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2014 STATISTICS ON THE INTERNATIONAL MOVEMENTS OF HAZARDOUS WASTE AND HAZARDOUS RECYCLABLE MATERIAL

Waste Reduction and Management Division

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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, which are 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).

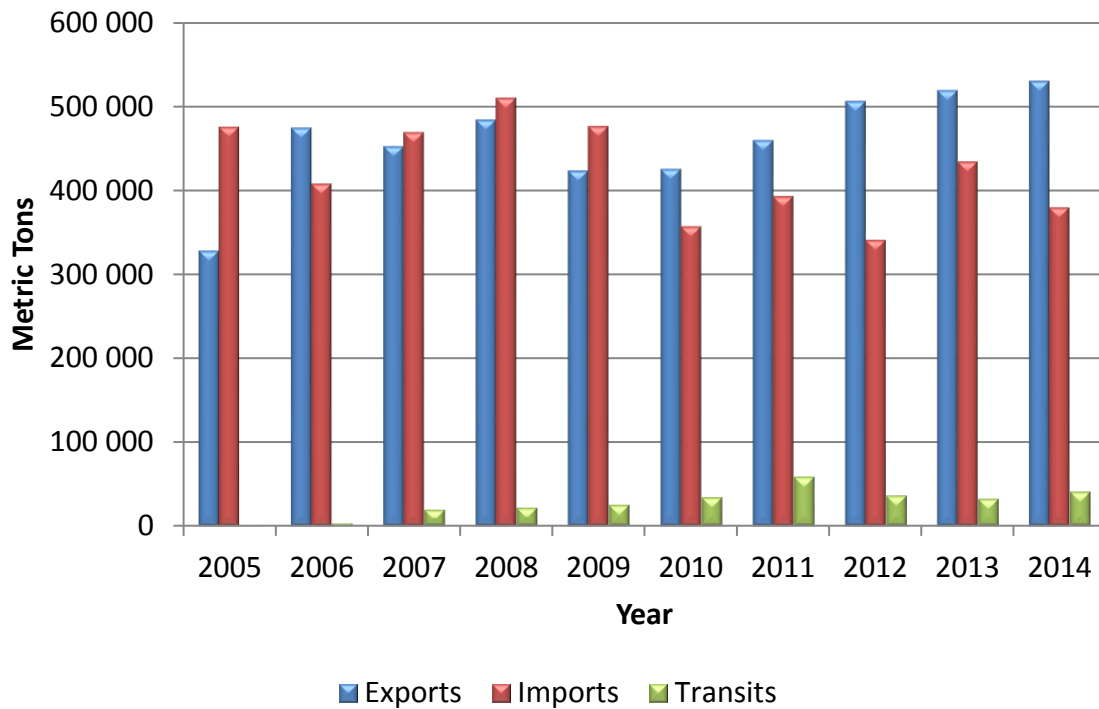
The EIHWRMR regulate international movements of hazardous waste and hazardous recyclable material out of, into and through Canada. The statistics presented in the following section show the status of imports, exports and transits for the last ten years¹. Then specific statistics on movements during the calendar year 2014 are presented. The report presents also information on the type of operation to be conducted on the hazardous waste or hazardous recyclable material following the import, export or transit. 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 and to Canada

The total quantity of hazardous waste and hazardous recyclable material exported from Canada has been increasing since 2009 (Figure 1). During the same period, the annual quantity of imports has fluctuated. The total quantity of hazardous waste and hazardous recyclable material transiting through Canada is relatively low compared to quantities exported or imported.

Figure 1: Exports, Imports and Transits of Hazardous Waste and Hazardous Recyclable Material 2005–2014

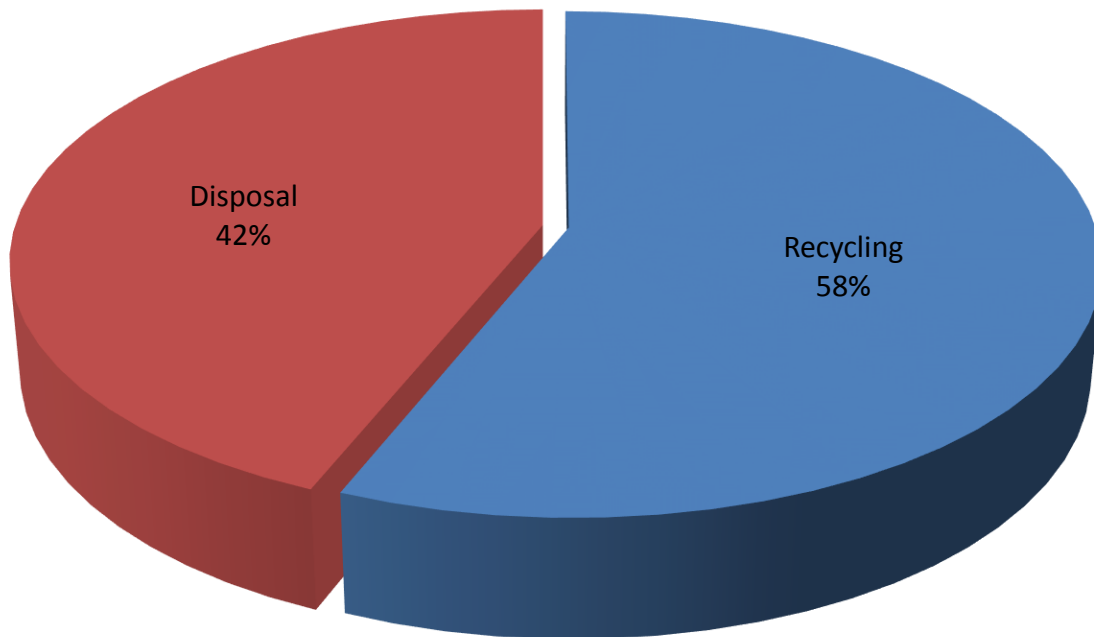


1. Imports

The total quantity of hazardous waste and hazardous recyclable material imported into Canada decreased by 13% in 2014, from 435 300 metric tons in 2013 to 380 600 metric tons in 2014 (Figure 1). To import this quantity of hazardous material in 2014, there were 22 040 cross-border movements.

Of the total quantity of hazardous waste and hazardous recyclable material imported in 2014, 42% was hazardous waste destined for disposal and 58% was hazardous recyclable material destined for recycling (Figure 2). In 2013, the proportions were similar at 44% and 56% respectively.

Figure 2: Type of Operation for 2014 Canadian Imports of Hazardous Waste and Hazardous Recyclable Material

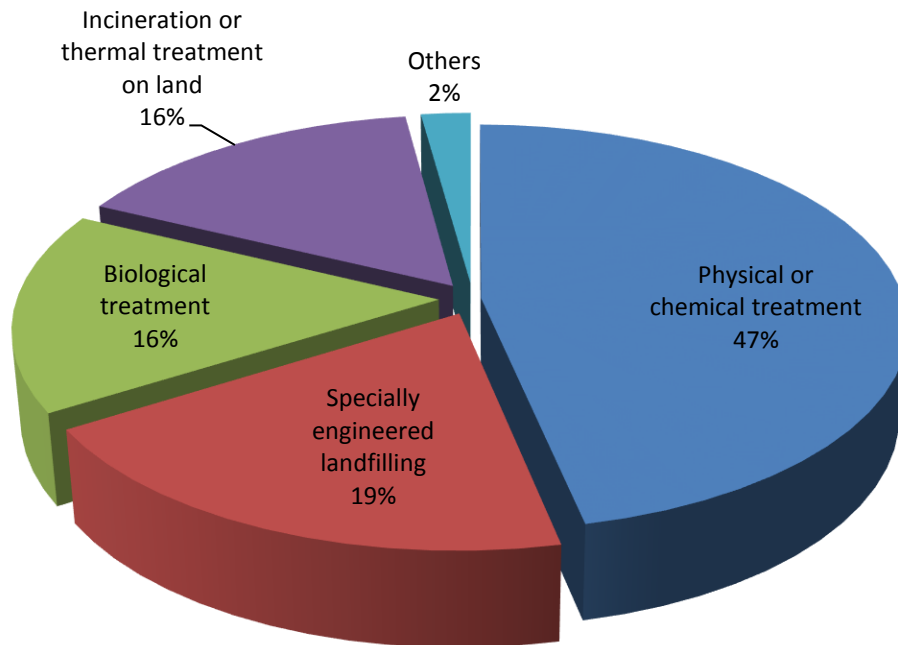


Hazardous waste imported for disposal in 2014 included wastes having as constituents or contaminants:

- hazardous metal compounds;
- waste halogenated organic solvents;
- waste tarry residues arising from the refining, distillation, and any pyrolytic treatment of organic material; and
- aluminium remelting by-product.

Imports of hazardous waste destined for disposal either: underwent physical or chemical treatment (47%); were sent to specially engineered landfills (19%); were incinerated or thermally treated on land (16%); or underwent biological treatment (16%) (Figure 3). The remaining 2% included interim operations such as blending or mixing, repackaging and temporary storage.

Figure 3: 2014 Canadian Imports of Hazardous Waste by Disposal Operation

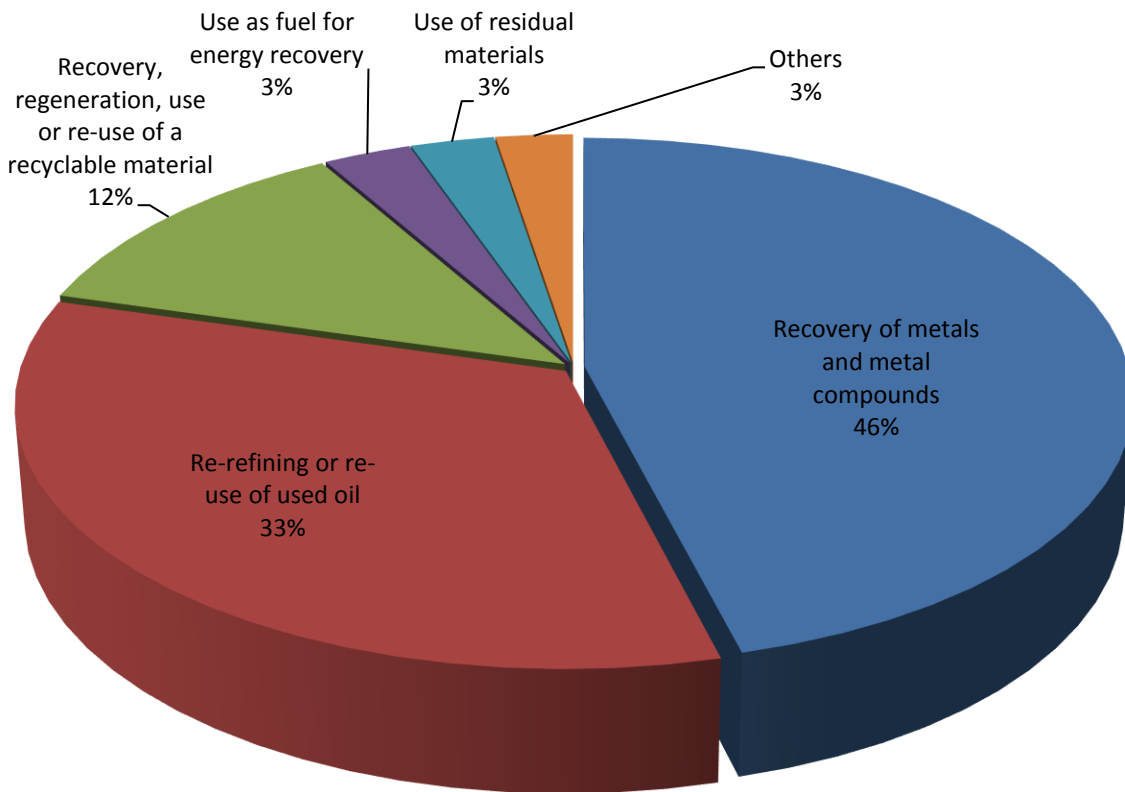


Hazardous recyclable material imported in 2014 included principally:

- waste lead-acid batteries;
- hydraulic fluids;
- waste liquors from the pickling of metals; and
- wastes having as constituents or contaminants hazardous metals compounds.

Hazardous recyclable material imported in 2014 was destined for various recovery operations such as: recovery of metals and metal compounds (46%); re-refining or re-use of used oil (33%); or recovery of a recyclable material (12%) (Figure 4).

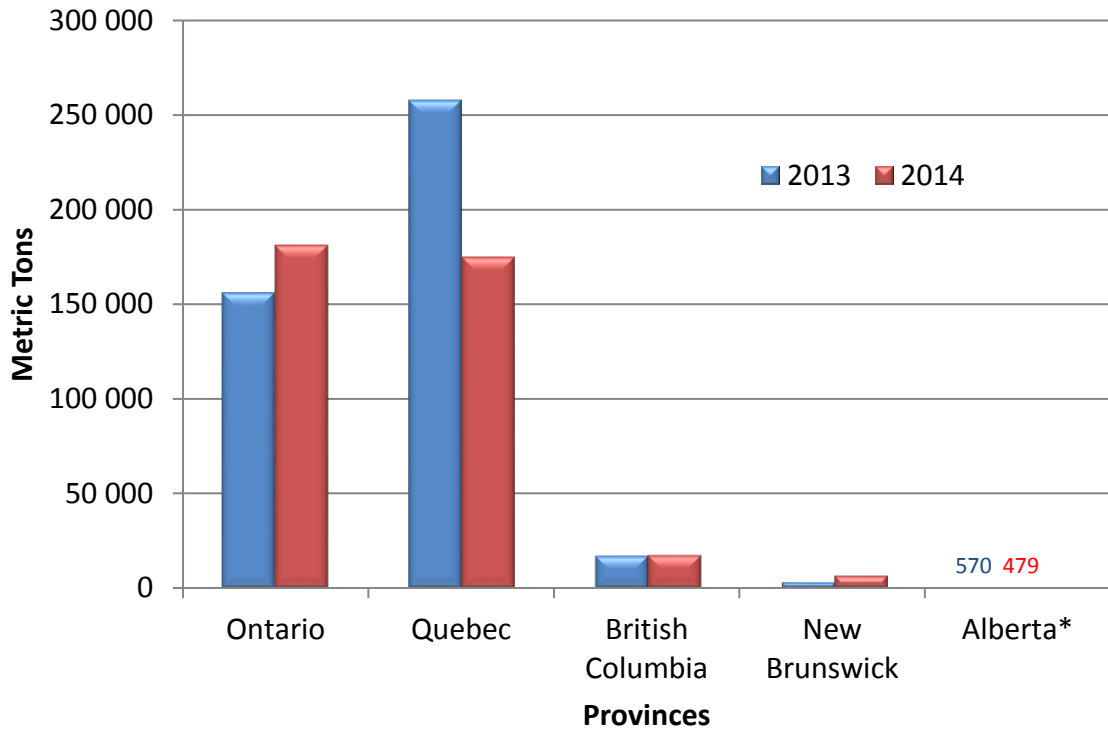
Figure 4: 2014 Canadian Imports of Hazardous Recyclable Material by Recycling Operation



As usual, more than 99% of the imports of hazardous waste or hazardous recyclable material originated from the United States. The majority of the remaining imports came from Nigeria, Jamaica and Norway.

Imports were destined to five Canadian provinces, with Quebec and Ontario receiving 95% of them. The other three provinces that received imports of hazardous waste and hazardous recyclable material were British Columbia, New Brunswick and, to a lesser extent, Alberta. There were no imports of hazardous waste or hazardous recyclable material to any of the territories or other provinces (Figure 5).

Figure 5: Comparison of 2013–2014 Canadian Imports of Hazardous Waste and Hazardous Recyclable Material by Province



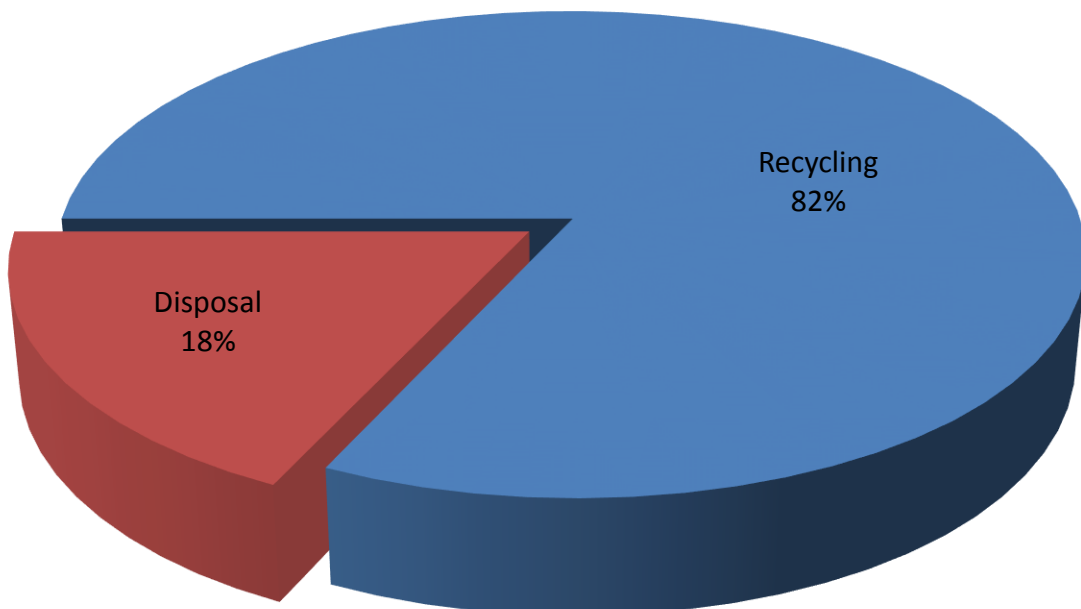
*Alberta: 570 and 479 metric tons in 2013 and 2014. These amounts are too low to appear on the graph.

2. Exports

The quantity of hazardous waste and hazardous recyclable material exported from Canada increased by 2% in 2014, from approximately 519 100 metric tons in 2013 to approximately 530 434 metric tons in 2014 (Figure 1). To export this quantity of hazardous material in 2014, there were 15 322 cross-border movements.

The proportion of hazardous waste and hazardous recyclable material exported in 2014 for disposal and for recycling has remained stable since 2012 at 18% and 82% respectively (Figure 6).

Figure 6: Type of Operation for 2014 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material

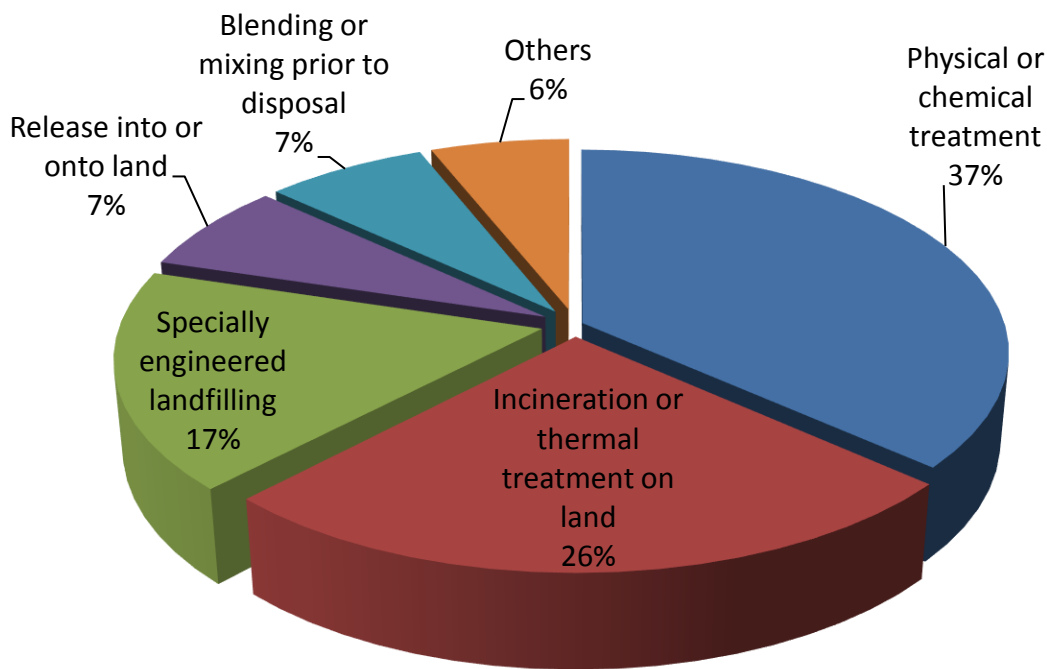


The hazardous waste exported for disposal in 2014 included:

- environmentally hazardous waste;
- waste oil/water and hydrocarbon/water mixtures;
- waste acidic and basic solutions;
- spent sulfuric acid; and
- waste having as constituents or contaminants hazardous metals compounds and wastes liquors from the pickling of metals.

The majority of exports of hazardous waste destined for disposal: underwent physical or chemical treatment (37%); was incinerated or followed a thermal treatment (26%); was disposed in specially engineered landfill (17%); released into or onto land (7%); or was blended or mixed prior to their final disposal (7%) (Figure 7). The remaining 6% was essentially deeply injected in soil.

Figure 7: 2014 Canadian Exports of Hazardous Waste by Disposal Operation

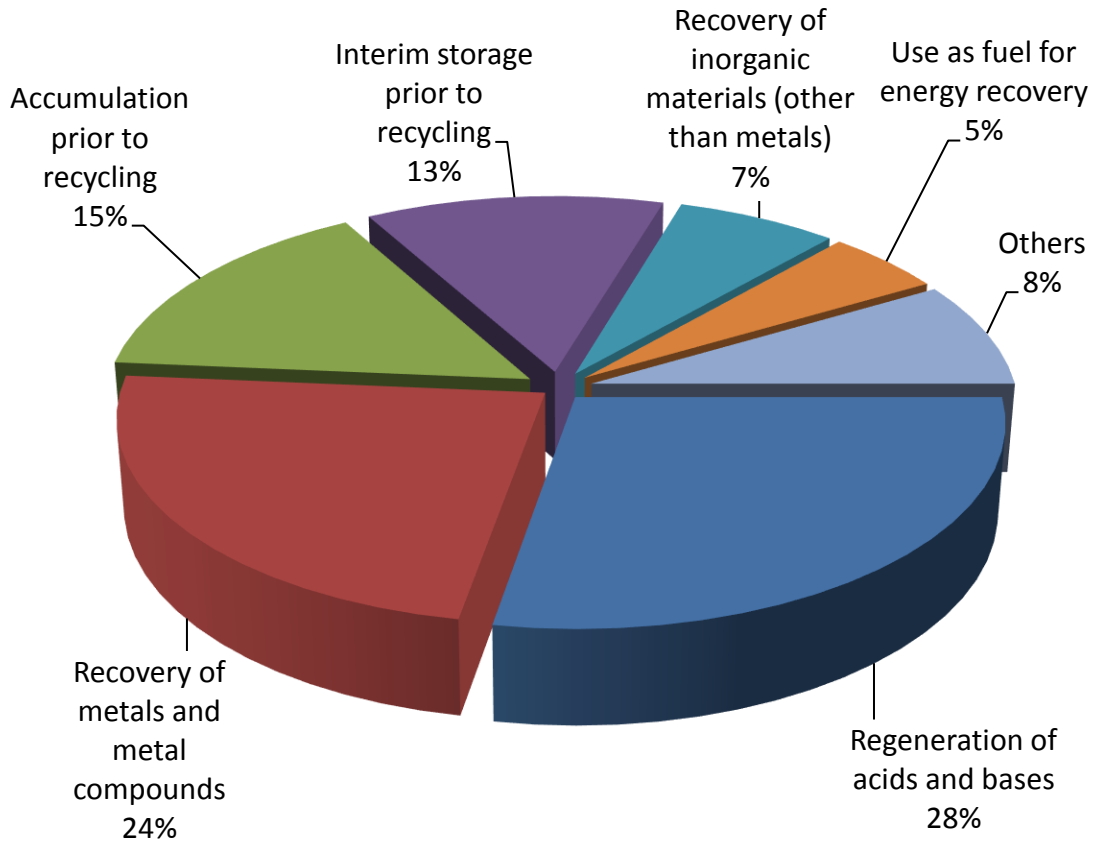


The hazardous recyclable material exported in 2014 was mostly:

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

The majority of hazardous recyclable material exported in 2014 was used: to regenerate acids and bases (28%); to recover metals and metal compounds (24%); for interim operations such as accumulation (15%); or for temporary storage prior to recycling (13%) or recovery of inorganic material (7%) (Figure 8). Among materials that were accumulated or stored, the majority were finally used as fuel in energy recovery systems.

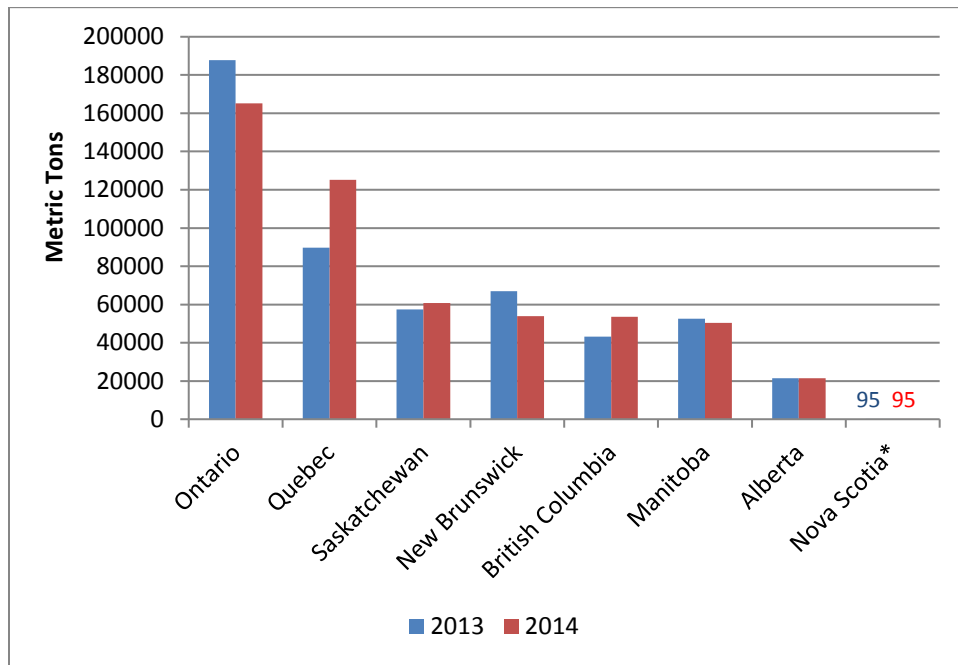
Figure 8: 2014 Canadian Exports of Hazardous Recyclable Material by Recycling Operation



Consistent with the past years, in 2014 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 2013-2014 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material by Province



*Nova Scotia: 95 and 95 metric tons in 2013 and 2014. These amounts are too low to appear on the graph.

3. Transits

In 2014, 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 40 433 metric tons. This is an increase of 26% compare to 2013 (Figure 1).

Of all hazardous waste and hazardous recyclable material that transited through Canada in 2014, 93% was destined for disposal while the remaining 7% was recycled.

More than 90% of hazardous wastes that transited through Canada in 2014 were wastes from the production, formulation, and use of biocides and phytopharmaceuticals that underwent incineration or thermal treatment on land.

The majority (95%) of waste that transited through Canada in 2014 was between New York State and the State of Michigan. The remaining shipments came from Alaska with a Northwestern state as destination.

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

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