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Sectoral report presented by RECYC-QUÉBEC as part of the BAPE's mandate on the state of ultimate waste management

English Summary

Summary

As part of the mandate on the state of ultimate waste management (officially known as *L'état des lieux et la gestion des résidus ultimes*) entrusted to the Bureau d'audiences publiques sur l'environnement (BAPE, Environmental Public Hearings Office) by the Minister of the Environment and the Fight Against Climate Change, Benoit Charette, RECYC-QUÉBEC hopes to contribute to the efforts and thoughts by sharing its expertise, its knowledge and the data available on the matter.

This document provides an overview of Quebec's current situation on residual materials management, specifically waste disposal.

The Quebec assessment on residual materials management, a key document produced by RECYC-QUÉBEC, helps track and measure Quebec's performance in residual materials management. Annual reports from waste disposal sites, as required by the regulation, are the primary source of data used to produce the waste disposal picture. Other informations presented in the waste assessment are mostly based on voluntary reports provided by Quebec recovery, sorting, processing and recycling facilities.

Quantities of disposed materials

Total quantities of disposed residual materials in Quebec (excluding sludge) have risen over the last few years, resulting in an increase of a little over 9 % between 2015 and 2019. The most significant increase is noted for quantities received at technical landfill sites, especially for the 2018-2019 period. However, during that same period, materials disposed at construction and demolition landfills declined by over 50 %.

As for disposed sludge, quantities of landfilled municipal sludge decreased from 2015 to 2018 but increase significantly in 2019. The total quantity of disposed residual materials in 2019 including sludge goes up to 6,139,000 tonnes. This is a 9.1 % increase compared to the 5,627,000 tonnes disposed of in 2015.

Quantity disposed per capita

The key indicator in recent action plans resulting from the Quebec Residual Materials Management Policy is the quantity of materials disposed of per capita. The most recent data indicate that 722 kg of waste per capita was disposed of in 2019. This is a notable increase compared to previous years as such quantity disposed per capita had not been seen since 2011. The 2023 target is to reduce this quantity to 525 kg or less per capita.

The use of residual materials as alternative daily cover or for other uses in landfills

In 2019, 2,659,000 tonnes of residual materials was used as alternative daily cover or other uses in Quebec landfills. This is a 20 % increase since 2015 but 80 % higher since 2010, the year in

which quantities used as cover or for other uses were noted the lowest since the *Regulation on landfilling and incineration of residual materials* came into force in 2009.

Specifically, more than half of the materials used as alternative daily cover or for other uses are made up of contaminated soils, followed by auto shredder residues, construction, renovation and demolition (CRD) debris, such as fine residues, shingles, roadway material, etc.

The increase in residual materials quantities used as alternative daily cover or for other uses at landfills resulted in a significant cover/landfill ratio of 50 % in 2019. This means that for every tonne of landfilled material, 500 kg of material is used as cover or for other uses at landfill sites.

CRD debris disposed of and used for alternative daily cover or other uses in landfills

As for CRD debris disposed of and used as alternative daily cover or other uses, an 88% increase in reported quantities had been noted at construction and demolition debris landfills, technical landfill sites and in-trench landfill sites between 2015 and 2019. In fact, quantities of disposed CRD debris increased from 507,000 tonnes in 2015 to 1,063,000 tonnes in 2019. This jump was notably due to changes in reporting methods used by disposal sites over the years but also shows the large quantities of CRD debris currently sent to disposal. Quantities of CRD debris used as alternative daily cover or other uses had however declined since 2016. This decrease can be explained by various problems experienced by technical landfills sites and related to fine residues received from CRD debris sorting centres as cover material. These facilities therefore significantly reduced the use of such materials for that purpose.

However, for a few years now, large quantities of CRD debris, which normally would have been sent to landfills or for alternative daily cover use, due to the lack of viable markets, are missing in the presented waste results. In fact, several illegal storage sites or end-of-life management sites for these materials are in operation, and the exact quantities sent to them are very difficult to estimate.

Composition of disposed materials

Over the last few years, several waste characterization studies were carried out across Quebec to determine the composition of residual materials sent to disposal. In 2011, RECYC-QUÉBEC conducted the first province-wide waste disposal characterization study (at the entrance of disposal sites) and specifically focused on disposed materials from the municipal, industrial, commercial and institutional (ICI) sectors or from the CRD sector. A new study was conducted over the 2019-2020 period, providing a picture of the composition of disposed residual materials for 2019, and allowing for a comparison with the 2011 results.

There were basically three key findings. First, organic materials declined sharply between 2011 and 2019, both in terms of total tonnage disposed and the proportion it accounts for in all disposed residual materials. In 2011, organic materials accounted for 41 % of total disposed waste while in 2019, it was only 30 %. Moreover, we saw a significant increase in disposed CRD

debris, and this proportion goes up even higher if we add the waste from CRD debris sorting centres sent to disposal in 2019, which was not covered in this study. Lastly, we see sharp increases in quantities of disposed textile and hazardous household waste (HHW). The quantity of disposed textile has nearly doubled between 2011 and 2019, while quantities of disposed HHW has more than doubled over that same period.

Lastly, our general finding based on the most recent data is that a number of residual materials could have been reused, recycled or reclaimed yet are still sent to landfills in Quebec. With that in mind, we should not only focus on tracking change, but rather provide support to the various actors in reducing and managing their residual materials soundly and responsibly.