



Environment and
Climate Change Canada

Environnement et
Changement climatique Canada



2016 STATISTICS ON THE INTERNATIONAL MOVEMENTS OF HAZARDOUS WASTE AND HAZARDOUS RECYCLABLE MATERIAL

Waste Reduction and Management Division

Environment and Climate Change Canada

April 2018

Canada

Cat. No.: En11-7E-PDF

ISSN: 1927-2359

Unless otherwise specified, you may not reproduce materials in this publication, in whole or in part, for the purposes of commercial redistribution without prior written permission from Environment and Climate Change Canada's copyright administrator. To obtain permission to reproduce Government of Canada materials for commercial purposes, apply for Crown Copyright Clearance by contacting:

Environment and Climate Change Canada

Public Inquiries Centre

7th Floor, Fontaine Building

200 Sacré-Cœur Boulevard

Gatineau QC K1A 0H3

Telephone: 819-997-2800

Toll Free: 1-800-668-6767 (in Canada only)

Email: ec.enviroinfo.ec@canada.ca

Photos: © Environment and Climate Change Canada

© Her Majesty the Queen in Right of Canada, represented by the Minister of Environment and Climate Change, 2017

Aussi disponible en français

Table of Contents

Background	1
Movements of Hazardous Waste and Hazardous Recyclable Material from and to Canada.....	2
1. Imports.....	3
2. Exports.....	7
3. Transits.....	11

Table of Figures

Figure 1: Exports, Imports and Transits of Hazardous Waste and Hazardous Recyclable Material 2007–2016.....	2
Figure 2: Type of Operation for 2016 Canadian Imports of Hazardous Waste and Hazardous Recyclable Material	3
Figure 3: 2016 Canadian Imports of Hazardous Waste by Disposal Operation.....	4
Figure 4: 2016 Canadian Imports of Hazardous Recyclable Material by Recycling Operation	5
Figure 5: Comparison 2015 - 2016 Canadian imports of hazardous wastes and hazardous recyclable material by provinces.....	6
Figure 6: Type of Operation for 2016 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material	7
Figure 7: 2016 Canadian Exports of Hazardous Waste by Disposal Operation	8
Figure 8: 2016 Canadian Exports of Hazardous Recyclable Material by Recycling Operation.....	9
Figure 9: Comparison of 2015-2016 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material by Province	10

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* (EIHWHRMR).

The EIHWHRMR 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 2016 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 EIHWHRMR.

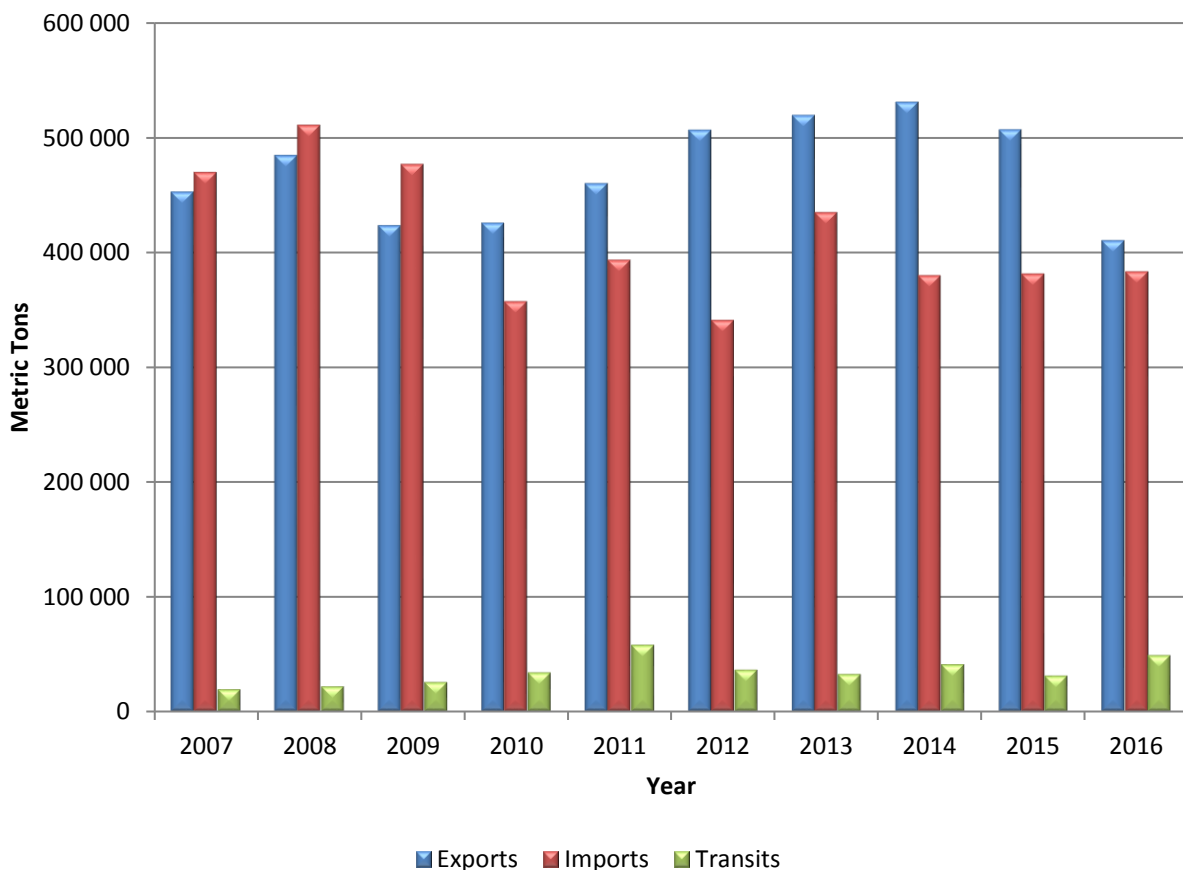
¹ Please note that data presented in this report are revised periodically as new information becomes available. Therefore, information presented may differ from information published in other reports.

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 until 2014. In 2016, a 20.0 % decrease was observed as compared to 2015 (Figure 1). In 2016 we did not observed a significant change in the annual quantity of imports as compared to 2015. 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. In 2016 total transits increased by 57.9% as compare to 2015.

A total of 35 372 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 2007 – 2016

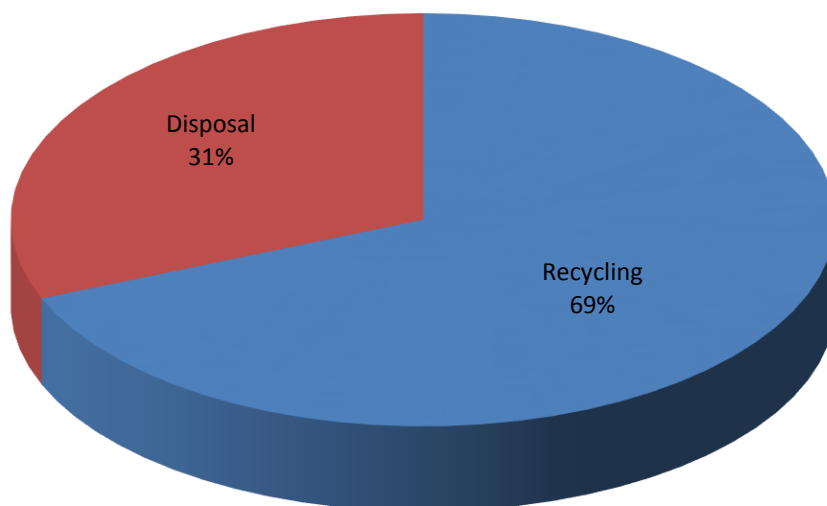


1. Imports

The total quantity of hazardous waste and hazardous recyclable material imported into Canada did not significantly change in 2016 as compared to 2015; 383 741 t in 2016 (Figure 1).

Of the total quantity of hazardous waste and hazardous recyclable material imported in 2016, 31% was hazardous waste destined for disposal and 69% was hazardous recyclable material destined for recycling (Figure 2). As compared to 2015, the proportions were 32% and 68% respectively.

Figure 2: Type of Operation for 2016 Canadian Imports of Hazardous Waste and Hazardous Recyclable Material



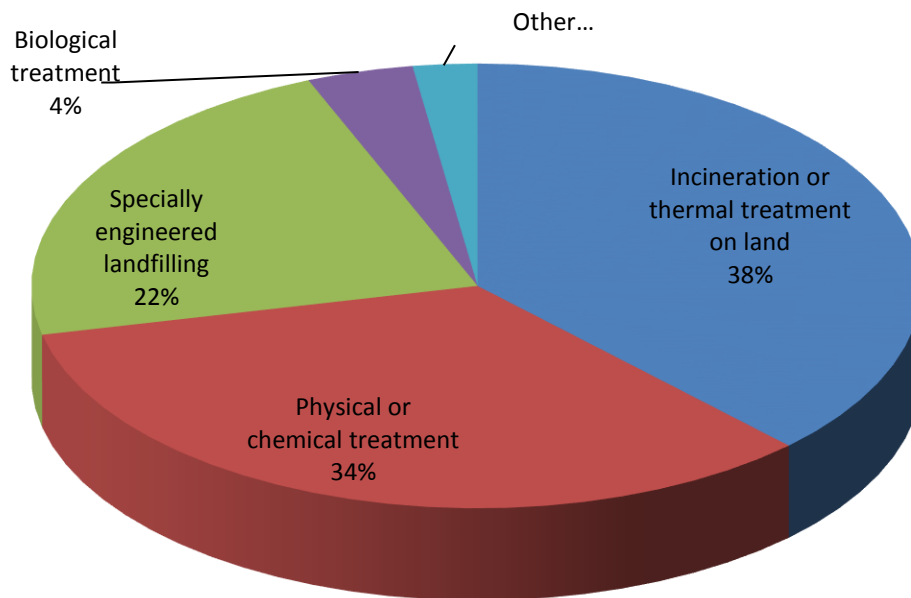
Hazardous waste imported for disposal in 2016 included wastes having as constituents or contaminants:

- metal-bearing waste;
- organics solvents/flammable liquids;
- treated wood;
- wastes from the production, formulation and use of biocides and phytopharmaceuticals, pesticides, herbicides;
- wastes tarry residues (excluding asphalt cements) arising from the refining, distillation and any pyrolytic treatment of organic materials.

Imports of hazardous waste destined for disposal either:

- were incinerated or thermally treated on land (38%);
- underwent physical or chemical treatment (34%);
- were sent to specially engineered landfills (22%); or
- underwent biological treatment (4%);
- the remaining 2% included interim operations such as blending or mixing, repackaging and temporary storage (Figure 3).

Figure 3: 2016 Canadian Imports of Hazardous Waste by Disposal Operation



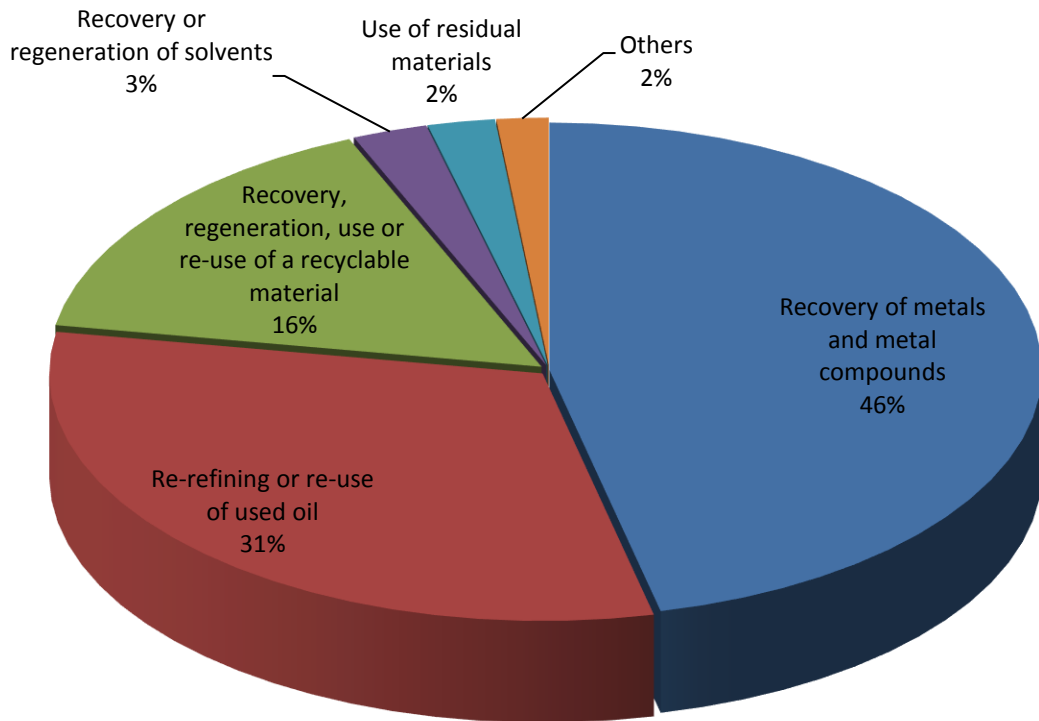
Hazardous recyclable material imported in 2016 included:

- spent lead-acid batteries;
- hydraulic fluids (used oil);
- spent sulfuric acid, corrosive liquids, waste liquors from pickling of metals;
- metal bearing waste;
- flammable liquids.

Hazardous recyclable material imported in 2016 was destined for various recovery operations such as mainly:

- recovery of metals and metal compounds (46%);
- re-refining or re-use of used oil (31%); or
- recovery of a recyclable material (16%) (Figure 4).

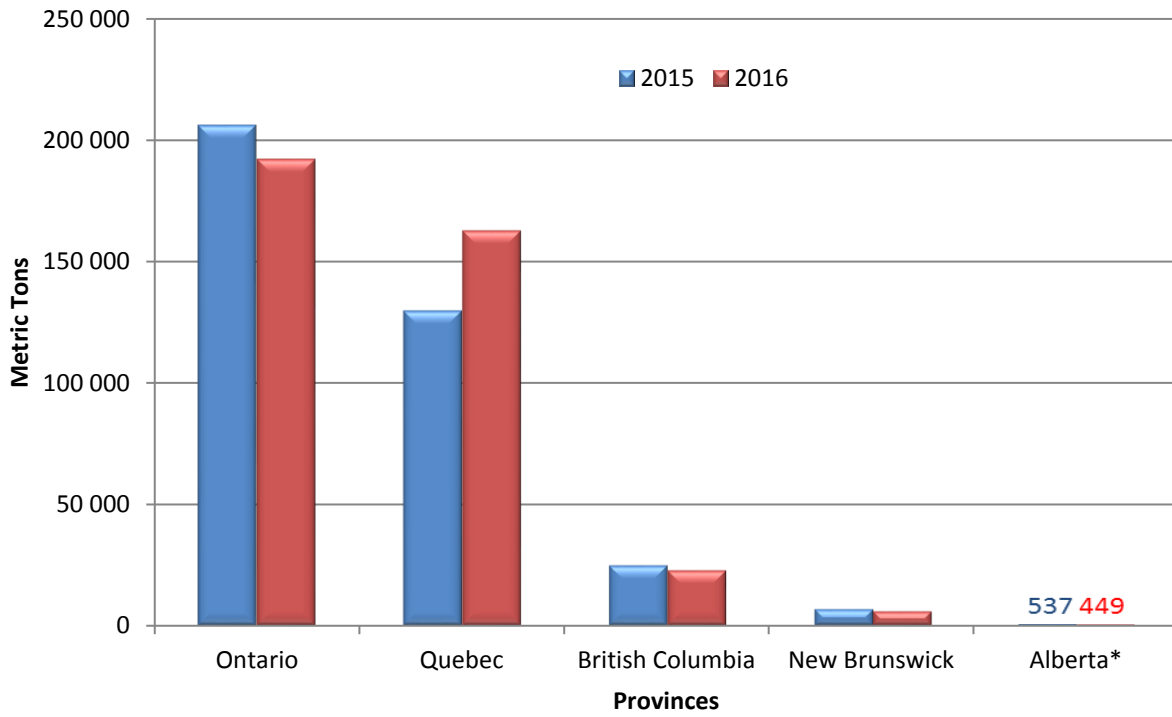
Figure 4: 2016 Canadian Imports of Hazardous Recyclable Material by Recycling Operation



As usual, almost all imports (99.9%) of hazardous waste or hazardous recyclable material were originated from the United States. The remaining imports came from Jamaica, Nigeria, Norway, Brazil, Australia and Indonesia.

Imports of hazardous recyclable materials in 2016 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 2015 - 2016 Canadian imports of hazardous wastes and hazardous recyclable material by provinces



*Alberta: 537 and 449 metric tons in 2015 and 2016. These amounts are too low to appear on the graph

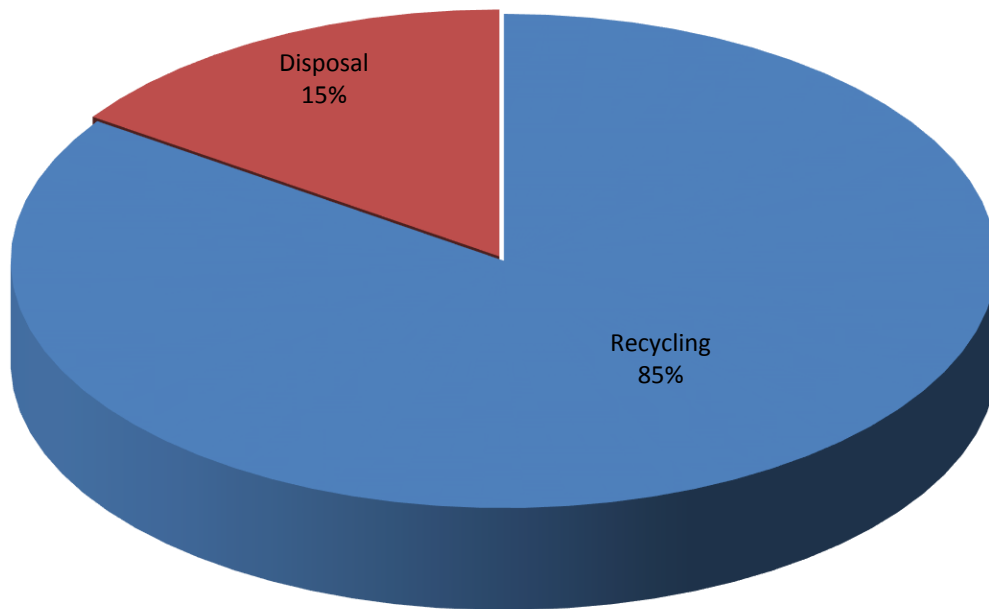
2. Exports

The quantity of hazardous waste and hazardous recyclable material exported was 410 194 t in 2016. This represents a decrease of about 20% from the 2015 figure. Shipments exported for recycling represented about 85% of all exports in 2016, the remaining 15% was sent for disposal (Figure 6).

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

- spent sulfuric acid, corrosive liquids, waste liquors from pickling of metals;
- aluminum remelting by-products;
- treated wood;
- spent lead-acid batteries;
- hydraulic fluids (used oil).

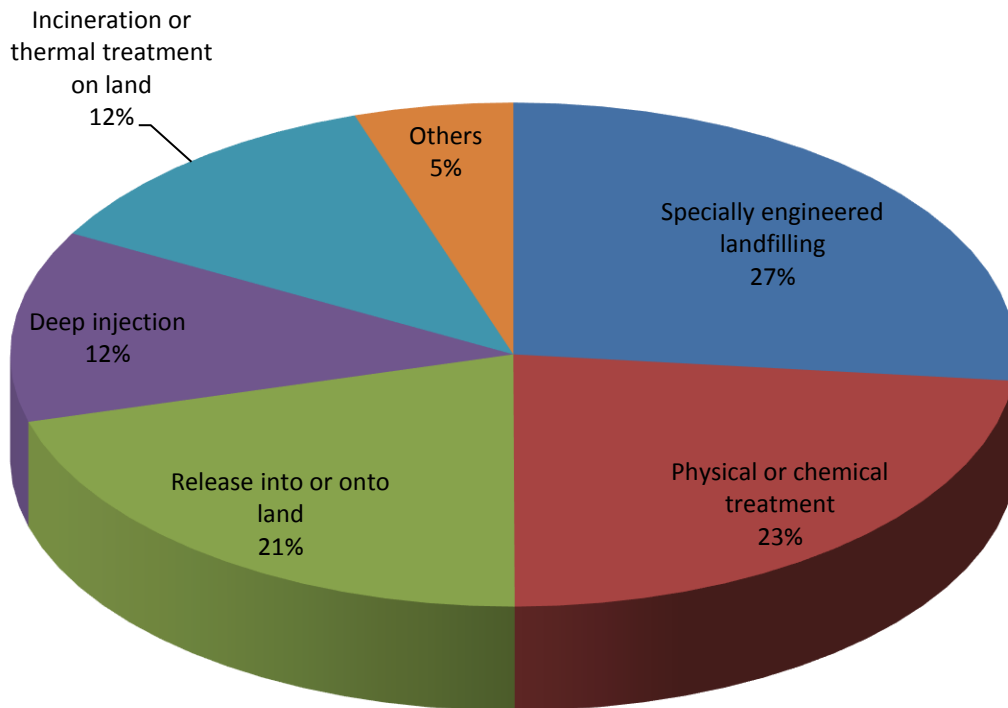
Figure 6: Type of Operation for 2016 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material



The majority of exports of hazardous waste destined for disposal:

- was disposed in specially engineered landfill (27%);
- underwent physical or chemical treatment (23%);
- released into or onto land (21%);
- was incinerated or followed a thermal treatment (12%);
- deeply injected in soil (12%); or
- was blended or mixed prior to their final disposal (5%) (Figure 7).

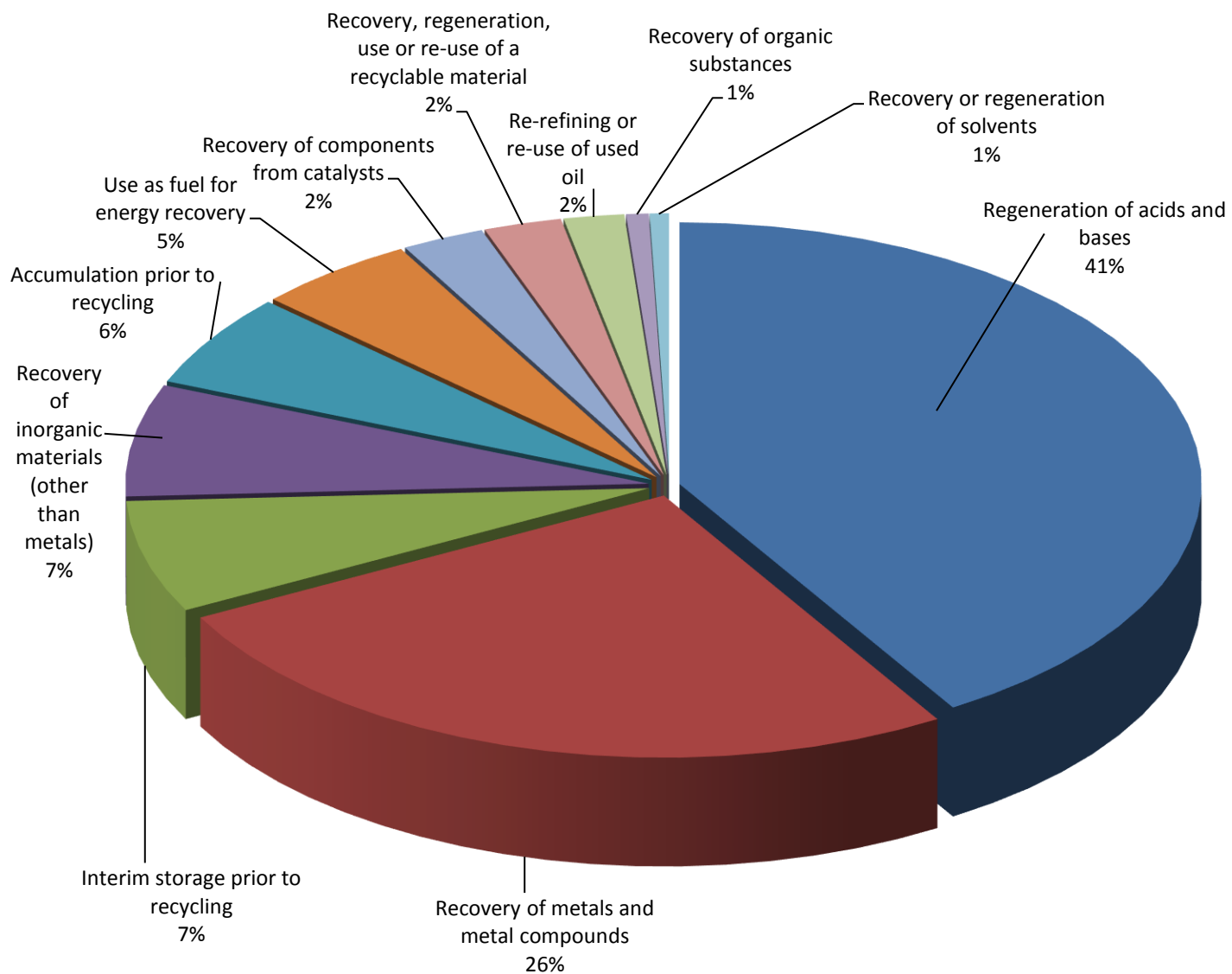
Figure 7: 2016 Canadian Exports of Hazardous Waste by Disposal Operation



The majority of hazardous recyclable material exported in 2016 was used:

- to regenerate acids and bases (41%);
- to recover metals and metal compounds (26%);
- for temporary storage prior to recycling (14%);
- for recovery of inorganic material (7%); or
- for interim operations such as accumulation (6%);
- Among materials that were accumulated or stored, the majority were finally used as fuel in energy recovery systems (Figure 8).

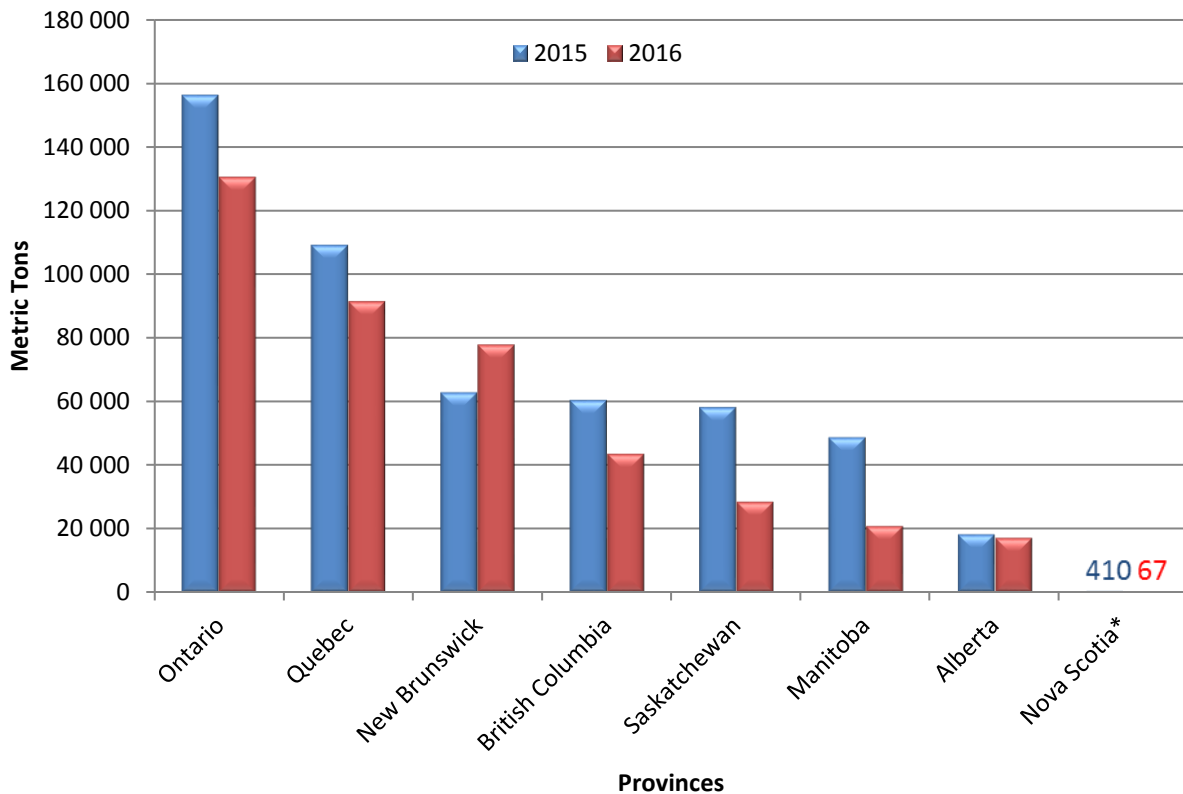
Figure 8: 2016 Canadian Exports of Hazardous Recyclable Material by Recycling Operation



Consistent with the past years, in 2016 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 Mexico, Belgium, Germany and Republic of Korea.

Exports originated from eight provinces, with Ontario and Quebec accounting respectively for 32% and 22% of the total quantity. There were no exports of hazardous waste or hazardous recyclable material from Prince Edward Island, Newfoundland and Labrador or from any of the Canadian territories (Figure 9).

Figure 9: Comparison of 2015-2016 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material by Province



*Nova Scotia: 410 and 67 metric tons in 2015 and 2016. These amounts are too low to appear on the graph

3. Transits

In 2016, 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 48 423 t. This is an increase of 57.9% as compare to 2015 (Figure 1).

Of all hazardous waste and hazardous recyclable material that transited through Canada in 2016, 38 720 t (80%) was destined for disposal while the remaining 9 703 t (20%) was recycled.

About 98.3% of hazardous wastes that transited through Canada in 2016 were wastes from the production, formulation, and use of biocides and phytopharmaceuticals that underwent incineration or thermal treatment on land. The hazardous recyclable materials that transited through Canada in 2016 were largely composed of treated wood wastes.

The majority (97%) of waste that transited through Canada in 2016 was from Michigan, New York State and Alaska to mainly New York State, Wisconsin, Oregon, Texas, and Washington.

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

Waste Reduction and Management Division

Environment and Climate Change Canada

Email: DM / MD (EC) ec.dm-md.ec@canada.ca

1-844-524-5295

Additional information can be obtained at:

Environment and Climate Change Canada

Public Inquiries Centre

7th Floor, Fontaine Building

200 Sacré-Coeur Boulevard

Gatineau QC K1A 0H3

Telephone: 1-800-668-6767 (in Canada only) or 819-997-2800

Email: ec.enviroinfo.ec@canada.ca

