



2015 STATISTICS ON THE INTERNATIONAL MOVEMENTS OF HAZARDOUS WASTE AND HAZARDOUS RECYCLABLE MATERIAL

Waste Reduction and Management Division

Environment and Climate Change Canada

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Background

In Canada, the management of hazardous waste and hazardous recyclable material is a shared responsibility between all levels of government. The Government of Canada is responsible for regulating the international movements of hazardous waste and hazardous recyclable material.

International agreements play a key role in responding to environmental issues in Canada and abroad. Canada is party to three international agreements on the transboundary movements of hazardous waste, including:

- the United Nations Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,
- the Organisation for Economic Co-operation and Development Decision of Council on the Control of Transfrontier Movements of Wastes Destined for Recovery Operations, and
- the Canada–U.S. Agreement Concerning the Transboundary Movement of Hazardous Waste.

In order to implement the terms of these international agreements, Canada relies on regulations made under the authority of the *Canadian Environmental Protection Act, 1999*. In 1992, regulations were introduced to control and track movements of hazardous waste. In 2005, Canada improved and reinforced its former control regime by adopting the *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations* (EIHWRMR).

The EIHWRMR regulate international movements of hazardous waste and hazardous recyclable material out of, into and through Canada. The statistics presented in the following section show the status of imports, exports and transits for the last ten years¹. Then specific statistics on movements during the calendar year 2015 are presented. The report presents also information on the type of operation conducted on the hazardous waste or hazardous recyclable material following their import, export. The disposal and recycling operations described in this document are listed in Schedules 1 and 2 of the EIHWRMR.

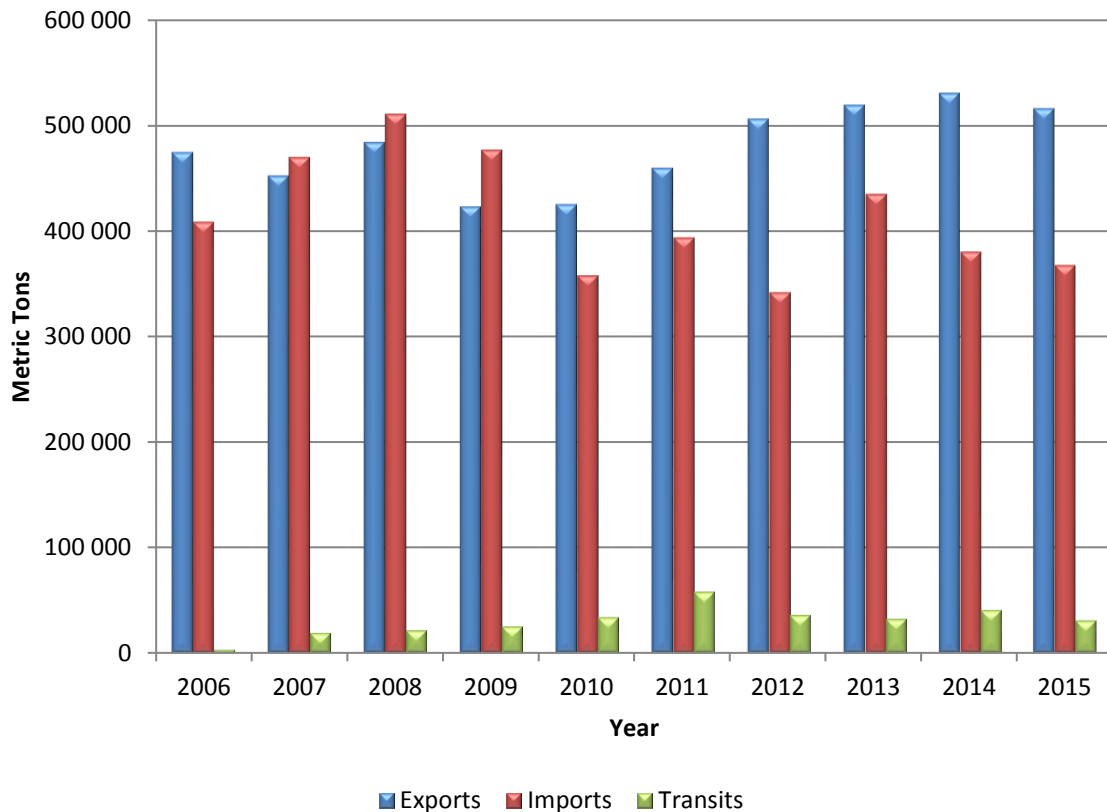
¹ Please note that data presented in this report are revised periodically as new information becomes available. Therefore, information presented may differ from information published in other reports.

Movements of Hazardous Waste and Hazardous Recyclable Material from, into and through Canada

The total annual quantity of hazardous waste and hazardous recyclable material exported from Canada has been increasing since 2009. In 2015, a 3% drop was observed as compared to 2014 (Figure 1). During the same period, the annual quantity of imports has fluctuated and no specific trend can be detected. The annual quantity of hazardous waste and hazardous recyclable material transiting through Canada is relatively stable and very low as compared to the quantities exported or imported.

A total of 36 952 individual transboundary shipments of hazardous waste and hazardous recyclable material were reported in movement documents received by Environment and Climate Change Canada.

Figure 1: Exports, Imports and Transits of Hazardous Waste and Hazardous Recyclable Material 2006 – 2015

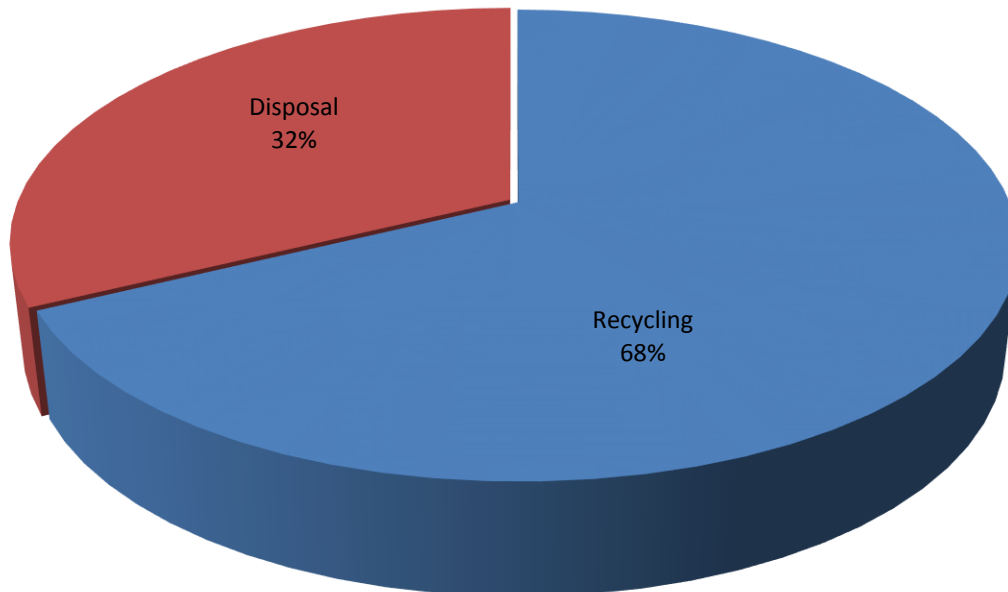


1. Imports

The total quantity of hazardous waste and hazardous recyclable material imported into Canada decreased slightly by 1.7% in 2015, from 380 600 metric tons (t) in 2014 to 373 963 t in 2015 (Figure 1).

Of the total quantity of hazardous waste and hazardous recyclable material imported in 2015, 32% was hazardous waste destined for disposal and 68% was hazardous recyclable material destined for recycling (Figure 2). As compared to 2014, the proportions were 42% and 58% respectively.

Figure 2: Type of Operation for 2015 Canadian Imports of Hazardous Waste and Hazardous Recyclable Material



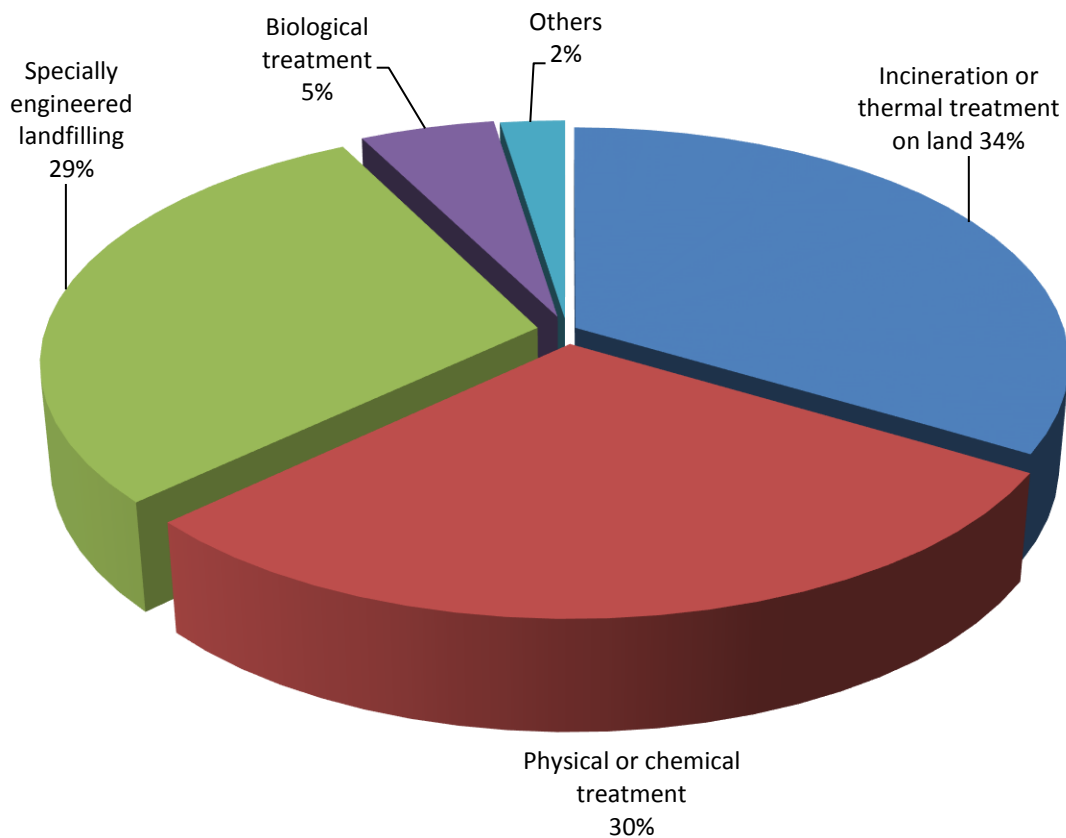
Hazardous waste imported for disposal in 2015 included wastes having as constituents or contaminants:

- flammable liquid ;
- aluminium remelting by-product ;
- corrosive liquid, acid, inorganic;
- flammable liquid, toxic, corrosive and
- Environmentally hazardous substances liquid.

Imports of hazardous waste destined for disposal either:

- were incinerated or thermally treated on land (34%);
- underwent physical or chemical treatment (30%);
- were sent to specially engineered landfills (29%); or
- underwent biological treatment (5%);
- the remaining 2% included interim operations such as blending or mixing, repackaging and temporary storage (Figure 3).

Figure 3: 2015 Canadian Imports of Hazardous Waste by Disposal Operation



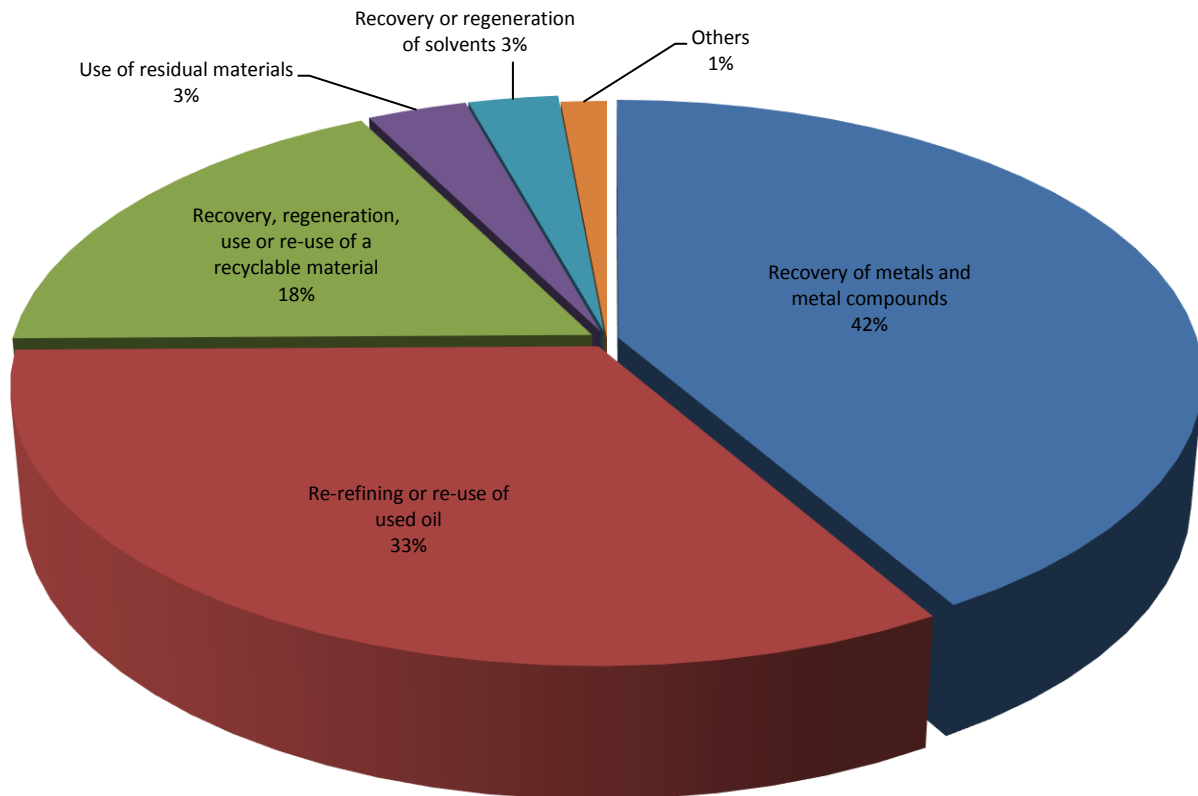
Hazardous recyclable material imported in 2015 included:

- waste oil/water, hydrocarbon/water, mixtures hydraulic fluids (used oil);
- batteries, wet, filled with acid, lithium ion, lithium metal batteries;
- corrosive liquid;
- flammable liquid;
- sulfuric acid;
- flammable liquid, toxic.

Hazardous recyclable material imported in 2015 was destined for various recovery operations such as mainly:

- recovery of metals and metal compounds (42%);
- re-refining or re-use of used oil (33%); or
- recovery of a recyclable material (18%) (Figure 4).

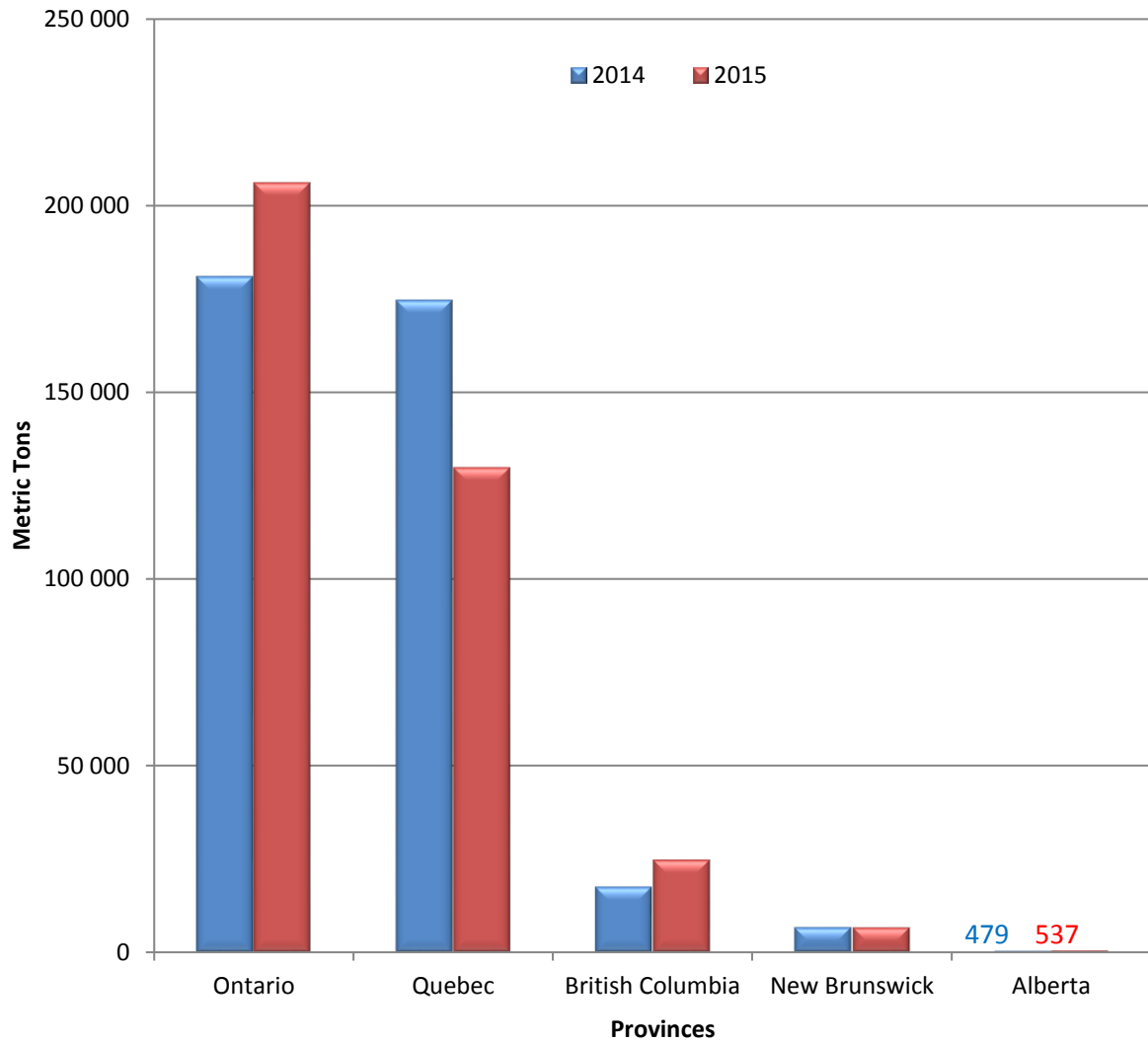
Figure 4: 2015 Canadian Imports of Hazardous Recyclable Material by Recycling Operation



As usual, almost all imports (99.9%) of hazardous waste or hazardous recyclable material in 2015 originated from the United States. The remaining imports came from Nigeria, France, Colombia, Mexico, Venezuela, Brazil and Ecuador.

These imports of hazardous recyclable materials were shipped to five provinces: Ontario, Quebec, British Columbia, New Brunswick and Alberta (Fig 5). Except for New Brunswick, all of these provinces also received waste for final disposal.

Figure 5: Comparison 2014 - 2015 Canadian imports of hazardous wastes and hazardous recyclable material by provinces

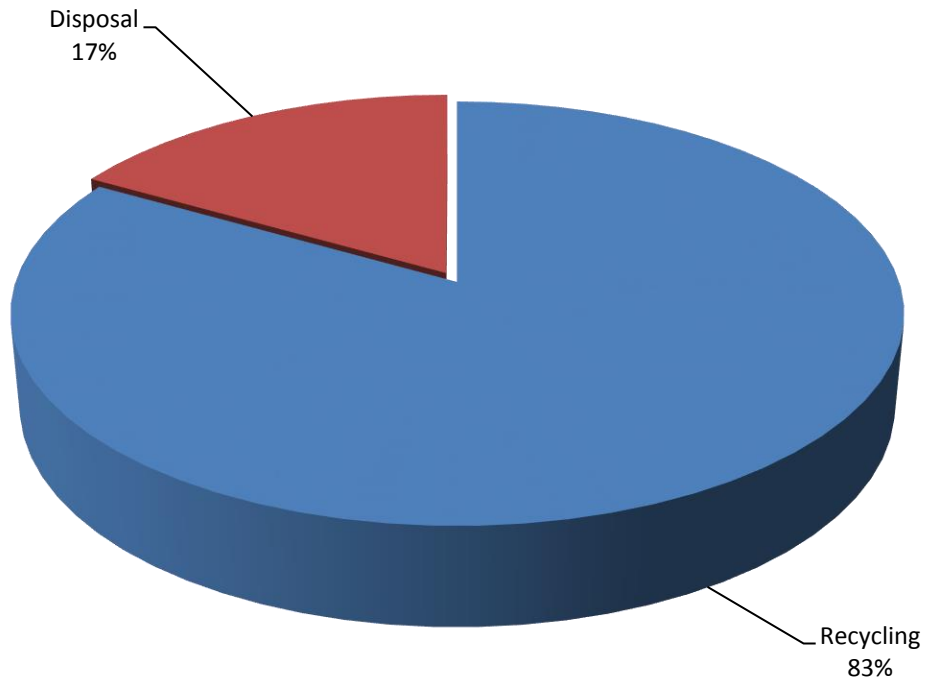


* Alberta: 479 and 537 metric tonnes in 2014 and 2015 respectively. These quantities are too small to appear on the graph

2. Exports

The quantity of hazardous waste and hazardous recyclable materials exported was 516 014 t in 2015. This represents a decrease of approximately 14 420 t or 2.7% from the 2014 figure. Shipments exported for recycling totaled 429 391 t and represented about 83% of all exports in 2015, the remaining 17% was sent for disposal (Figure 6).

Figure 6: Type of Operation for 2015 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material



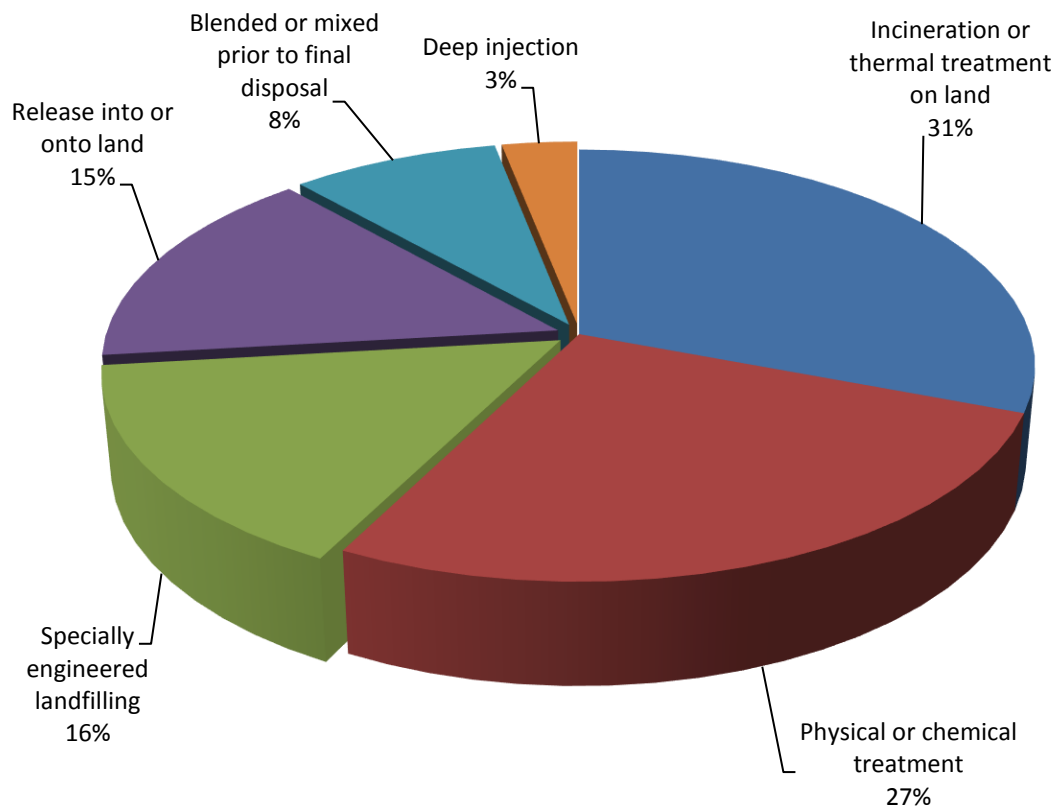
The majority of hazardous recyclable material exported abroad for recycling includes:

- sulfuric acid spent;
- aluminum remelting by-products;
- treated cork and wood wastes (rail ties...);
- batteries, wet, filled with acid;
- caustic alkali liquid;
- self-heating solid, inorganic.

The majority of exports of hazardous waste destined for disposal:

- was incinerated or followed a thermal treatment (31%);
- underwent physical or chemical treatment (27%);
- was disposed in specially engineered landfill (16%);
- released into or onto land (15%);
- or was blended or mixed prior to their final disposal (8%)
- the remaining 3% was essentially deeply injected in soil (Figure 7).

Figure 7: 2015 Canadian Exports of Hazardous Waste by Disposal Operation



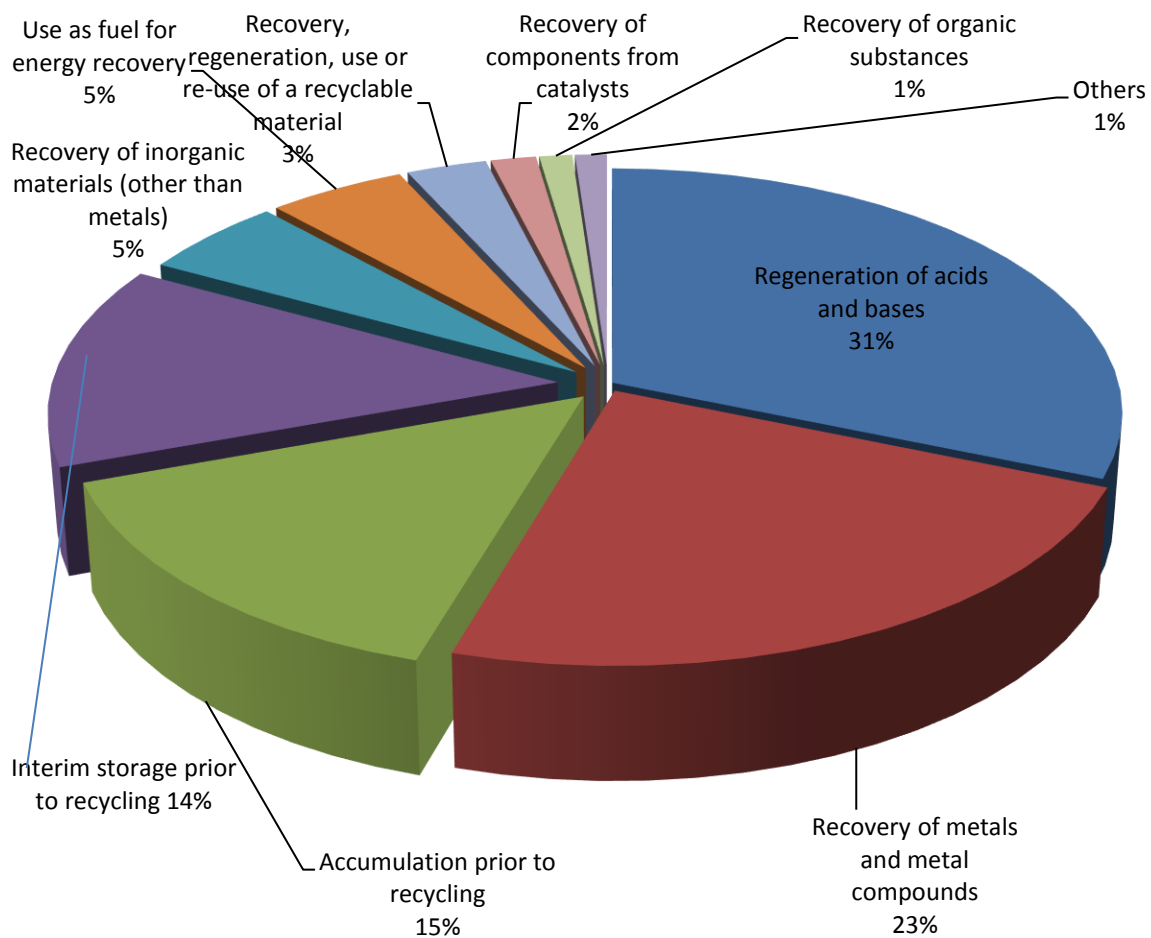
The hazardous recyclable material exported in 2015 was mostly:

- sulfuric acid spent;
- treated cork and wood wastes;
- wastes oil/water and hydrocarbon/water mixtures;
- wastes from the manufacture, formulation, and use of wood-preserving chemicals;
- aluminum remelting by-product; and
- lead-acid batteries.

The majority of hazardous recyclable material exported in 2015 was used:

- to regenerate acids and bases (31%);
- to recover metals and metal compounds (23%);
- for interim operations such as accumulation (15%);
- for temporary storage prior to recycling (14%);
- or recovery of inorganic material (5%);
- Among materials that were accumulated or stored, the majority were finally used as fuel in energy recovery systems (Figure 8).

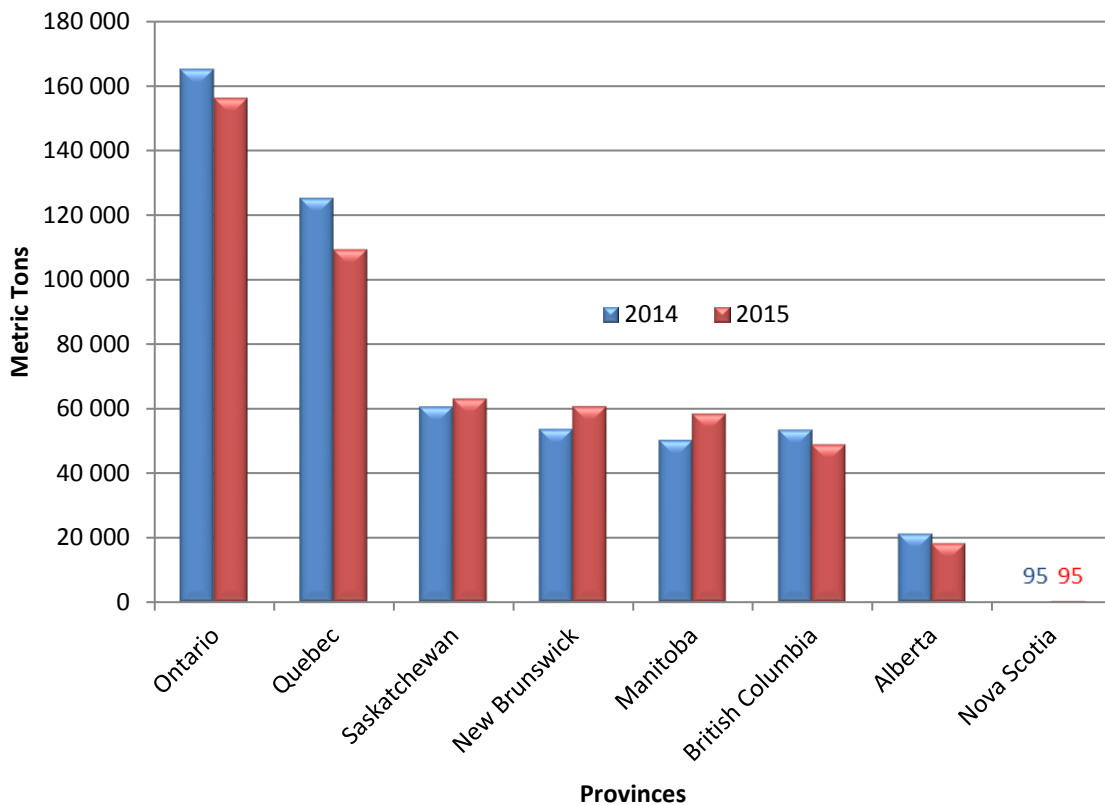
Figure 8: 2015 Canadian Exports of Hazardous Recyclable Material by Recycling Operation



Consistent with the past years, in 2015 98% of exports of hazardous waste and hazardous recyclable material were intended for the United States while, in order of importance, the remaining hazardous waste and hazardous recyclable material were exported to Germany, Mexico, Belgium and Republic of Korea.

Exports originated from eight provinces, with Ontario and Quebec accounting respectively for 31% for 24% of the total quantity. There were no exports of hazardous waste or hazardous recyclable material from Prince Edward Island, Newfoundland and Labrador or any of the Canadian territories (Figure 9).

Figure 9: Comparison of 2014-2015 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material by Province



*Nova Scotia: 95 and 95 metric tons in 2014 and 2015. These amounts are too low to appear on the graph

3. Transits

In 2015, all transits through Canada were shipments between U.S. states. The quantity of hazardous waste and hazardous recyclable material that transited through Canada was approximately 35 616 t. This is a decrease of 12% as compare to 2014 (Figure 1).

Of all hazardous waste and hazardous recyclable material that transited through Canada in 2015, 97.2% was destined for disposal while the remaining 2.8% was recycled.

About 97% of hazardous wastes that transited through Canada in 2015 were wastes from the production, formulation, and use of biocides and phytopharmaceuticals that underwent incineration or thermal treatment on land.

The majority (97%) of waste that transited through Canada in 2015 was from Alaska, Michigan and New York State to mainly New York State, Washington and Wisconsin.

For more information, please visit [Environment Canada's Pollution and Waste website](#) or contact:

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