

2017

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



Waste Reduction and Management Division

Environment and Climate
Change Canada

November 2020



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
12th Floor, Fontaine Building
200 Sacré-Coeur Boulevard
Gatineau QC K1A 0H3
Telephone: 819-938-3860
Toll Free: 1-800-668-6767 (in Canada only)
Email: ec.enviroinfo.ec@canada.ca

© Her Majesty the Queen in Right of Canada, represented by the Minister of Environment and Climate Change, 2020

Aussi disponible en français

Table of Contents

Background	4
Movements of Hazardous Waste and Hazardous Recyclable Material from, into and through Canada	5
1. Imports	6
2. Exports	10

Table of Figures

Figure 1: Exports, Imports of Hazardous Waste and Hazardous Recyclable Material 2008–2017 (metric kilos).....	5
Figure 2: Type of Operation for 2017 Canadian Imports of Hazardous Waste and Hazardous Recyclable Material	6
Figure 3: 2017 Canadian Imports of Hazardous Waste by Disposal Operation	7
Figure 4: 2017 Canadian Imports of Hazardous Recyclable Material by Recycling Operation	8
Figure 5: Comparison of 2016-2017 Canadian Imports of Hazardous Wastes and Hazardous Recyclable Material by Province (in kilograms).....	9
Figure 6: Type of Operation for 2017 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material	10
Figure 7: 2017 Canadian Exports of Hazardous Waste by Disposal Operation.....	11
Figure 8: 2017 Canadian Exports of Hazardous Recyclable Material by Recycling Operation	12
Figure 9: Comparison of 2016-2017 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material by Province (in kilograms).....	13

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 and exports for the last ten years.¹ Specific statistics on movements during the 2017 calendar year are then presented. The report also includes information on the type of operation conducted on the hazardous waste or hazardous recyclable material following their import or 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

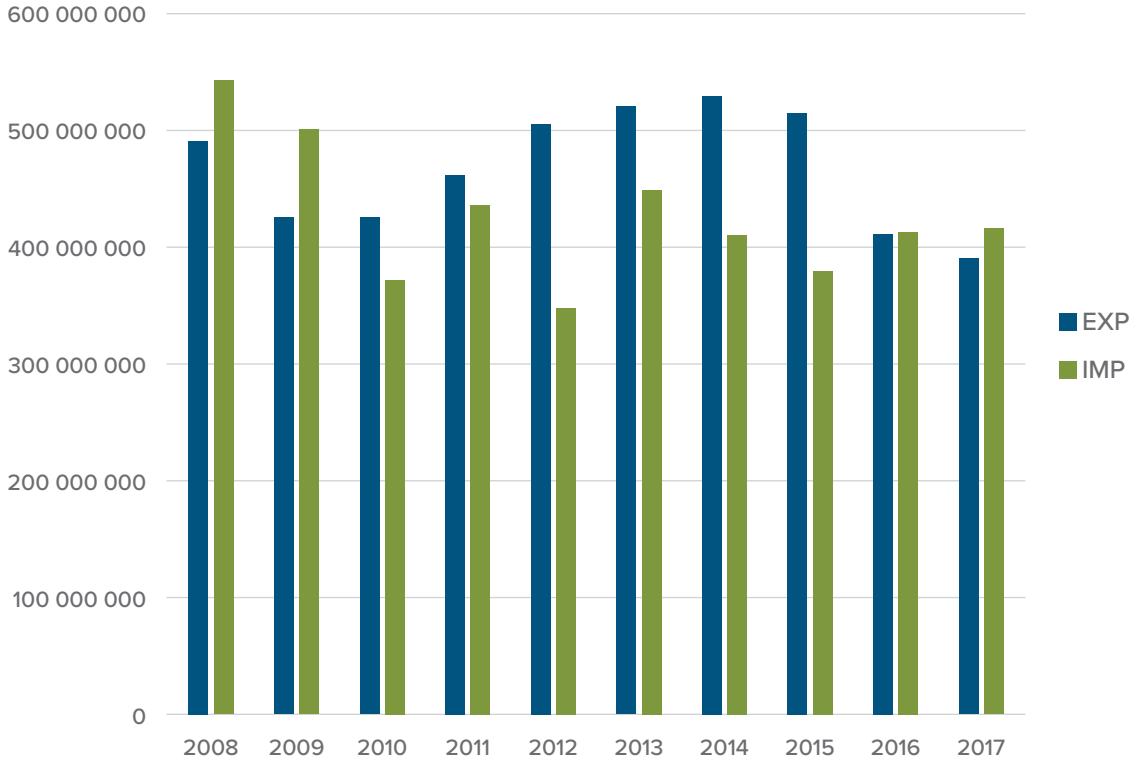
Environment and Climate Change Canada reported a total of 32,368 individual transboundary shipments of hazardous waste and hazardous recyclable material, on the basis of movement documents received.

The total annual quantity of hazardous waste and hazardous recyclable material varied between 2008 and 2017, without any specific trend throughout these years.

The total annual quantity of hazardous waste and hazardous recyclable material exported from Canada increased each year from 2009 until 2014. However, between 2015 and 2017, there was a decrease of 24.1% in the quantity exported, with a reduction of 5.2% from 2016 to 2017 (Figure 1).

The annual quantity of imports varied from 2009 to 2015, but there was little change between 2016 and 2017 (Figure 1).

Figure 1: Exports, Imports of Hazardous Waste and Hazardous Recyclable Material 2008–2017 (metric kilos)

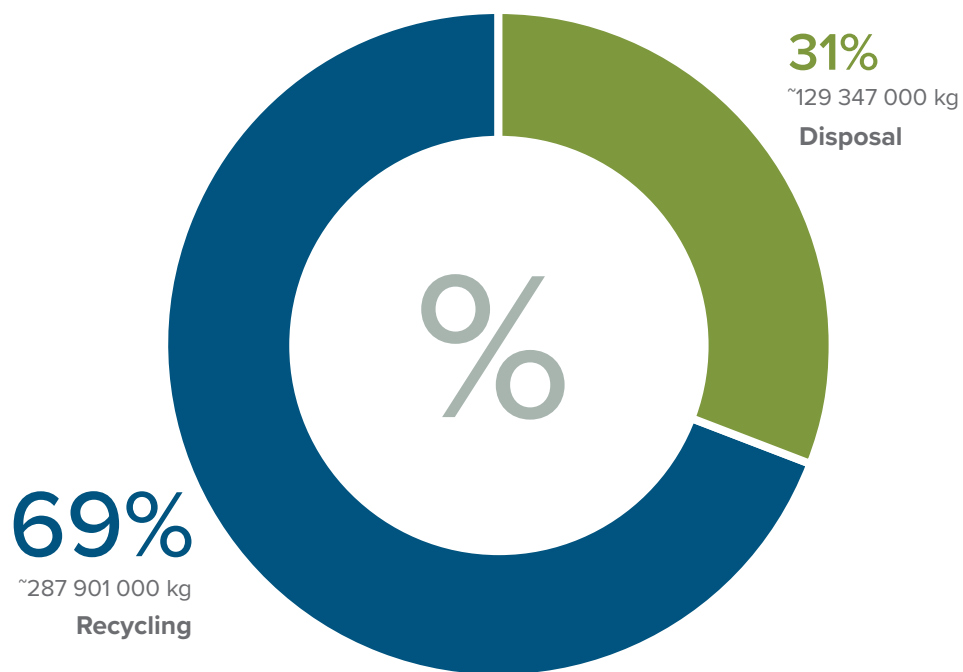


1. Imports

The total quantity of hazardous waste and hazardous recyclable material imported into Canada fluctuated between 2008 and 2015, but similar quantities were imported in 2016 (414 074 000 kg) and 2017 (417 248 000 kg) (Figure 1).

The total quantity of imported hazardous waste and hazardous recyclable material for disposal and recycling in 2016 (31% and 69%, respectively) was similar to that of 2017 (Figure 2).

Figure 2: Type of Operation for 2017 Canadian Imports of Hazardous Waste and Hazardous Recyclable Material



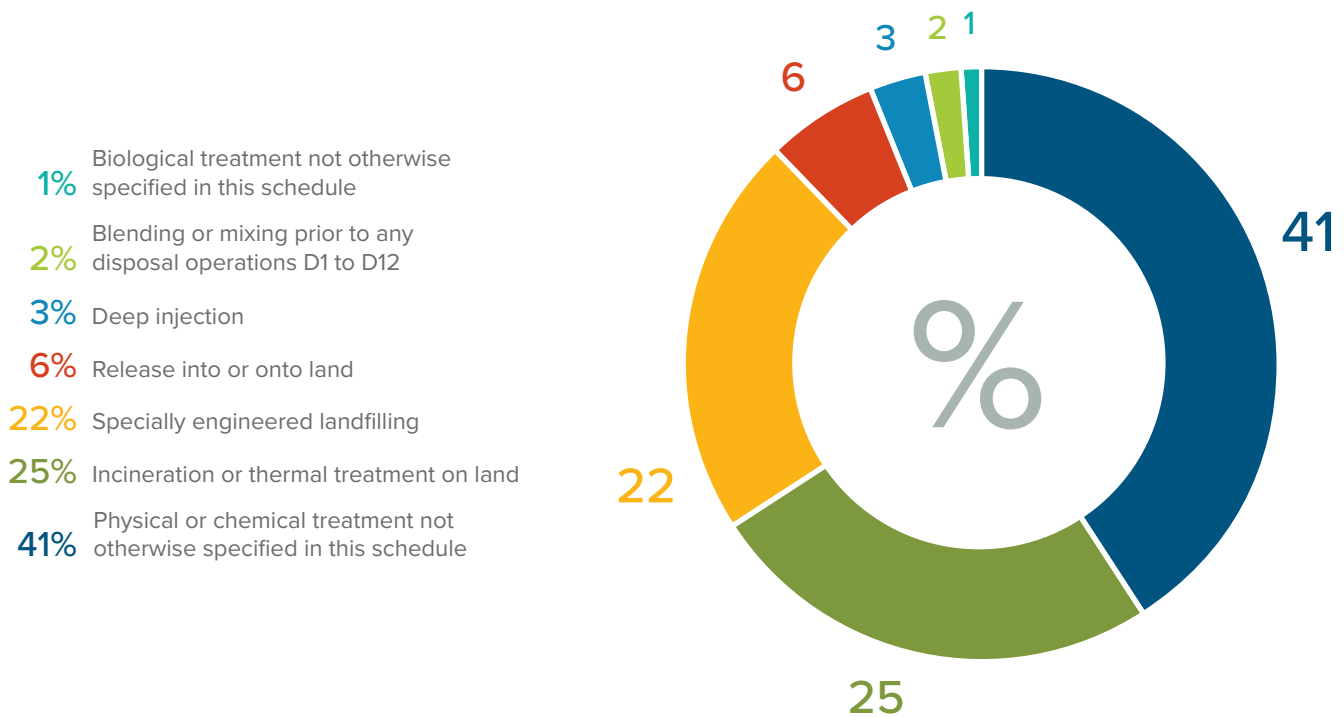
Hazardous waste imported for disposal in 2017 included waste having as constituents or contaminants:

- metal-bearing waste;
- treated wood;
- organic solvents / flammable liquids;
- aluminum re-melting by-products;
- wastes from the production, formulation and use of biocides and phytopharmaceuticals, pesticides, herbicides; and
- corrosive liquid.

Imports of hazardous waste destined for disposal:

- had undergone physical or chemical treatment;
- had been incinerated or thermally treated on land;
- had been sent to specially engineered landfills;
- had undergone interim operations such as blending or mixing, repackaging and temporary storage prior to any of operations D1 to D12; or
- had undergone biological treatment (Figure 3).

Figure 3: 2017 Canadian Imports of Hazardous Waste by Disposal Operation



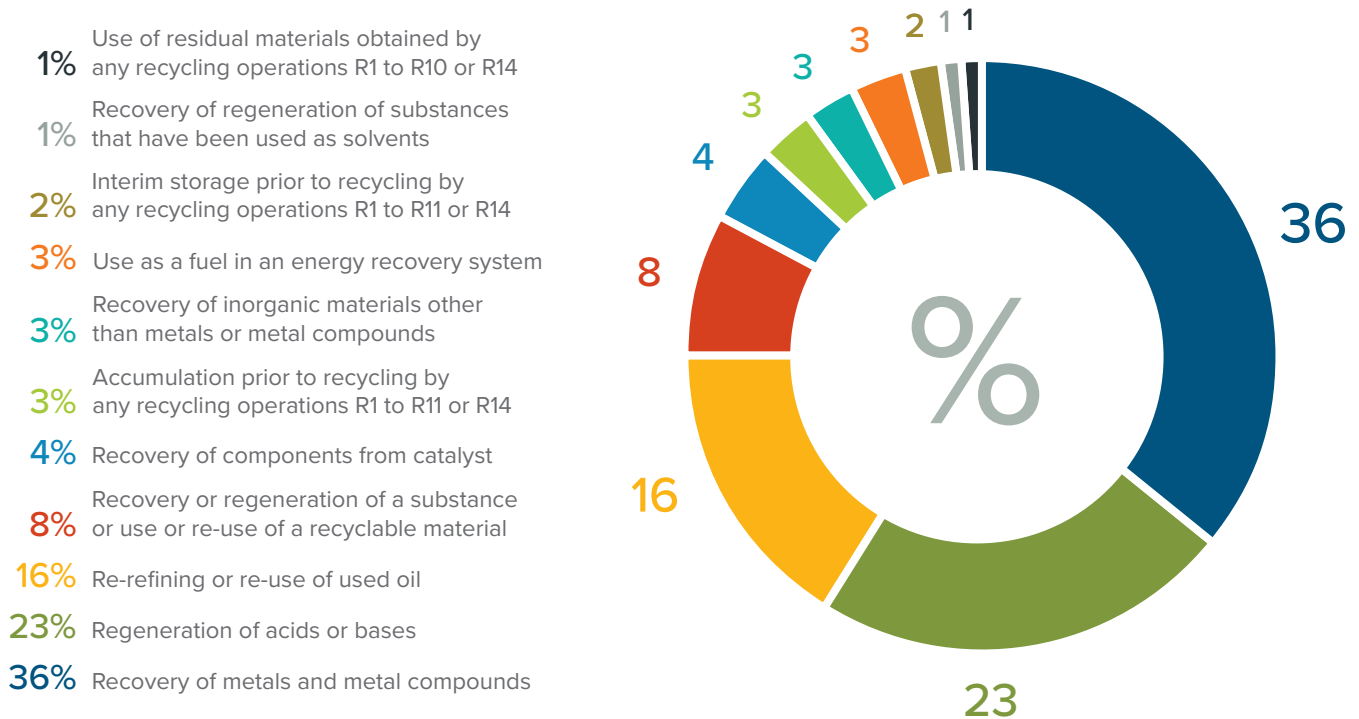
Hazardous recyclable material imported into Canada in 2017 included:

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

Hazardous recyclable material imported in 2017 was mainly destined for recovery operations, such as:

- recovery of metals and metal compounds;
- regeneration of acids or bases;
- re refining or re-use of used oil;
- recovery or regeneration of a substance or use or re-use of a recyclable material;
- recovery or regeneration of substances that have been used as solvents;
- residual materials obtained by any of operations R1 to R10 or R14; or
- fuel in an energy recovery system (Figure 4).

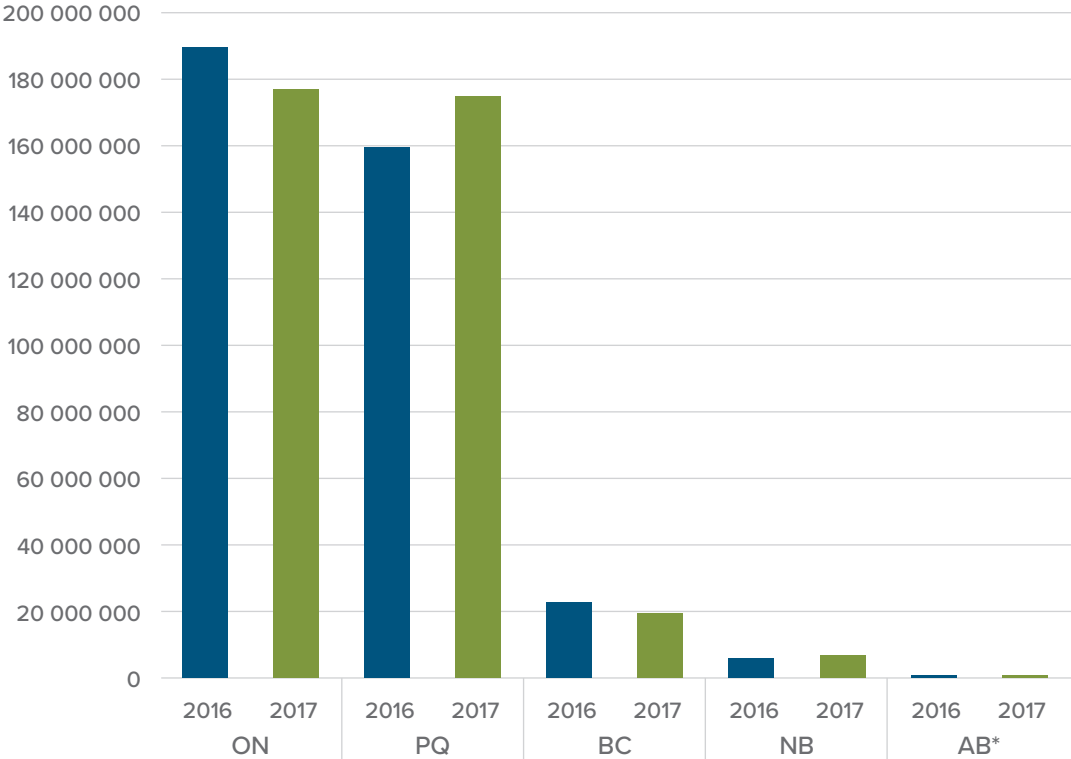
Figure 4: 2017 Canadian Imports of Hazardous Recyclable Material by Recycling Operation



As usual, almost all imports (99.9%) of hazardous waste or hazardous recyclable material originated from the United States. The remaining imports came from Uruguay, the United Arab Emirates and Venezuela.

Imports of hazardous recyclable materials in 2017 were shipped to five provinces: Ontario, Quebec, British Columbia, New Brunswick and Alberta (Figure 5). Except for New Brunswick, all of these provinces also received waste for final disposal.

Figure 5: Comparison of 2016-2017 Canadian Imports of Hazardous Wastes and Hazardous Recyclable Material by Province (in kilograms)



*Alberta: 445 578 and 374 051 kilograms in 2016 and 2017. These amounts are too low to appear on the graph

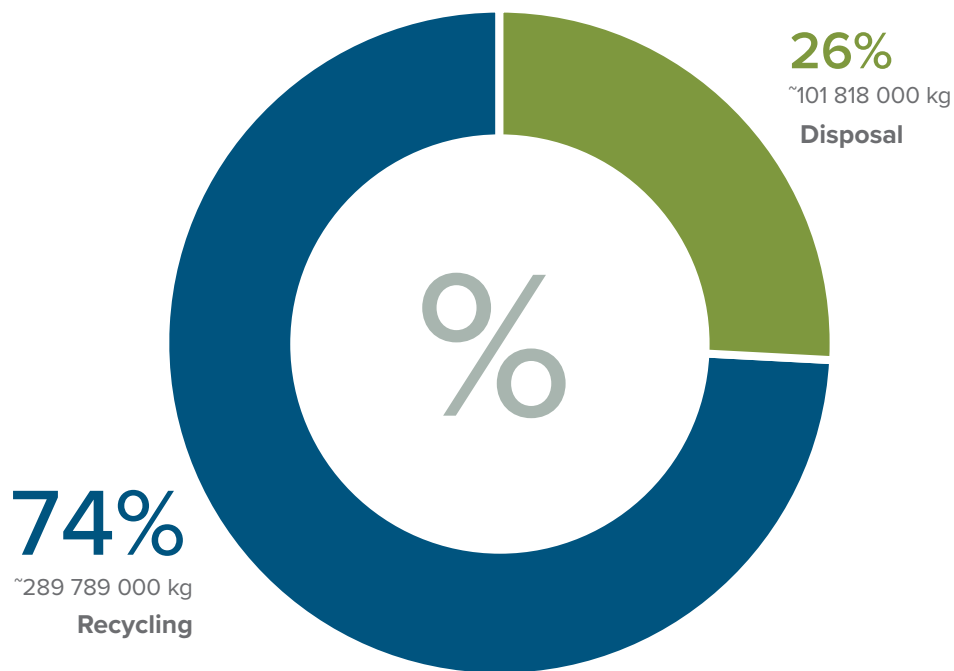
2. Exports

The quantity of hazardous waste and hazardous recyclable material exported in 2017 was 391 607 000 kg. This represents a decrease of approximately 5.2% from 2016 (Figure 1).

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

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

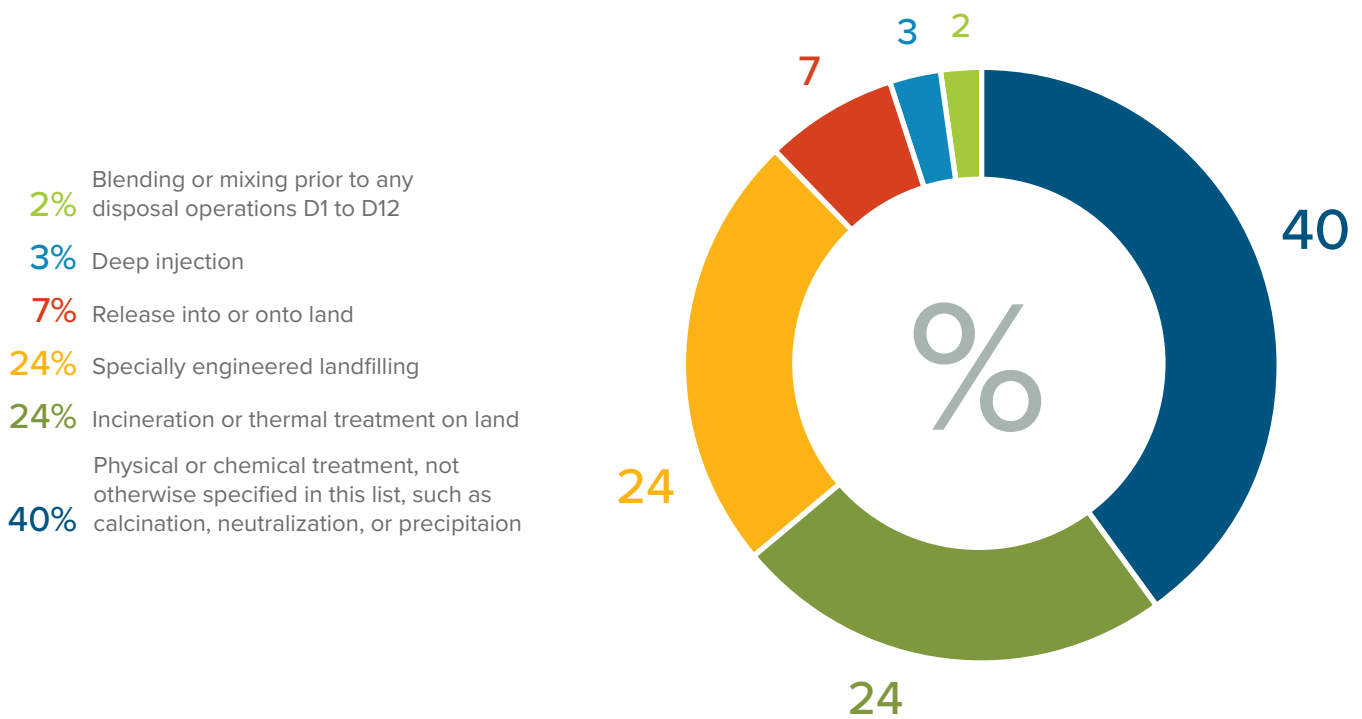
Figure 6: Type of Operation for 2017 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material



The majority of exports of hazardous waste destined for disposal:

- went through physical or chemical treatment;
- were incinerated or treated thermally;
- were disposed of in specially engineered landfill;
- were released into or onto land;
- were deeply injected in soil; or
- were blended or mixed prior to their final disposal (Figure 7).

Figure 7: 2017 Canadian Exports of Hazardous Waste by Disposal Operation

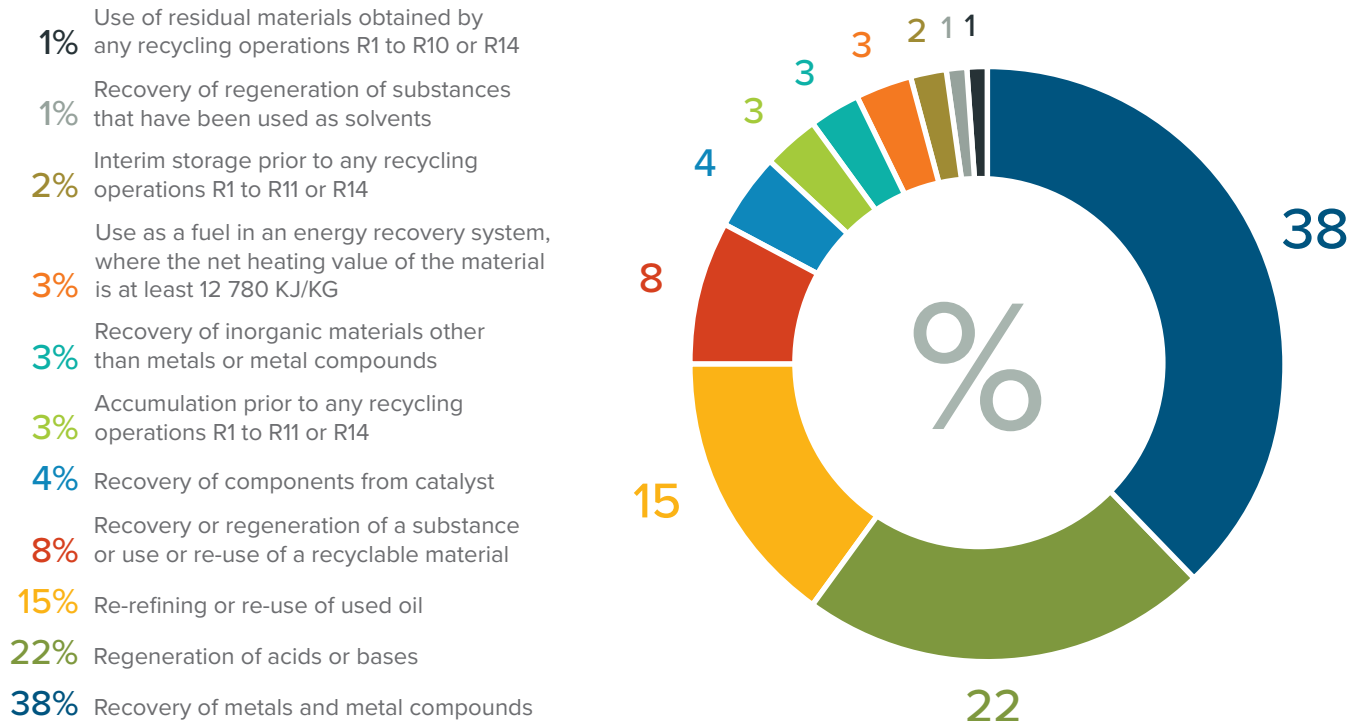


The majority of hazardous recyclable material exported in 2017 was used:

- to recover metals and metal compounds;
- to regenerate acids and bases;
- for use or re-use of used oil;
- for use or re-use of a recyclable material;
- for temporary storage prior to recycling;
- for recovery of inorganic material;
- for interim operations such as accumulation;
- for use as a fuel in and energy recovery system;
- for recovery or regeneration of substances used as solvents; or
- for recovery or regeneration of substances not used as solvents.

The majority of accumulated or stored materials were ultimately used as fuel in energy recovery systems (Figure 8).

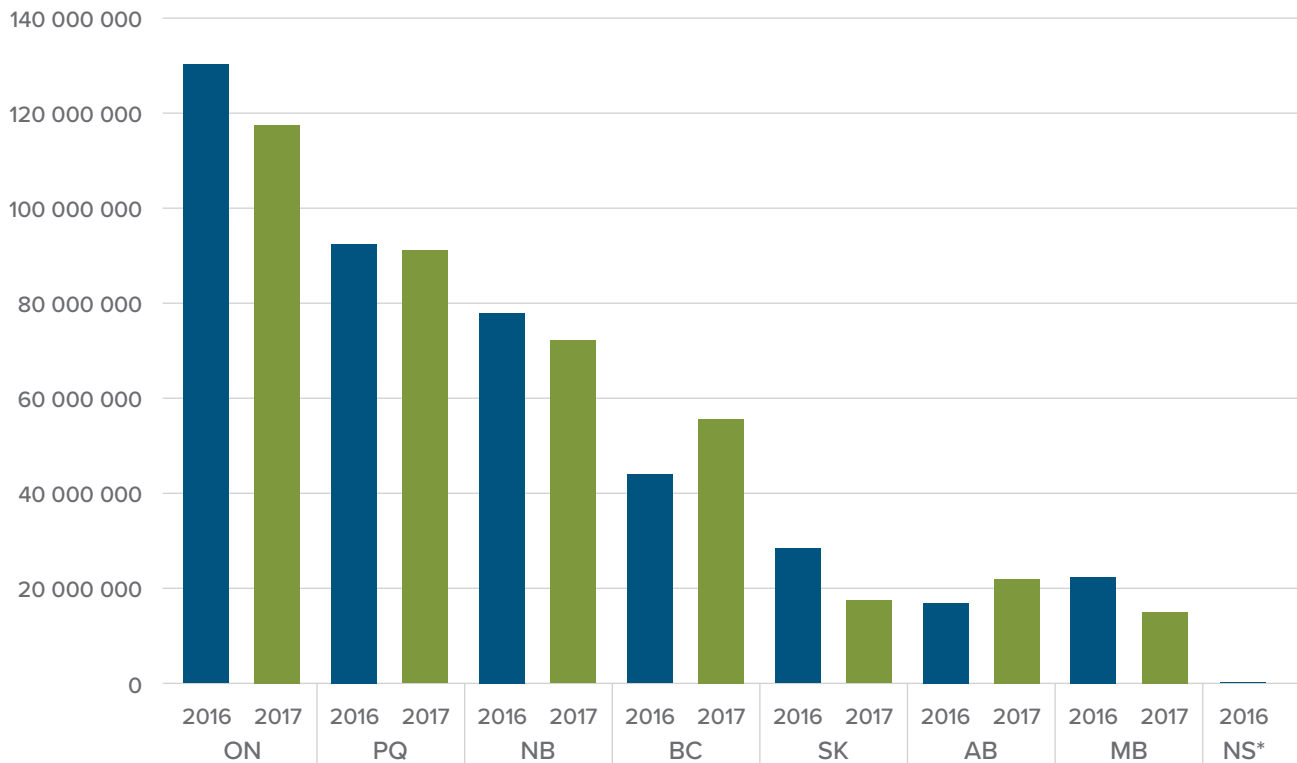
Figure 8: 2017 Canadian Exports of Hazardous Recyclable Material by Recycling Operation



Consistent with previous years, in 2017 96.8% of exports of hazardous waste and hazardous recyclable material were intended for the United States, while the remaining hazardous waste and hazardous recyclable material were exported, in order of importance, to Mexico, Republic of Korea, Belgium and Germany.

Exports originated from seven provinces, with Ontario and Quebec accounting for 30.8% and 22.8% of the total quantity, respectively. In 2017, there were no exports of hazardous waste or hazardous recyclable material from Prince Edward Island, Newfoundland and Labrador, Nova-Scotia or any of the Canadian territories (Figure 9).

Figure 9: Comparison of 2016-2017 Canadian Exports of Hazardous Waste and Hazardous Recyclable Material by Province (in kilograms)



*Nova Scotia: 67 469 kilograms and 0 kilograms in 2016 and 2017. These amounts are too low to appear on the graph

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