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FROM: BRYCE HESTERMAN, RESA DIMINO, KATY RICCHI - RRS
DATE: 5.27.2020
RE: IMPACT OF EPR FOR PPP ON RECYCLING MARKET STABILITY

RRS was asked to research several outstanding questions generated by the Oregon Recycling Steering Committee (RSC) during the framework and scenario review and evaluation process. This is the second in a series of memos responding to the RSC's questions. In this memo, RRS presents the results of research to determine whether extended producer responsibility (EPR) for packaging and printed paper (PPP) contributes to the stability of recycling end-markets. To address this question, the RRS team examined the impact of recent market disruptions resulting from the 2018 restrictions on import of recyclables from the US and Canada implemented by China and other countries in Southeast Asia. The research identified notable reductions in material categories accepted for recycling in five US states and in one jurisdiction in Canada without EPR for PPP. The research found only very limited reductions in community acceptance of materials for recycling in Canadian jurisdictions with EPR for PPP.

Methodology

RRS researched the extent to which EPR for PPP provides stability for end-markets by investigating the impact of import restrictions imposed by China and other countries in Southeast Asia on recycling programs since the beginning of 2018 in both EPR and non-EPR jurisdictions in Canada, and in select U.S. States. RRS compiled available data on program suspensions and closures, as well as program contractions, beginning in 2018. Research methods included a literature search, compilation of aggregate data, where available, and direct outreach to state agencies, provincial ministries and third-party researchers that track such changes.

RRS sought information on the following Canadian provinces: Alberta, British Columbia, Manitoba, Nova Scotia, Ontario, and Quebec. All of those provinces, with the exception of Alberta and Nova Scotia, have EPR for PPP policies in place. RRS also researched program contractions and cancellations in the following US states: Maine, Michigan, Oregon, Vermont, Washington and Wisconsin. These states were chosen because of their proximity to Canadian provinces with EPR for PPP, and the likelihood that they experienced similar regional recycling market conditions.

Based on the initial research results, RRS identified a select number of jurisdictions that reported recycling program changes and sought to find evidence indicating whether those changes were the result of unstable markets. RRS confirmed the causes of changes through press releases and news articles. Quotes from these sources and references for each of the selected jurisdictions are provided in Appendix A.

RRS research revealed additional indicators of market instability in US States, such as increased recycling costs / gate fees, discussion of potential program changes, stockpiling of collected recyclables, and landfilling of collected recyclables.¹ Findings related to these indicators are not included in the results outlined below.

The impact of EPR for PPP Market Stability

The research identified significant changes in nearly all non-EPR jurisdictions studied, and few changes to jurisdictions with EPR. The data indicates that communities that have implemented program changes were driven to do so by unstable markets.

Canadian Provinces

CM Consulting regularly tracks changes to the list of acceptable materials in Canadian recycling programs to document recycling access rates in each province. Through a consistent methodology, program acceptance lists in all provinces are regularly evaluated. The results are reported as increases or decreases in the percentage of the population that has access to recycling for each type of packaging. CM Consulting reports that, nationally, most access numbers have increased since 2018 and with one exception there were no changes in provinces evaluated that were significant enough to decrease the percentage of the population with access to recycling for any materials. However, the data provided by CM indicates that measurable reductions in access have been observed in the province of Alberta, a jurisdiction that does not have EPR for PPP².

In Alberta, CM Consulting reports the following reductions in percent of population with access to recycling (since 2018):

- Plastic Bottles Jugs and Jars: -1 to -5%, depending on the resin
- PP packaging: -3%
- PET non-bottle rigid plastics: -8%
- HDPE non-bottle rigid plastics: -7%
- LDPE non-bottle rigid plastics: -9%
- PS non-bottle rigid plastics: - 10%

These decreases were attributed to approximately 35% of the province's Recycling Program Areas (RPAs) and reflected mostly rural areas with smaller populations.

Additional research performed by RRS, including literature search and outreach directly to government officials and industry organizations, did not identify any program reductions in BC or Manitoba. There were limited instances of reductions identified in Nova Scotia, Ontario, and Quebec, where film plastics were removed from curbside collection programs / MRF processing systems.

¹ RRS was unable to gather definitive information on the extent to which the jurisdictions studied had disposed of collected recyclables, as the reporting is inconsistent among states and jurisdictions. In the framework research RRS noted a remote section of Vermont (the Northeast Kingdom) that had received approval to dispose of recyclables in a brief exemption from the state's recyclables landfill ban. RRS is aware of collected material in Oregon and Washington going to landfill. While the amount of material disposed of in Oregon is reported, RRS was not able to document the amount of recyclables disposed in Washington. RRS did not find any evidence of collected materials going to landfill in the Canadian provinces but cannot conclude definitively whether there have been any instances.

² Email communication between Jason Wilcox, CM Consulting, and Resa Dimino, RRS, April 24, 2020

U.S. States

RRS maintains a database tracking changes to recycling programs in the U.S. RRS drew information from that database and performed additional research on program contractions and closures in Oregon and five states bordering Canadian EPA provinces: Maine, Michigan, Vermont, Washington and Wisconsin. The research included literature searches, as well as outreach to state officials.

The results in Table 1 show program changes since 2018, and the percentage of households in the state that are impacted by those changes. Of the states studied, the most significant impacts were in the Pacific Northwest, where both small and large communities experienced recycling program contractions. In Maine, Michigan and Wisconsin, the communities affected were primarily small and/or rural. In Vermont, no program contractions or closures were identified.

Table 1. Curbside and Drop-off program changes in target states measured by number of households in impacted communities

State	Removed specific recyclables collection (curbside and / or drop off)	Removed specific recyclables from curbside, still accepts drop off	Suspended entire recycling program	Total HH Impacted ³	% of HH in state Impacted
Maine	11,550	3,328	12,684	27,562	5.32
Michigan	83,297	8,026	8,931	100,254	2.65
Oregon ⁴	313,857	85,555	21,576 ⁵	420,998	31.56
Washington ⁶	1,019,621	125,612	15,441	1,160,674	51.10
Wisconsin	21,428	-	-	21,428	1.03
Total	1,449,753	222,521	58,632	1,730,906	17.32

The most common types of material dropped from recycling programs were plastics and cartons. Glass was also dropped by a significant number of programs. Metals impacts appear limited to aluminum foil and trays and only in Washington, possibly indicating a very specific market shift.

³ See data caveats section. Program changes identified may not be exhaustive. HH presented in this table includes all households in cities/counties that had a program change.

⁴ For detail on Oregon programs included, see Appendix B

⁵ Douglas County Transfer Station Drop Off. Does not include areas of the county that receive curbside service.

⁶ Information gathered was primarily from survey results provided by Department of Ecology

Table 2. Type of materials removed from programs in instances where specific materials were removed, measured by number of households in affected communities

State	Glass	All Plastic	Specific Plastic	Mixed Paper	Aluminum foil and trays	Cartons
Maine	8,790	0	6,815	3,305	0	0
Michigan	91,323	0	0	0	0	0
Oregon	127,251	4,226	357,613	83,076	0	141,740
Washington	341,799	104,866	549,183	62,893	532,320	754,692
Wisconsin	0	0	21,428	0	0	0
Total	569,163	109,092	935,039	149,274	532,320	896,432

DATA CAVEATS

- Household figures reflect the total number of households in an impacted community. The actual number of households with recycling program access was not consistently available. For example, in some communities, multi-family households may not have access to recycling. For the percentage of total households affected, the calculation was based on the total households in each state. Many of the states studied have high access rates, so we expect this to be fairly accurate.
- The table includes any change reported, even if it was temporary.
- The data presented was gathered from several sources of public information, including National Waste & Recycling Association program updates, Waste Dive program updates, general web research, and information provided by state officials. This approach may not capture every change.
- This study included more detailed and exhaustive information from Washington, as Department of Ecology provided results from a recent survey on the topic. It is possible that this is why there are so many more changes listed in WA than other states. The data was submitted to the state in raw form and had yet to be aggregated and vetted by the department. RRS performed quality control review to ensure there was no duplicate information and validated some of the information on the largest communities via internet research. However, not all of the survey responses were validated.

Appendix A: CAUSE OF PROGRAM CHANGES:

RRS sought to validate that program changes were principally due to market issues stemming from the Chinese import restrictions on recyclables. RRS was unable to interview contacts at local governments, so instead compiled press releases and news articles indicating the cause of program changes included in the tables reported above. The following are some examples.

Lacombe, Alberta (3,715 households)

An article noted:

The city ended curbside recycling pickup at the end of May (2019) after the contract expired for the previous waste management company. A competitive bidding process resulted in a single bid that would have raised costs by 65 percent while restricting accepted items. It also didn't adequately ensure a high enough proportion of material would actually be recycled, according to city manager Matthew Goudy⁷.

In reference to the program suspension, Lacombe's website indicated that

In 2018, Canada's recycling industry was substantially impacted by a change in policy in China and other countries, which have effectively closed their borders to typical wholesale recycling products from Canada.⁸

St. Albert, Alberta (23,954 households)

The city's website noted:

The recycling program in St. Albert changed as of November 1, 2018. Due to new global restrictions on recycled material, municipalities throughout the Edmonton Region and beyond are adapting to the changing market for recyclables.

Lane County, Oregon (145,966 households)

The recycling program update provided by the county on July 1, 2018 references a disruption in global recycling markets⁹.

A local newspaper noted:

International market shifts early this year (2018) led to changes in what you can put into curbside recycling bins in Eugene, Springfield and other parts of Lane County¹⁰.

Pierce County, Washington (221,377 households¹¹)

The county website notes:

⁷ <https://globalnews.ca/news/5367957/lacombe-ends-curbside-recycling/>

⁸ <http://www.lacombe.ca/Home/Components/News/News/2406/18>

⁹ https://lanecounty.org/UserFiles/Servers/Server_3585797/File/Government/County%20Departments/Public%20Works/Waste%20Management/Recycling/Recycle%20Updates%20for%20Web.pdf

¹⁰ <https://www.registerguard.com/news/20180820/comingled-confusion-changes-have-eugene-springfield-residents-relearning-recycling>

¹¹ not including Tacoma, which had different program changes and was listed separately

Recycling in the United States has changed dramatically over the past two years. In response, we must update our list of accepted items so the material we collect has the best chance of being made into new products.

Now that most of our recyclables are no longer sent to overseas recyclers, we are faced with the increased costs associated with processing and shipping material to re-manufacturers in the U.S. and Canada. These changes to the recycling program will clean up our recycling stream and give the remaining material the best chance at a new life¹².

Kennebunkport, Maine (1,587 households)

The town's website notes:

On September 1, 2019, Kennebunkport will be SUSPENDING curbside recycling collection due to market conditions¹³.

A local newspaper article notes:

With curbside recycling poised to cost the town three times more than trash pick up after the current waste disposal contract expires at the end of this month (Sept 1, 2019), the town of Kennebunkport has suspended its recycling program as it searches for more cost effective solutions in the wake of a global recycling crisis¹⁴.

¹² <https://www.co.pierce.wa.us/5188/Recycling-Program-Changes>

¹³ <https://www.kennebunkportme.gov/home/news/changes-kennebunkport%E2%80%99s-recycling-program>

¹⁴ <https://www.seacoastonline.com/news/20190829/kennebunkport-suspends-curbside-recycling>

Appendix B: Changes in Oregon

Jurisdiction	Action	Items Removed	Number of Households
Lane County ¹⁵	Removed specific recyclables from collection	Specific plastics, cartons	141,740
Marion County	Removed specific recyclables from collection	Specific plastics	112,957
Jackson County	Removed specific recyclables from curbside, still accepts drop off	Glass, specific plastics, mixed paper	83,076
Josephine County	Removed specific recyclables from collection	Glass	34,646
Douglas County ¹⁶	Suspended entire recycling program	All items	21,576
Roseburg	Removed specific recyclables from collection	Glass, All Plastics	9,081
Pendleton	Removed specific recyclables from collection	Specific Plastics	6,220
Florence	Removed specific recyclables from collection	All plastics	4,226
Sutherlin	Removed specific recyclables from collection	Specific Plastics	3,249
Milton-Freewater	Removed all recyclables from curbside, still accepts drop off	All items	2,479
Glide	Removed specific recyclables from collection	Specific Plastics	749
Siletz	Removed specific recyclables from collection	Glass	448
Oakland	Removed specific recyclables from collection	Specific Plastics	380
Winchester	Removed specific recyclables from collection	Specific Plastics	161

¹⁵ Florence households were subtracted, as they were listed separately

¹⁶ Roseburg, Sutherlin, Glide, Oakland and Winchester households were subtracted, as they were listed separately