

2012 Ontario Residential Diversion Rates

January 22, 2014

Introduction

Each year, WDO receives reports from municipalities on the amounts of residential waste diverted through each of their waste diversion programs. These data are submitted to WDO through the Municipal Datacall, along with financial data for the Blue Box Program.

On September 27, 2013, WDO published [2012 Datacall: Residential Highlights](#), an analysis of the different amounts (by tonnes) of Blue Box materials recycled in 2012. This report, 2012 Ontario Residential Diversion Rates, expands on the previous report by examining the total amounts of residential waste diverted by municipalities, including Blue Box waste. The data in this analysis are included in the following spreadsheets available on the WDO website:

1. 2012 Ontario Residential Diversion Rates by Municipality (<http://wdo.ca/partners/municipalities/municipal-datacall/> under “Documents”/Residential GAP Diversion Rates)
2. 2012 Ontario Residential Diversion Rates by Municipal Grouping (<http://wdo.ca/partners/municipalities/municipal-datacall/> under “Documents”/Residential GAP Diversion Rates). Criteria to determine the municipal groups for 2013 Blue Box funding are available [here](#).

WDO uses information reported by municipalities to calculate residential waste diversion rates for each reporting municipality, as well as an overall average for the Province of Ontario. The residential waste diversion rate is the percentage of Blue Box and other residential garbage reported to WDO that is kept out of landfill. Diversion data are included for the following activities:

- Municipally-operated recycling activities, including:
 - Blue Box materials;
 - Waste Electrical and Electronic Equipment (WEEE);
 - Municipal Hazardous or Special Waste (MHSW);
 - Other recyclables (e.g., scrap metal); and
 - Used tires¹.
- Municipally-operated composting activities (e.g., kitchen organics);
- A per capita² allowance for provincial deposit systems based on the deposit containers returned from the residential sector;

¹ Diversion of passenger and light truck tires is estimated by a credit of 7.1 kg/capita, as reported by Ontario Tire Stewardship.

² A credit of 5.51 kg/capita is included for the return of provincial deposit containers.

- An allowance for residential on-property management (e.g., backyard composting and grasscycling); and
- Municipally-operated reuse activities.

“Disposal tonnes” referenced in the spreadsheets include garbage, recycling and composting processing residues going to energy-from-waste and landfill. The following formula is used to calculate the residential diversion rates:

$$\text{Residential Diversion Rate} = \frac{\text{Diversion Tonnes}}{\text{Generation Tonnes (Diversion + Disposal)}} \times 100 \text{ to be expressed as a percentage}$$

WDO verifies all the diverted or disposed material quantities reported in the Municipal Datacall. Depending on the data reported, WDO might adjust material quantities reported as either diverted or disposed by a municipality in cases where, for example, disposal figures are missing, serviced household totals do not match, or particular figures are significantly out of normal range.

Total residential diversion rate continuing to rise: The 2012 municipal data continue a trend of incremental annual increases in the total residential diversion rate since 2007. These results are encouraging, as 2012 represents only the third full year of operation for three of the four waste diversion programs for which WDO has oversight (MHSW Program, WEEE Program and Used Tires Program).

Organics and other recyclables improving outcomes: Municipalities that expanded their waste diversion programs to include household organics and other recyclables such as Construction and Demolition (C&D) waste experienced higher increases in their residential diversion rates. Since the residential diversion rate is a weight-based metric, heavier C&D materials like brick and concrete have more of an effect on reducing garbage and bolstering overall residential diversion outcomes.

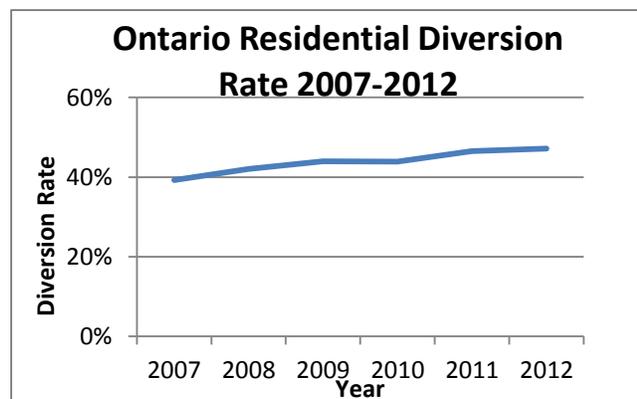
Ontarians producing less residential waste per capita: In addition to diverting a higher proportion of residential waste, Ontarians are generating less residential waste per capita. The average residential waste generation in Ontario in 2012 was 366 kg/capita, which represents a decrease compared to 2007 of 17 kg/capita (4%), or the weight of about one Stanley Cup.

Residential trends being tracked: Information on the amount of residential waste diverted each year is essential to tracking and evaluating longer-term waste trends, particularly lightweighting, the trending shift to use of lighter-weight materials for packaging and printed paper discussed in [2012 Blue Box Program Financial Trends](#).

Analysis

Incremental increase in overall residential diversion rate

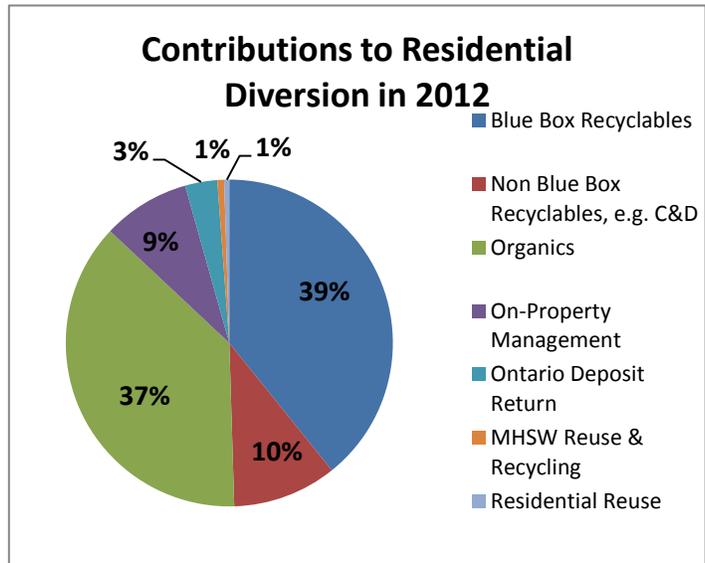
In 2012, the total percentage of residential waste diverted from landfill in Ontario increased to 47.2% from 46.5% in 2011. However, over the past five-year period, the total residential



diversion rate has grown by nearly eight percentage points, which equals an average annual increase of 1.6% since 2007.

Blue Box and organics contributed most to diversion

The wastes that provided the most material (by weight) to the province’s overall residential diversion efforts in 2012 were Blue Box (39%) and organics (37%). Potential gains in residential diversion can be achieved by expanding existing Blue Box programs to accept more materials, and initiating a program (or expanding existing programs) to collect household organics. The collection of more C&D waste could have an even greater effect on residential waste diversion.



In addition to an organics program, some municipalities promote residential on-property management, which includes grasscycling and outdoor composting. In 2012, municipalities distributed 5,661 new backyard composters. Each of these composters is estimated to annually divert 566.1 tonnes of organic waste from landfill. The cumulative number of backyard composters distributed by municipalities in Ontario as of December 31, 2012 was 1,394,107. Together, all of these composters are estimated to divert 139,410.7 tonnes of residential organic waste every year.

Wide range in residential diversion rates and tonnes

Among the 230 municipalities, recycling associations and First Nations that reported waste diversion data to WDO in 2012, there was a marked difference in residential diversion rates, ranging from 4.6% to 67.7%. The chart below shows that most programs have a residential diversion rate between 15% and 45%. However, the total residential diversion rate for the province is higher than this range at about 47%. This is due to the handful of municipalities serving larger populations that have more developed recycling programs, which enables diversion of more tonnes, leading to a higher average residential provincial rate.

Within individual recycling programs, the amount of residential waste diverted in 2012 ranged from 17 tonnes to 432,179 tonnes. Out of the 4.8 million tonnes of residential waste generated in Ontario in 2012, 2.3 million tonnes were diverted from landfill, which equals the weight of 30,732 empty Space Shuttles.

