five years ago with the same equipment. This costs the local residents about \$628,000 per year.

Product manufacturers need to understand better how the packaging they produce is managed at end-of-life and the supply-and-demand issues with specific recyclables. For example, there is a higher demand for #1 and #2 plastics than for #3, #4, #5, #6 and #7 plastics. There are also regional differences in what can be recycled, and resulting labeling issues. For example, labeling #6 foam plastics with an SPI code enclosed in the universal recycling symbol confuses residents to think it is recyclable when it is not accepted locally.



Contamination is Your Responsibility

Recycling contaminants are generally defined as unrecyclable materials that must be separated from recyclable materials or an improperly sorted recyclable material that ends up in the wrong commodity (i.e. a can with the newspaper) also known as a cross contaminant.

The contamination issue has been steadily increasing and this contamination is problematic in a number of ways.

First, contamination directly affects costs. The key to maintain a low cost for our residents is based on maintaining low operational costs for collection and processing, while increasing commodity prices. Unfortunately, contaminants increase operational costs for collection and processing because sorting is more difficult and takes longer due to the presence of contaminants. Once sorted, the recyclable material has the potential to be less pristine, lowering its value. And, the non-acceptable materials must be hauled away and disposed of for a fee.

Besides costs, there are numerous operational challenges presented by the contaminants. For example, plastic bags and clothing wrap around sorting equipment and clog up screens. This requires significant downtime for the plant while workers cut away the material. This lowers the overall capacity of the plant.



A third concern is worker safety. In addition to the recyclables front-line workers are exposed to contaminants that can include everything from diapers to propane tanks. One of the fastest-growing hazards is a medical sharp, also known as syringes. With people increasingly utilizing sharps at home to control diabetes and other medical conditions, more and more of these items are threatening the safety of recycling workers each day.

Many people are unaware of the recycling business' intricacies. Most people assume that if an item is accepted at one location then it's accepted at any location. Many people don't understand the differences in resins. Plastic is plastic, people figure, so if a soda bottle is recyclable, then a drinking straw should be recyclable as well. That is simply not the case.

In an effort to control abusers, some municipalities have even coupled enforcement activities with education. They initiated a program of random recycling inspections conducted at curbside. If non-recyclables are found in a recycling bin, an educational notice is attached to the bin detailing items that are acceptable for recycling, and a random follow-up inspection is conducted. If non-recyclables are found again, the recycling bin is removed and the occupant's billing status is changed to garbage-only with a \$10 rate increase per month for six months.

Problems Are In The Bag

The Association has seen a steady increase in downtime in the Material Recovery Facility. The culprit is a constant stream of loose plastic bags that folks have tossed into their recycling bins.

While residents have embraced recycling as never before with the introduction of the wheelie bins in many of our service areas, some residents appear to have forgotten the importance of keeping all their plastic bags bagged together.

The problem with countless, loose plastic bags in the recycling stream has become so severe that the Association has launched a public awareness campaign to try to change people's recycling habits.

Key to that campaign is to have residents take all their bags and stuff them into one, single bag, tie it and toss it into the recycling bin. That will streamline operations immensely at the material recovery facility.

While magnets can be used to separate steel, and optical scanners can remove plastic bottles, there is no technology other than human fingers to snag the bags from the lines. Picking out all those bags drives up labour costs and eats into workers' ability to sort much more valuable materials helping to offset the cost of operating the curbside pickup program.

The loose bags lead to frequent equipment stoppages and repairs because they get wrapped under conveyor belts, work their way into bearings and shafts and wrap around screens that separate different materials. Loose bags cause sorting lines at the Association to be stopped about 5 hours a week, costing taxpayers more than \$250,000 a year.

While the bags wrap around the shafts of our screens, they reduce their effectiveness in separating other materials affecting quality and revenue. If left untouched, the screens would literally become conveyor instead of screens. For example, where containers are supposed to be separated from paper materials based on size and physical properties like being flat or round, the potential for containers to end up in papers increases considerably resulting in cross-contamination. This requires more effort to clean the papers and can result in substantial loss of revenue.

End markets have strict demands for quality materials with some allowances for minimal contamination, typically 2%. Even though our materials meet end market specifications, even a small loss of 2% can be significant. For example, newspapers currently sell for about \$69 per tonne. If the 2% in contamination is made up of flat pop cans that slipped in between the pages instead of being recycled with the rest of the aluminum cans, we lose the opportunity to get paid \$1831 per tonne for that aluminum. Improper preparation of materials resulting in this type of cross contamination results in over \$457,000 in lost revenue each year.





What You Can Do To Help

1) **Keep your plastic bags together.**

If you still bring home plastic grocery and retail bags, empty your plastic bags by turning them inside out. Stuff your empty plastic bags into one bag. Once your collection of bags exceeds what you need

around the house, tie the top of the bag of bags and place in your recycling bin. At the recycling facility, it will be much easier for our staff to recover a bag of bags than trying to hand pick millions of bags one at a time.



2) **Remove and dispose of plastic lids smaller than 3 inches.** Any plastic lids smaller than 3 inches will contaminate our glass or they will be screened out and disposed of instead of

being recycled. The removal of the lids also helps making sure that all liquids have been emptied from your bottles so they can be sorted properly by our equipment. It also means we can make denser bales reducing our shipping cost and ultimately yours.



3) **Do not flatten your containers** such as metal cans, milk containers and aseptic juice boxes. Our equipment separates containers from paper based on their physical three-dimensional shape. By flattening these containers, they behave like two-dimensional paper and as a result they stay with the paper in our process rather than going into the containers. This misdirection makes them extremely difficult to find in a pile of paper. Unfortunately, those that get missed act as a contaminant to the paper fibre they end up with reducing the value of the commodity and ultimately increasing your cost.



Place and Pinch metal cans for everyone's safety. **Place** the metal lid inside the can and **pinch** the top to keep it there.

4) Only glass bottles and jars are acceptable in our recycling program. While many items are made of glass like windows, drink ware, mirror, bake ware, etc. they are not made with the same materials and they cannot be mixed in. Similarly, ceramic tiles and mugs are not recyclable. Mixing types of glass together virtually makes it impossible for us to make new glass bottles with the material because the contaminants cause glass defects and safety issues for those handling it.



5) Rigid plastic containers are acceptable in the recycling program. Unfortunately we cannot accept everything made of plastic. We accept the vast majority of the bottles and other packaging in the marketplace as long as it is not blown polystyrene commonly known as “Styrofoam”. However, this does not mean we accept everything made of plastic. We can only handle packaging. This means that straws, small swimming pools, lawn chairs, toys, and anything else made of plastic is NOT acceptable. A recycling symbol with a number in it does not mean that the item is recyclable or even made of recyclable materials. It was placed there to help us identify the type of plastic resin used in the manufacturing process.



6) When in doubt leave it out. When you are not sure if something is recyclable, do not place in in your recycling bins until you have verified it is in fact acceptable. You can verify this by:

- a) Visiting our website at www.bra.org/recycleguide.html
- b) Emailing us at info@bra.org
- c) Calling our toll free line at 1-800-265-9799,
- d) Looking at the lid of your recycling wheelie bin,
- e) Seeing us at 415 Canada Avenue, Huron Park, ON, or
- f) Downloading MyWaste App from www.bra.org/mobileapp.html

