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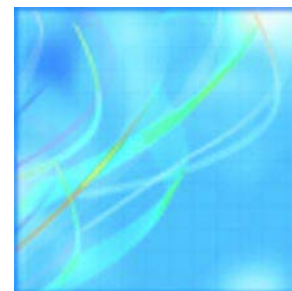
**Environment Accounts and Statistics Analytical and
Technical Paper Series**

Recycling by Canadian Households, 2007

by A. Munro

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Recycling by Canadian Households, 2007

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- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- p preliminary
- r revised
- x suppressed to meet the confidentiality requirements of the *Statistics Act*
- E use with caution
- F too unreliable to be published

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Highlights

Recycling rates

- Almost all households with access to recycling programs (98%) recycled.
- Only half of recycling households (52%) reported that they recycled all the recyclable waste they produced in an average week.
- Most households with access (84%) had curbside recycling pickup, with fewer than one in five having only recycling drop-off centers or depots.
- Households without curbside recycling pickup were less likely to recycle (92% versus 98%) and less likely to recycle all their waste (34% versus 55%).
- In Quebec, only 77% of households without curbside pickup recycled, compared to 98% of households with curbside pickup.

Barriers to recycling

- Non-recyclers were most likely to say that they had not recycled because recycling was too inconvenient (43%), it was too time-consuming (40%), or it took up too much space (33%).
- Households that recycled only part of their waste (partial recyclers) were most likely to state that some other factor kept them from recycling more: the most commonly mentioned factors were that they felt that they were recycling as much as they could or that they used the non-recycled material in some other way (for example by burning it).
- In Saskatchewan and Alberta, partial recyclers were twice as likely as the average partial recycler to say that it was too inconvenient for them to recycle more than they were recycling already (47% in Saskatchewan and 46% in Alberta).

Motives for recycling

- Most recyclers reported that they were motivated to recycle by a sense of social responsibility (82%) or by the desire to reduce waste in landfill sites (75%).
- Just over half of recyclers (53%) reported that reducing demand for raw materials was one of the reasons for which they recycled.

Access to recycling and material types

- In 2007, 95% of Canadian households had access to recycling programs.
- Most were able to recycle all four types of recyclable material: paper, plastic, glass, and metal.
- The availability of recycling in Canada has increased for all materials since 1994, rising from 70% or less in 1994 to 89% and up in 2007.

- Given access to recycling programs, households were more likely to report that they had recycled all of their glass waste (74%) than all of their paper waste (62%).
- Households in Saskatchewan and New Brunswick were among the least likely to recycle any single type of material, despite high overall recycling participation in those provinces.

Recycling by Canadian Households, 2007

by A. Munro

1 Introduction and summary

Over the last 15 years, recycling has become a part of life for an increasing number of Canadian households. In 2007, 93% of households in Canada recycled, compared to only 73% in 1994.¹

Most of this growth in household recycling has come from increased access to recycling, with 95% of Canadian households having access to recycling programs in 2007 compared to only 74% in 1994 (Table 1). Households that had access to recycling programs were also more likely to use them: 98% of households with access recycled in 2007, compared to 86% in 1994 (Table 1).

Recycling has several direct and indirect environmental benefits: it lessens pressure on landfill space, reduces pollution resulting from incineration, and decreases the demand for raw resources to be used in production. In some cases, recycling can also be a more efficient way to produce new materials, reducing the amount of energy that is needed by production processes.²

Recycling at the household level makes an important contribution to overall waste management in Canada. In 2006, residential households produced one-third (34%) of the disposed waste in Canada³ and half (48%) of the waste prepared for recycling.⁴

Almost all (98%) of the Canadian households with access to a recycling program reported that they recycled at least some of their waste during an average week in 2007 (Table 1 and Chart 2). This was true across all provinces: even in the provinces where households were least likely to have recycled (New Brunswick, and Newfoundland and Labrador), almost all households recycled (91% and 94%, respectively).

While almost all households recycled, doing so was only the first part of a household's decision-making process: households also made choices about how much of their recyclable waste they would recycle. Throughout this study, the term waste is used to refer specifically to recyclable waste (see text box: "**Study information**").

Only half (52%) of recyclers recycled all of the recyclable waste that they produced in an average week. The rest were partial recyclers, recycling only some of their waste. One-third (34%) of recyclers had recycled between most and all of their waste, and only a small percentage (15%) had not recycled the majority of their waste (Table 1) (See Appendix II). In this study, comparisons are made only between partial recyclers and those that recycled all of their waste. This is due to the construction of the survey, which asked some questions only of partial recyclers.

When recyclers were asked why they recycled, they were most likely by a wide margin to say that they did so out of a sense of social responsibility (82%) or a desire to reduce waste in landfills (75%) (Table 2). By contrast, non-recycling households were most likely to say that they did not recycle because recycling was too inconvenient (43%), because it required too much time or effort (40%), or because it took up too much space (33%) (Table 3).

When partial recyclers were asked why they had not recycled all of their recyclable waste, they were most likely to choose to give an explanation in their own words (41%) (Table 3). In these responses, they were most likely to state

1. Includes all Canadian households that recycled, regardless of their access to recycling programs.

2. Williams, P.T., 2002, "Emissions from Solid Waste Management Activities," in *Environmental and Health Impact of Solid Waste Management Activities*, R.E. Hester and R.M. Harrison (eds.), Cambridge: The Royal Society of Chemistry.

3. Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0041.

4. Statistics Canada, Environment Accounts and Statistics Division, CANSIM table 153-0042.

that they believed that they were recycling as much as they could. Another common explanation was that they had made some other use of their recyclable materials, such as burning them in a fireplace or returning them for refund.

Several factors were related to the likelihood that a household would recycle and to the likelihood that a recycling household would recycle all their waste. The type of recycling program that was available to a household had the strongest connection with its recycling behaviour: households with curbside recycling pickup were significantly more likely to recycle; and households with curbside recycling pickup that did recycle were more likely to recycle all of their recyclable waste (Table 5).

On a demographic level, households in detached homes were more likely to recycle and more likely to recycle all of their recyclable waste than those living in apartments or in mobile homes (Table 10). However, demographic characteristics were more strongly related to the likelihood that a household would have access to recycling: the households most likely to have access to a recycling program were those with higher incomes, those with higher levels of education, and those living in a detached dwelling.

Measuring access to recycling was complicated by the fact that not all recycling programs accepted all types of recyclable waste, which led to some households having only partial access. The percentage of households with access to recycling programs that accept all recyclable materials has increased since the mid-nineties, but in 2007 11% of Canadian households with access to recycling programs were still unable to recycle one or more types of recyclable waste (Table 12).

Certain materials were more likely than others to be accepted by recycling programs. Households reported that their recycling programs were slightly more likely to accept paper (98%) and plastic (96%) rather than glass (94%) or metal (94%) (Table 13). When households were able to recycle a material, they were most likely to recycle all of their glass (74%) or metal (71%) waste.

Study information

This study is based on data from the 2007 Households and the Environment Survey (HES), conducted as part of the Canadian Environmental Sustainability Indicators project.

The Household and the Environment Survey publishes data on recycling participation and on access to recycling, as well as an estimate of the proportion of waste recycled by material type for each household. For the purposes of this survey, recycling participation means that a household made use of a recycling program during an average week during the 12-month reference period.

Recycling questions were also asked during the 2006 cycle of the HES. However, no data was collected on the type of recycling program available or on the amount of each material that was recycled. As well, the reference period for the 2006 cycle referred to any type of use during the previous year rather than in an average week. For those reasons, data from this cycle is not used for this study.

2 Results

2.1 Access to recycling

Population without access to recycling

Households that indicated that they had no access to any type of recycling program in their current residence. This category does not consider access to alternative forms of waste diversion such as refund or reuse.

Having access to a recycling program was a necessary first step for any type of recycling. The percentage of households with access has increased greatly since the mid-nineties; in 2007, nearly all Canadian households (95%) reported having access to one or more recycling programs, compared to only three-quarters of Canadian households in 1994 (74%) (Table 1).

Despite this increase, access continued to be the major barrier to recycling in Canada: two-thirds of the approximately one-million households not recycling in 2007 were those without access to recycling programs, with the remaining one-third being made up of households that had access but which chose not to recycle.

Access presented a greater barrier in some provinces than in others. By a wide margin, Newfoundland and Labrador households were the least likely to have access to recycling programs, as less than three-quarters of all provincial households (71%) had access to recycling programs (Table 1). Saskatchewan and New Brunswick were tied for the second-lowest percentage of access, at 90% of provincial households for each.

By contrast, almost all households in Prince Edward Island (100%) and Nova Scotia (99%) reported that they had access to recycling programs. This likely reflects the strong provincial mandates with regard to recycling that were present in those provinces. British Columbia (97%) and Ontario (96%) were also slightly above the national average.

Residents of census metropolitan areas (CMAs) were only slightly more likely than households outside CMAs to have access to recycling, with 95% of CMA residents having access versus 92% of those residing outside of a CMA (Table 4). As a result of the greater population density in metropolitan areas, however, most of the households that reported no access to recycling services lived in a CMA (70%) and were most likely to reside in an apartment building (50%).⁵

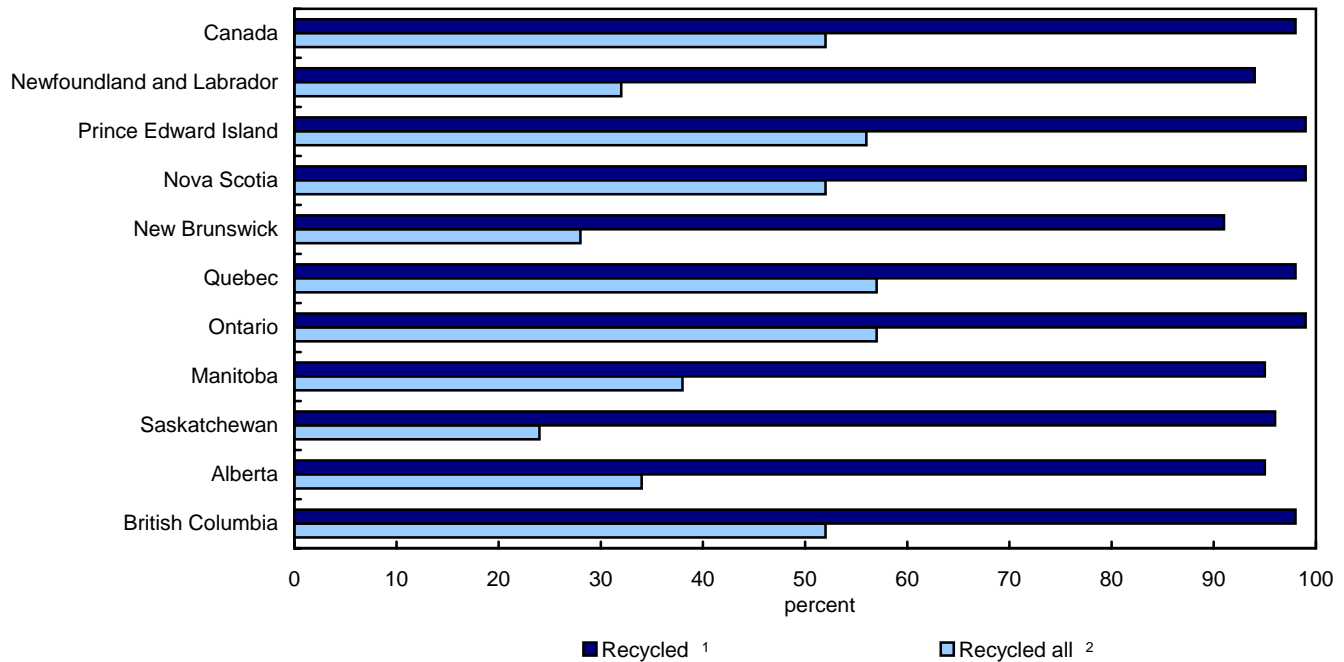
Demographic characteristics were also linked to recycling access, with some types of households being more likely than others to have access to recycling. This is discussed in more detail in section 2.4.

2.2 Recycling participation

Almost all (98%) of the Canadian households with access to a recycling program reported that they recycled at least some of their waste during an average week in 2007 (Table 1 and Chart 1).

5. Calculated as a percentage of the total non-recycling households in Canada.

Chart 1
Recycling participation in Canada, by province, 2007



1. Recycling rate as a percentage of households with access to recycling programs.

2. Recycled all rate as a percentage of recycling households.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

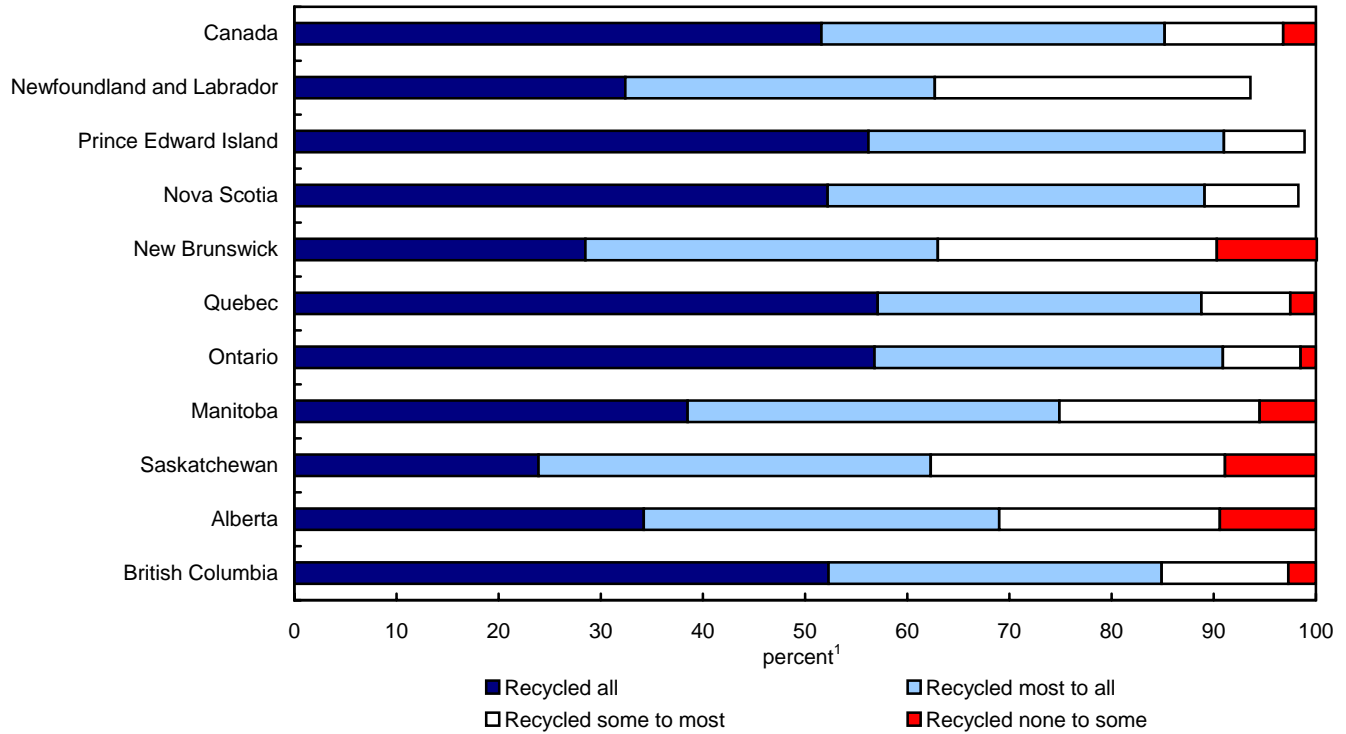
This was true across all provinces: even in the provinces where households were least likely to have recycled (New Brunswick, and Newfoundland and Labrador), almost all households recycled (91% and 94%, respectively). By a small margin, the provincial households that were most likely to have recycled were those in Prince Edward Island (99%), Ontario (99%), Nova Scotia (99%), and Quebec (98%).

Not all recyclers participated in recycling to the same degree. When respondents were asked to estimate how much of the recyclable materials generated by their households they recycled in an average week, only half of recyclers reported that they recycled all of their recyclable waste (52%). An additional one-third of recyclers (34%) recycled between most and all of their recyclable waste, and only a small percentage (3%) recycled between none and some of their recyclable waste (Table 1) (See Appendix II for averaging conditions).

Unlike overall recycling participation, which remained high across all areas, the percentage of recyclers that recycled all their waste varied greatly between the provinces. Only one-quarter of Saskatchewan recyclers (24%) recycled all of their waste, compared to half (52%) of recyclers nationally (Table 1, Chart 2). Recyclers were also less likely to have recycled all their recyclable waste in New Brunswick (28%), Newfoundland and Labrador (32%), and Alberta (34%).

Recycling households in Prince Edward Island (56%) and Nova Scotia (52%) were only slightly more likely than the average Canadian household to report that they recycled all of their waste, as were those in Quebec (57%) and Ontario (57%).

Chart 2
Proportion of recyclable waste recycled in Canada, by province, 2007



1. As a percentage of all households in the province that participated in a recycling program.
Note(s): Average amount recycled by household for materials accepted by a recycling program. Some percentages have been suppressed for reasons of data quality.
Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Glossary

Households that participated in recycling

Households reporting that they had recycled some quantity of waste during an average week in the 12-month period preceding the survey.

Households that recycled all their waste

Households reporting that, during an average week in the 12-month period preceding the survey, they had recycled 'all' recyclable waste for each of the waste types that they were able to recycle.

Partial recyclers

Households reporting that, during an average week in the 12-month period preceding the survey, they had recycled at least 'some' of one or more of the waste types that they were able to recycle.

Non-recyclers

Households reporting that, during an average week in the 12-month period preceding the survey, they had access to recycling programs but had recycled none of the waste types that they were able to recycle.

Census metropolitan area

A census metropolitan area (CMA) is formed by one or more adjacent municipalities centred on a large urban area. A CMA must have a total population of at least 100,000, of which 50,000 or more must live in the urban core. To be included in the CMA, adjacent municipalities must have a high degree of integration with the central urban area, as measured by commuting flows.

2.3 Motives

In 2007, almost all (98%) Canadian households chose to recycle at least some of their waste when they had access to recycling programs.

Households may recycle for any number of reasons, and being aware of those reasons is part of understanding recycling behaviours. To that end, recyclers were asked to identify one or more of the reasons that had motivated them to recycle other than a general concern for the environment.

By a wide margin, most recyclers reported that a sense of social responsibility (82%) or the desire to reduce waste in landfill sites (75%) had influenced their decision to recycle (Table 2). This pattern held true across provinces, with social responsibility and the desire to reduce waste being the top two responses for households in every province.

Just over half of recycling households (53%) indicated that the desire to reduce demand for raw materials had contributed to their participation. The desire to reduce this demand was one of the three most common reasons given in all provinces except for Prince Edward Island and Nova Scotia.

Recyclers in these two provinces were more than twice as likely to say that they recycled as a result of bylaws or legal requirements (68% in Prince Edward Island and 57% in Nova Scotia, versus 28% nationally). Households in these two provinces were also more likely than households in any other province to cite the desire to follow peer behaviour (51% in Prince Edward Island and 41% in Nova Scotia, versus 28% nationally).

Recyclers in the Prairie Provinces were more likely to say that they were concerned about reducing demand for raw materials: 58% to 60% of those in the Prairie Provinces listed this as a motivating factor, compared to between 41% and 43% in the Atlantic Provinces, 49% in Quebec, and 52% in Ontario.

2.4 Barriers

Although most Canadian households recycled when they could, only 52% of those households reported that they recycled all of their waste. An additional one-third of recyclers (34%) recycled between most and all of their waste, and only a small percentage (15%) recycled less than the majority of their waste (Table 1) (See Appendix II).

Combined with the non-recycling households, approximately half of the households with access to a recycling program were either not recycling or were not recycling all that was possible for them. Although most partial recyclers were recycling the majority of their recyclable waste, both non recyclers and partial recyclers were asked to identify some of the barriers that had prevented or reduced their recycling participation in 2007.

Responses varied according to whether the respondent belonged to a non-recycling household or a partially recycling household. When non-recyclers were asked what had prevented them from recycling, they were almost equally likely to say that recycling was too inconvenient (43%), that it was too time-consuming (40%), or that it took up too much space (33%) (Table 3, Chart 3).

Roughly one-third of non-recyclers (32%) chose to give a personal explanation for why they did not recycle. In those explanations, they were most likely to say that they did not recycle due to some problem with the recycling options that were available to them: for example, that there was no curbside pickup available, that the drop-off depot was too far, or that the facility or program in their area was inadequate. Another common explanation was that they did not produce enough waste to make recycling worthwhile.

In contrast to non-recyclers, partial recyclers were most likely overall to choose to give an explanation in their own words for why they did not recycle more (41%). In these explanations, partial recyclers were most likely to state that they felt that their household was already recycling as much as it could.⁶ This was likely connected to the fact that over two-thirds of partial recyclers had recycled the majority of their waste, meaning that the amount not being recycled could be relatively small. A significant number of partial-recyclers also reported that they had used recyclable materials in some other way: for example, that they had burned them or returned them for refund.

When partial recyclers chose a barrier included in the list, the pattern of their responses was generally similar to that seen for non-recyclers. They were most likely to indicate that recycling more would be too time consuming or would take too much effort (30%), and almost as likely to indicate that it was not convenient (25%) for them to increase their recycling participation.

There were key differences between non-recyclers and of partial recyclers in respect to two of the less commonly selected responses: non-recyclers were more than twice as likely as partial recyclers to say that they did not recycle because they did not have a bin or bags (25% versus 9%) and five times as likely as partial recyclers to respond that they did not think that recycling was important (15% versus 3%).

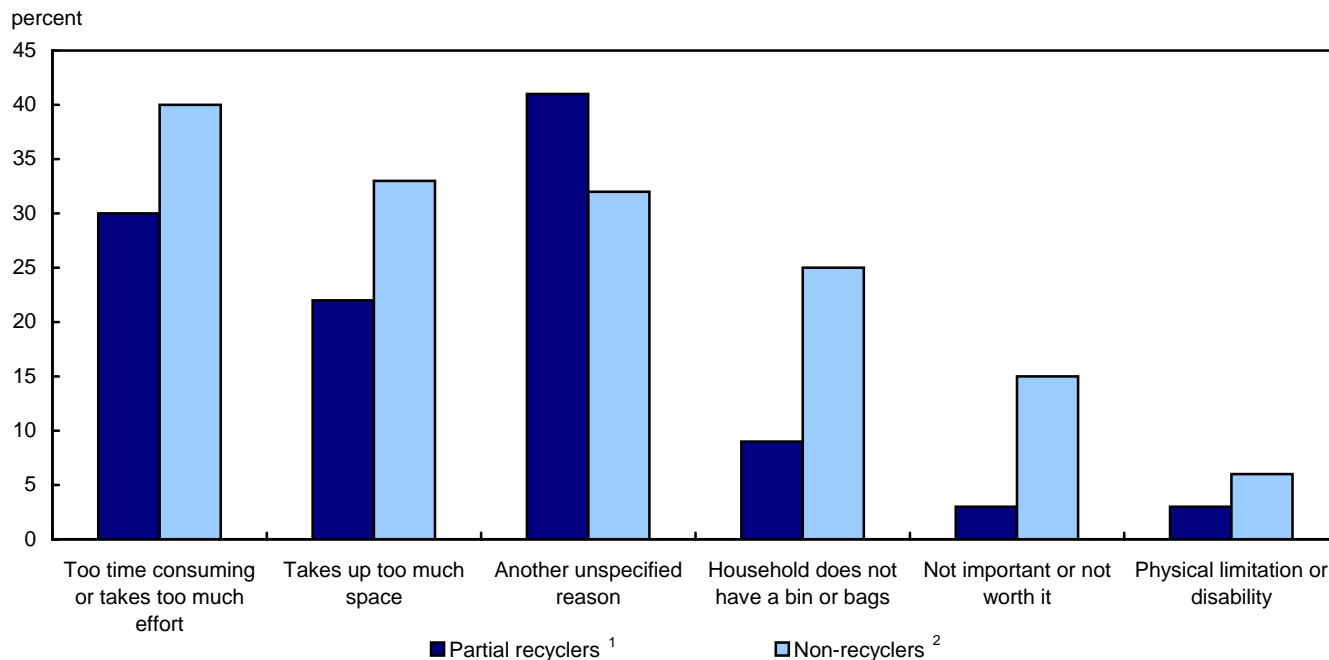
For partial recyclers, the greatest divergence from the national responses among the provinces was exhibited by Saskatchewan and Alberta.⁷ In these provinces, partial recyclers were almost twice as likely to state that it was too inconvenient for them to recycle more (47% in Saskatchewan and 46% in Alberta versus 25% for partial recyclers nationally). This may have been connected with the relatively low levels of curbside pickup in those provinces, which may have made recycling more difficult or more time-consuming.

Smaller variations occurred in other provinces. In Quebec, partial recyclers were only one-third as likely to say that it was too inconvenient for them to recycle more (7% versus 25%) (Table 3). Households in Saskatchewan, Alberta, and Newfoundland and Labrador were more likely to say that recycling more would take up too much space; approximately one out of every three partial recyclers (from 35% to 37%) in those provinces gave that response, compared to 22% nationally.

6. This could be interpreted in two ways: a) That the household did not produce one or more of the recyclable materials: for example, it might not use things made of recyclable metal, and so would report that it 'recycled no metal', even though such households were recycling all the recyclable waste that they produced; b) That the respondent felt that they were doing as much recycling as was possible in their individual situations.

7. Provincial analysis is provided for partial recyclers only, as the total number of non-recyclers was too small to permit reliable provincial analysis.

Chart 3
Barriers to recycling by recycling participation, 2007



1. Recycled none as a percentage of households that had access but did not recycle.
 2. Recycled some as a percentage of households that recycled but did not recycle all their waste.
Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

2.5 Factors related to recycling

Previous research has identified several variables that appear to be related to recycling behaviours. One key factor that has been identified is the overall convenience of the process: the type of recycling program available to a household has been shown to be strongly related to the likelihood that that household will recycle.⁸

This trend was also evident in the results of this study: households without access to curbside recycling pickup programs were much less likely to have recycled. Even when households without access to curbside pickup did recycle, they were much less likely to have recycled all of their recyclable waste. This is likely linked to the fact that curbside programs offer a level of convenience, while travelling to a drop-off center or depot may require an additional investment of time and transport costs.

On a demographic level, factors such as age, income, education, and the type of dwelling have been connected to recycling access and participation.^{9,10} This study found that, nationally, demographic characteristics were most strongly related to the likelihood that a household would have access to recycling programs; the households that were most likely to have access to recycling were those with higher incomes, those with higher levels of education, and those living in a detached dwelling.

Nearly all households that had access to recycling programs participated in recycling in 2007. This high level of participation was largely insensitive to demographic characteristics, although some variation occurred within individual categories and provinces in that respect.

8. Berger, Ida E., 1997, "The demographics of recycling and the structure of environmental behaviour," *Environment and Behavior*, vol. 29, no. 4, July, p. 515-541.
 9. Babooram, Avani, and Wang, Jennie. "Recycling in Canada". *EnviroStats*, Summer 2007, vol. 1, no. 1. Statistics Canada Catalogue no. 16-002-X200700110174, Ottawa.
 10. Schultz, Wesley P., Stuart Oskamp, and Tina Mainieri, 1995, "Who recycles and when? A review of personal and situational factors," *Journal of Environmental Psychology*, Vol. 15. p. 105-121.

There was a stronger connection between demographic characteristics and the likelihood that recyclers had recycled all of their recyclable waste. In particular, the households most likely to have recycled all of their waste were those that contained only individuals aged 65 years or more, and those in which no household member had more than 8 years of education.

2.5.1 Type of recycling program

While recycling always involves the separation of recyclable materials from other waste, the type of recycling program available affects the amount of time that recycling takes and the degree of effort that it requires.

The survey asked respondents whether they had access to the following types of recycling programs:

- A municipal curbside pickup program, including containers or bins located within or near the household's place of residence;
- Recycling drop-off centers or depots, including those located at landfill sites.

Most Canadian households with access to a program had curbside pickup available for their recycling (84%) (Table 5). Half of the households with access to a recycling program (51%) were able to use only curbside pickup, while a further third (33%) had access to both curbside pickup and drop-off locations. Less than one-fifth of households with access to a recycling program reported having access to recycling only through drop-off centers or depots (16%).

The availability of curbside pickup varied among the provinces. Households in Newfoundland and Labrador were the least likely to have had curbside pickup available, at only 28% of households with access. Among the households with access to recycling programs, curbside pickup was also less likely to be available to households in Saskatchewan (37%), Alberta (37%), and New Brunswick (48%).

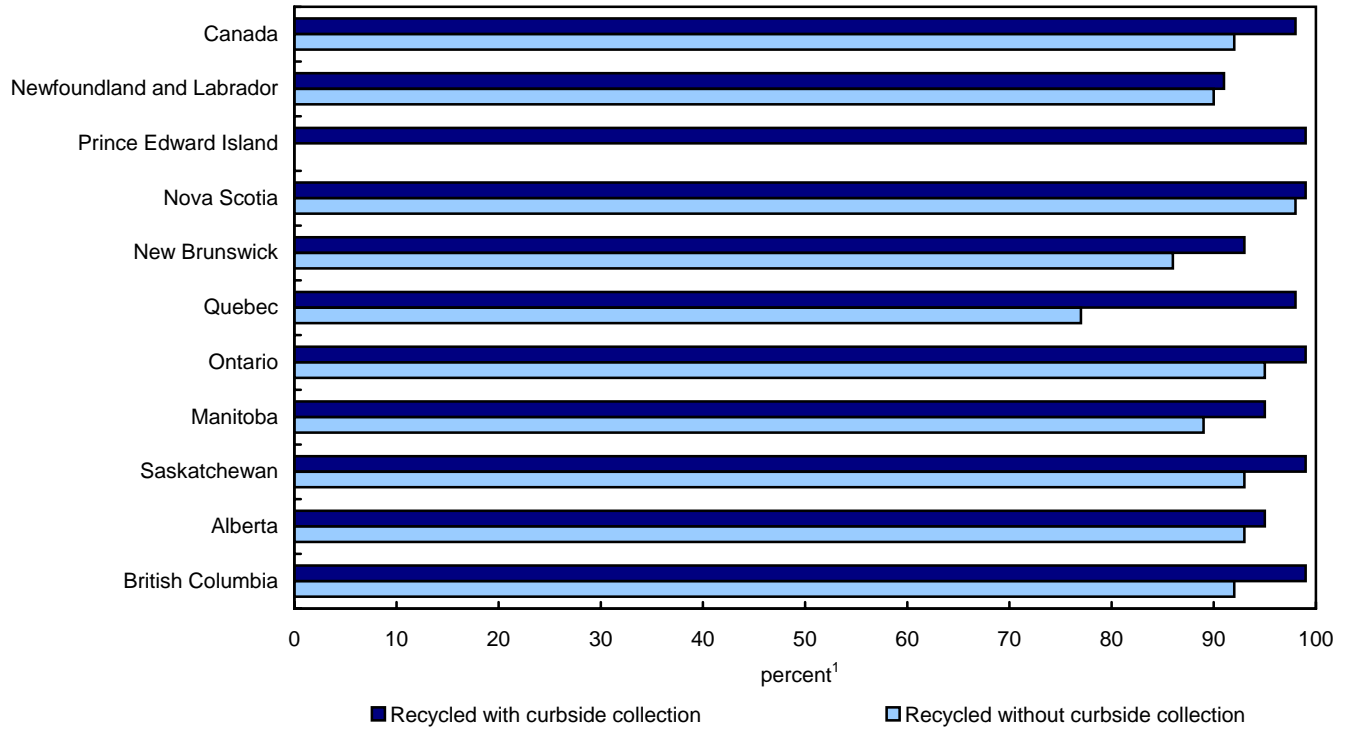
There was a wide gap between those three provinces and the rest of Canada, as in every other province three-quarters or more of households with access to recycling programs were able to use curbside pickup. The households most likely to have access to curbside pickup for their recycling were those in Prince Edward Island (98%), Quebec (98%), Ontario (95%), and Nova Scotia (94%).

Households without access to curbside pickup were less likely to have recycled: 92% of households without access to curbside pickup recycled versus 98% of those with curbside access (Table 6 and Chart 4). This relationship was consistent in almost all provinces but was most pronounced in Quebec, where only about three-quarters of households without access to curbside pickup (77%) recycled, while 98% of those with curbside access did so.

When households without curbside pickup did recycle, they were significantly less likely to have recycled all of their waste (Chart 5). Only one-third of recyclers without curbside pickup (34%) recycled all of their waste, compared to over half of recyclers with curbside access (55%). This relationship was again seen in almost all provinces but was weakest in Ontario and Alberta, where households without access to curbside pickup were only slightly less likely to have recycled all of their waste (57% versus 49%, respectively, for Ontario; 38% versus 32%, respectively, for Alberta).

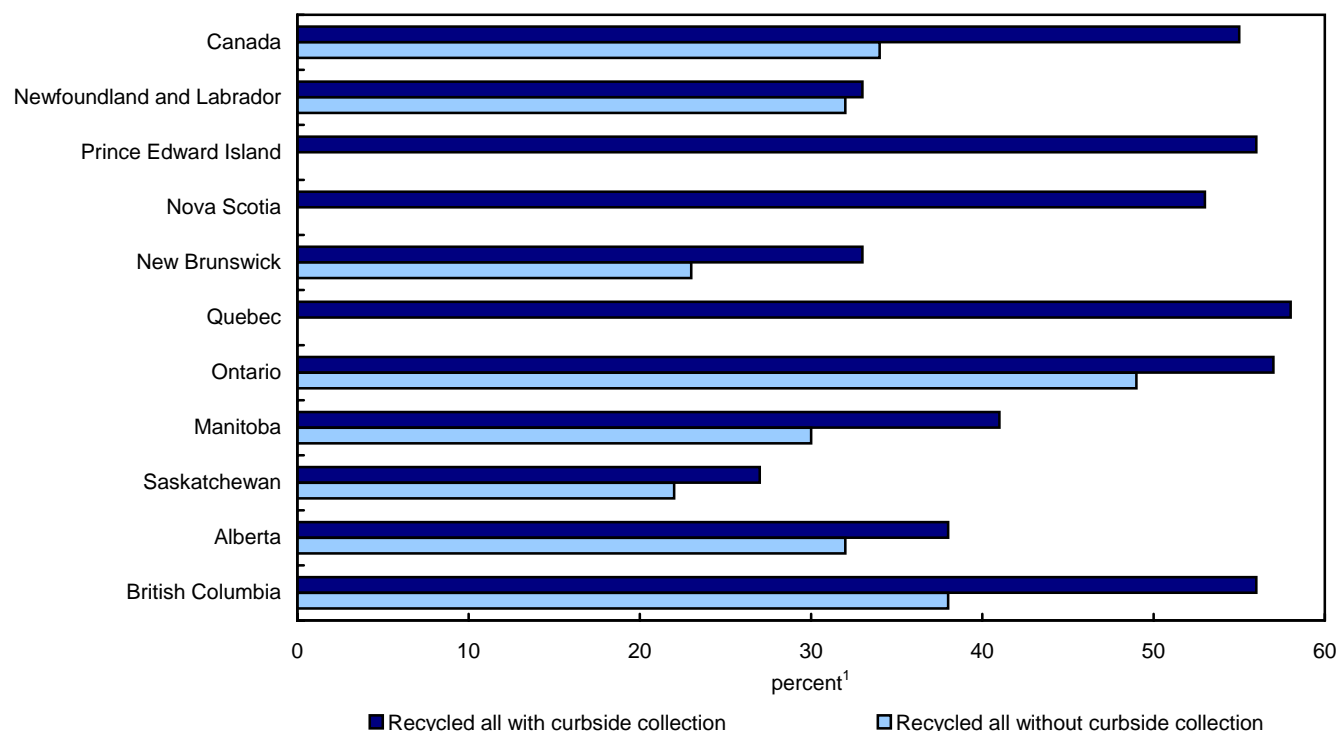
Part of this variation may be related to households living outside of densely populated areas being less likely to have access to convenient recycling options. However, the same pattern was not found in Newfoundland and Labrador, the province where curbside pickup was most uncommon. In this province, households with access to curbside pickup and households without were equally likely to participate in recycling (90% and 91%, respectively) and equally unlikely to recycle all of their waste when they did recycle (32% and 33% of households, respectively). This may indicate that in areas where curbside recycling is largely unavailable, depots or drop-off centres could become a more generally accepted or integrated system for recycling.

Chart 4
Recycling in Canada, by type of access and province, 2007



1. Participation rate as a percentage of households with access.
Note(s): Some percentages have been suppressed for reasons of data quality.
Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Chart 5
Recycling of all recyclable waste in Canada, by type of access and province, 2007



1. Recycled all rate as a percentage of recycling households.

Note(s): Some percentages have been suppressed for reasons of data quality.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

2.5.2 Dwelling type

The type of dwelling in which households reside affects their recycling behaviour, particularly if it requires them to expend more effort or to take special steps in order to participate in recycling. In 2007, most Canadian households resided in single detached dwellings (58%), while one-quarter lived in apartments (25%) and the rest were located in multiple-dwelling units (15%) or mobile homes (2%).

Households in apartments were significantly less likely to have access to recycling programs: only 86% of those living in high-rise apartment buildings and 90% of those living in low-rise apartment buildings had access to recycling programs. Figures for the proportion residing in all other types of dwellings stood at between 95% and 98% (Table 10). This may be related to the fact that apartment buildings often carry out their waste disposal via internal systems, such as waste chutes, which may not include options for recycling.

Households residing in apartments that did have access to recycling programs were only slightly less likely than the average household to make use of them (97%). New Brunswick was the only province in which apartment dwellers were significantly less likely to have recycled than those in other unit types; given access, 85% of those in New Brunswick apartments recycled, compared to 91% of those in single detached units and 93% of those in multi-unit dwellings.

However, on a national level, households residing in apartments were significantly less likely to recycle all of their recyclable waste: 46% of recyclers in apartments reported that they had recycled all of their waste, compared to 54% of those living in single detached homes.

2.5.3 Household composition

Just over half of Canadian households can be grouped into one of three categories: adults between 45 and 64 years of age (21%), a combination of adults and children under age 12 (18%), and households containing only those 65 years of age or older (16%).

Perceptions about household composition often associate types of families or individuals with environmental behaviours or attitudes: for example, young adults are often thought to have a greater awareness of environmental issues. On a national level, however, the composition of a household had very little connection with a household's recycling characteristics: households of all types were almost equally likely to have access to recycling programs and equally likely to recycle when they had access to such programs.

As regards recycling participation, the major difference was found with respect to households containing only those between the ages of 20 and 24: these households were less likely to have access to a recycling program (89%) and slightly less likely to recycle when they did have access (93%) (Table 7). However, households in this age category were also quite uncommon, making up less than 2% of households overall.

On a provincial level, the largest difference in terms of participation was found with respect to overall recycling in Saskatchewan and Alberta. In these provinces, households that contained both adults and a combination of children and teens between the ages of 0 and 19 were less likely than other types of households to have recycled, including those with children but no teens.

When looking at the amount being recycled by participating households, the largest difference occurred for senior-only households. While these households were no more likely to recycle than other types, when they did recycle they were significantly more likely to recycle all of their recyclable waste: 67% of recycling senior-only households recycled all of their recyclable waste, compared to between 32% and 55% for other types of households.

One explanation for this might be that senior-only households could contain fewer household members and that this made it more feasible to track the recycling being done by the entire household. It is also possible that senior-only households could have a different perspective on waste disposal, particularly those containing members that were living at the time when waste disposal regulations came into force.

2.5.4 Household income and highest education level

As is the case with age, income and education are often perceptually linked with environmental attitudes. For example, it might be expected that those with higher levels of education would be more likely to be informed about environmental impacts, while those with higher levels of income could be likely to produce more waste than others or to be less mindful of its disposition.

In the 2007 HES results, income and education tended to vary together. This relationship was strongest at the lower end of the scale, with almost all of those in the lowest educational category also being in one of the two lowest income categories. In light of this strong relationship, these two variables will be discussed together.

On a national level, the largest differences pertaining to income or education were related to access to recycling: only 88% of households with an income of \$20,000 or less and only 87% of households where no member had graduated from high school had access to recycling programs, whereas between 95% and 97% of households with higher levels of income or education had access to recycling programs.

Nationally, almost all households with access to a recycling program recycled, regardless of income or education level. Significant differences in recycling participation appeared only on the provincial level and only within some categories.

On the provincial level, the strongest relationship between these variables and recycling was seen in the case of New Brunswick, where only 83% of households in either the lowest income category or the lowest educational category recycled; this compares with a provincial average of 92% for households with higher levels of income or education (Table 8).

This pattern was replicated to some degree among almost all provinces with the exception of Alberta, where those in the lowest income category were slightly more likely to have recycled than those in other income categories (98% of those in the lowest income category versus a provincial average of 95% for those in other income categories).

Nationally, there was a stronger connection between income, education, and the likelihood that a recycling household had recycled all its waste: when households in the lowest income or lowest education category recycled, they were slightly more likely to recycle all their waste than were households in higher categories. Fifty-five percent of recyclers with a household income of less than \$20,000 recycled all of their waste, whereas between 47% and 51% of those in the top three income categories did so.

The disparity in access may result from a greater concentration of low-income households in apartment buildings. However, apartment-dwellers were also the least likely to recycle all of their waste. Consequently, this cannot be used to explain why lower-income or lower-education households were slightly more likely to recycle all their waste. One possible factor could be that those in the lowest income group may produce smaller amounts of recyclable waste or may be more aware of the disposition of that waste.

2.6 Types of recyclable waste

Recycling by material

For each type of material, households were asked to indicate how much they had recycled as a proportion of the total amount of recyclable waste of that type that they had produced during an average week in the preceding 12 months. They were asked to indicate whether they had recycled all, most, some, or none of the given type of waste.

- Paper waste: any paper waste, including newsprint and cardboard.
- Plastic waste: any plastic waste, including plastic soft drink bottles and polycoats, such as milk containers.
- Glass waste: any jars, juice bottles, wine bottles, or other glass containers.
- Metal waste: any metal cans or metal containers, including soft-drink cans, soup cans, and juice cans, or other metal food containers.

Although this study has so far dealt with overall recycling, the process of recycling can involve many different materials and objects: from newspapers to glass bottles to certain types of plastic or metal. The survey grouped recyclable wastes into four broad categories - paper, plastics, glass, and metal - and asked respondents to report on each separately (see text box: "**Recycling by material**").

Not all recycling programs accept all types of materials. Even when access is available, the type of material can affect the recycling process; some materials may be heavier or more awkward than others or may require an additional effort to prepare them for recycling.

In 2007, households were significantly more likely to be able to recycle all four types of recyclable materials than they were in the mid-nineties. However, not all households that had the means to recycle a material did so even when they were participating in other forms of recycling: for example, a household might recycle all of its paper but none of its metal.

This type of partial recycling was carried out by a significant number of Canadian households: it was much more common for a household to report that it had recycled none of the waste it produced for one or more types of material, whether by choice or on account of a lack of access, than it was for a household to report that it had done no recycling at all.

2.6.1 Access by type

Since 1994, households have become more likely to be able to recycle each type of recyclable materials: in 2007, at least 89% of households with access to a recycling program were able to recycle each type of material. By

comparison, only between 63% and 70% of households with access were able to recycle each type of material in 1994 (Table 11).

This increase corresponds with an increase in the number of materials accepted by recycling programs: almost all of the households with access to a recycling program reported that their recycling program accepted all four types of recyclable materials (89%) (Table 12). An additional 7% were able to recycle three out of the four materials, and only 1% could recycle just one type of recyclable waste.

Despite these increases, the number of households with only partial access to recycling was significant in terms of the overall recycling picture: there were twice as many households unable to recycle one or more materials as there were households that were completely without access to recycling programs.

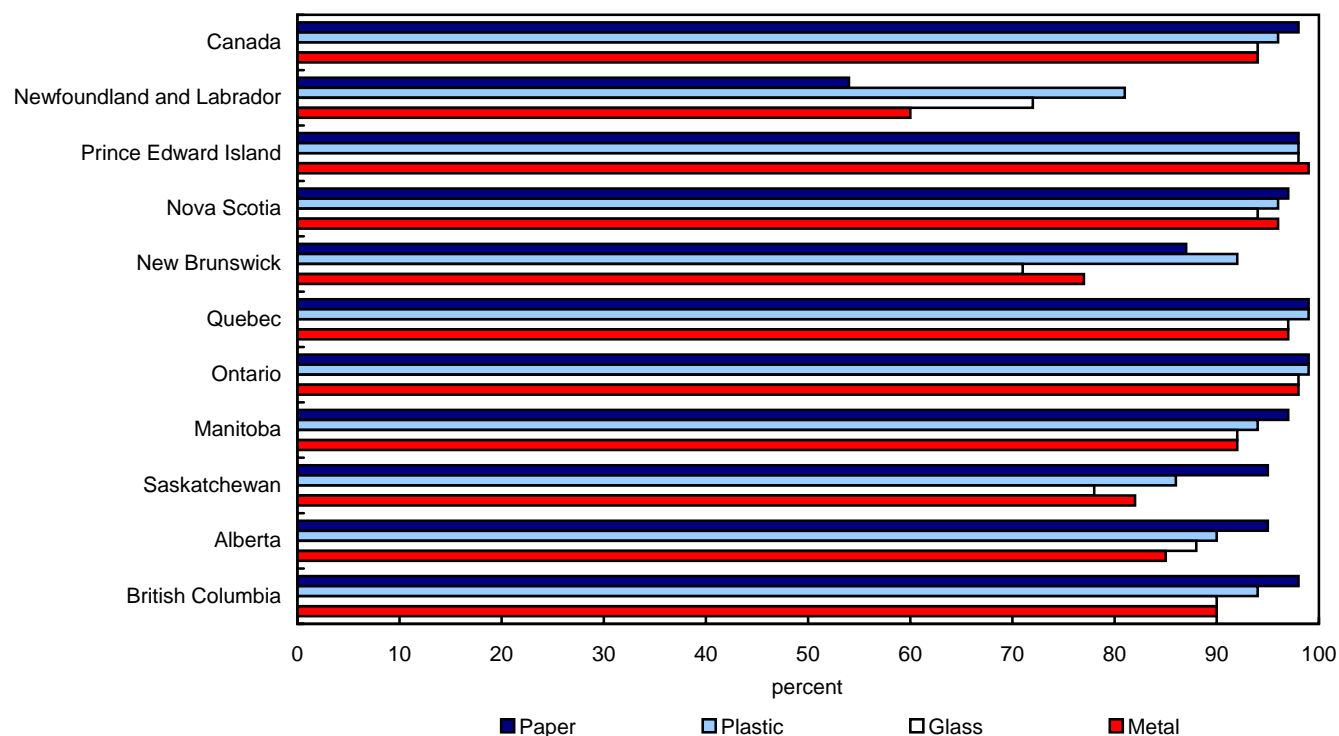
The comprehensiveness of recycling programs varied among the provinces. By a wide margin, Newfoundland and Labrador households were the least likely to have a program that accepted all materials: only 27% of Newfoundland and Labrador households with access could recycle all four types of recyclable waste. Newfoundland and Labrador households with access were also over ten times more likely than the average Canadian household with access to be able to recycle just one of the four types (14% versus 1% nationally).

New Brunswick and Saskatchewan were the only other provinces in which more than one-quarter of households were unable to recycle all types of recyclable waste, at 46% and 38%, respectively. The provincial households that were most likely to be able to recycle all four types of materials were those in Prince Edward Island (96%), Ontario (96%), and Quebec (96%) (Chart 6).

Nationally, households were slightly more likely to be able to recycle paper and plastic (98% and 96%) than glass or metal (94% for both) (Table 13). This relationship was maintained across almost all of the provinces, with households overall tending to be most likely to have access to paper recycling and least likely to have access to metal recycling.

The unusual exception to this was Newfoundland and Labrador, where households with access were least likely overall to be able to recycle paper (54% for paper versus 60% to 81% for other materials). Those in New Brunswick were generally less likely than those in most other provinces to have the means to recycle any given type of waste, with only three out of every four households with access being able to recycle glass (71%) or metal (77%).

Chart 6
Households with access to recycling in Canada, by material and province, 2007



Note(s): As a percentage of all households.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

2.6.2 Recycling by type

As with participation in recycling overall, the increase in recycling for each type of material was less pronounced than the increase in access to recycling programs that accepted each type; even in 1994, most households recycled each material when they could (between 85% to 86% depending on the type of material). However, by 2007, there had nevertheless been significant increases, with 92% to 96% of households now recycling each material when it was accepted by their recycling program (Table 11).

Households were more likely to have recycled some materials than others. In particular, households were less likely to recycle metal than any other material: approximately one out of every ten recyclers (8%) reported that they had recycled none of their metal waste (Table 13). By comparison, only half of that proportion had recycled no paper or plastic waste (4%).

This trend held true across the provinces, as the highest rates of non-recycling were consistently those for metal waste. The provinces where households were most likely to recycle any given material were also those where households were the most likely to recycle overall, namely Prince Edward Island, Nova Scotia, Ontario, and Quebec.

Households in Saskatchewan and New Brunswick were consistently among the least likely to recycle individual types of materials, despite high overall rates of recycling participation in those provinces. Only approximately three-quarters of households in Newfoundland and Labrador (73%), Saskatchewan (77%), and New Brunswick (78%) recycled metal waste; these three provinces also had the lowest rates for paper recycling, at 83% for households in Newfoundland and Labrador and in New Brunswick, and 88% for Saskatchewan households.

Relationships were different with respect to the partial or complete recycling of materials. Nationally, recyclers were most likely to report that they recycled all their glass waste (74%) or their metal waste (71%) and least likely to report that they recycled all their paper waste (62%).

Some of the differences are likely attributable to differences in the recycling process for individual materials. For example, some recycling programs may require metal or glass waste to be washed; this requirement may act to discourage this type of recycling. Households might also be more likely to produce large quantities of paper waste compared to other types, and therefore may be less likely to recycle all of the paper waste that they produce or be less certain that they have recycled all of the paper waste they produced. This does not mean that less paper was being recycled by households overall: paper waste made up over half of all the waste material recycled by weight in Canada in 2006.¹¹

3 Conclusion

The research that has been presented here provides a first look at the recycling behaviours of Canadian households in 2007. Further investigation could examine the relationships between recycling and other variables related to environmental behaviours. In particular, it would be useful to explore the relationship between lack of access to recycling and participation in alternative environmental activities such as composting or donating clothing or goods.

11. Statistics Canada, 2007, *Waste Management Industry Survey: Business and Government Sectors*, Catalogue no. 16F0023X.

Table 1
Households that had access to and used recycling programs in Canada, by province, 1994 and 2007

	1994		2007					
	Access to recycling ¹	Participated in recycling ²	Access to recycling ¹	Participated in recycling ²	Quantity recycled by those who participated in recycling ³			
					Recycled all	Between most and all	Between some and most	Between none and some
	percent							
Canada	74	86	95	98	52	34	12	3
Newfoundland and Labrador	23	60	71	94	32	30	31	F
Prince Edward Island	25	73	100	99	56	35	8 ^E	F
Nova Scotia	55	74	99	99	52	37	9	F
New Brunswick	80	86	90	91	28	34	27	10 ^E
Quebec	60	75	94	98	57	32	9	2 ^E
Ontario	85	94	96	99	57	34	8	1
Manitoba	67	57	91	95	38	36	20	6 ^E
Saskatchewan	84	89	90	96	24	38	29	9
Alberta	79	86	93	95	34	35	22	9 ^E
British Columbia	78	90	97	98	52	33	12	3 ^E

1. As a percentage of all households.
2. As a percentage of households with access to a recycling program.
3. As a percentage of households that participated in recycling. Categories reflect the average amount recycled by the household for all materials they were able to recycle. Due to rounding, categories may not total to one hundred.

Source(s): Statistics Canada, Households and the Environment Survey, 1994 and 2007 (survey no. 3881).

Table 2
Motives for recycling in Canada, by province, 2007

	Due to a social responsibility	To reduce waste in landfills	To reduce demand for raw materials	Because of bylaws or legal requirements	Because everyone in the area participates	For another reason
		percent ¹				
Canada	82	75	53	28	28	5
Newfoundland and Labrador	68	69	41	14	15	11 ^E
Prince Edward Island	76	69	43	68	51	F
Nova Scotia	75	65	43	57	41	6 ^E
New Brunswick	77	68	41	30	27	6 ^E
Quebec	83	69	49	24	19	4
Ontario	82	76	52	37	36	5
Manitoba	82	84	60	18	30	6 ^E
Saskatchewan	80	81	58	15	22	5 ^E
Alberta	85	80	58	13	16	5
British Columbia	84	79	59	22	28	5

1. As a percentage of households that participated in recycling.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Table 3
Barriers to recycling by participation in Canada, by province, 2007

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	percent										
Too time consuming or takes too much effort ¹	29	19	F	20	24	31	26	30	34	36	31
Partial recyclers ²	30	19 ^E	F	20	23	32	26	31	34	36	30
Non-recyclers ³	40	F	F	F	F	F	F	F	F	F	F
Not important or not worth it ¹	4	F	F	F	F	2 ^E	3	7 ^E	7 ^E	5 ^E	4 ^E
Partial recyclers ²	3	F	F	F	F	F	3	7 ^E	8 ^E	4 ^E	3 ^E
Non-recyclers ³	15 ^E	F	F	F	F	F	F	F	F	F	F
Not convenient ¹	25	28	F	18	31	7	21	33	48	45	34
Partial recyclers ²	25	28	F	19	28	7	21	32	47	46	34
Non-recyclers ³	43	F	F	F	57	F	F	51	F	58 ^E	F
Takes up too much space ¹	22	35	F	20	25	18	16	28	36	34	21
Partial recyclers ²	22	37	F	20	25	19	16	28	36	35	20
Non-recyclers ³	33	F	F	F	F	F	F	F	F	F	F
Physical limitation or disability ¹	3	F	F	F	F	F	3	5 ^E	7	5 ^E	4
Partial recyclers ²	3	F	F	F	F	F	3	5 ^E	7 ^E	5 ^E	4 ^E
Non-recyclers ³	6 ^E	F	F	F	F	F	F	F	F	F	F
Does not have a bin or bags ¹	10	15 ^E	F	4	16	7	7	14	18	14	11
Partial recyclers ²	9	16 ^E	F	4	16	7	7	13 ^E	18	14	10
Non-recyclers ³	25 ^E	F	F	F	F	F	F	F	F	F	F
Another reason ¹	40	36	57	52	37	45	46	34	28	25	35
Partial recyclers ²	41	40	59	53	39	46	47	36	29	25	36
Non-recyclers ³	32	F	F	F	F	F	F	F	F	F	F

1. As a percentage of all households that had access to recycling programs but which did not recycle all their recyclable waste. Includes all respondents that were asked the barrier questions, including some not counted within the other categories.

2. As a percentage of all households with access to recycling programs that recycled some but not all of their waste.

3. As a percentage of all households with access to recycling programs that did not recycle any of their waste.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Table 4
Recycling participation in Canada by metropolitan residence and province, 2007

	Census metropolitan area	Outside a census metropolitan area
	percent	
Household distribution	67	33
Canada		
Had access to a recycling program	95	92
Participated in a recycling program	98	97
Recycled all waste	52	51
Newfoundland and Labrador	97	93
Prince Edward Island	..	99
Nova Scotia	99	99
New Brunswick	90	91
Quebec	98	99
Ontario	99	99
Manitoba	96	94
Saskatchewan	96	96
Alberta	95	95
British Columbia	99	96

1. As a percentage of households with access to a recycling program.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Table 5
Access distribution in Canada, by province, 2007

	All households				Non-recycling households			
	Curbside access only	Curbside and depot access	Depot access	Other access	Curbside access only	Curbside and depot access	Depot access	Other access
	percent ¹				percent ²			
Canada	51	33	16	0^E	34	20^E	46	F
Newfoundland and Labrador	9 ^E	19	70	F	F	F	F	F
Prince Edward Island	36	62	F	F	F	F	F	F
Nova Scotia	32	62	5 ^E	F	F	F	F	F
New Brunswick	16	32	51	F	F	F	64	F
Quebec	78	20	2 ^E	F	86	F	F	F
Ontario	56	39	5	F	50 ^E	F	F	F
Manitoba	36	42	22	F	F	F	41 ^E	F
Saskatchewan	6 ^E	31	64	F	F	F	94	F
Alberta	13	24	63	F	F	F	69 ^E	F
British Columbia	39	40	21	F	F	F	65	F

1. As a percentage of all households.

2. Non-recycling households with the given type of access as a percentage of all households that did not recycle.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Table 6
Recycling participation in Canada by access type and province, 2007

	With curbside access		Without curbside access	
	Recycled ¹	Recycled all ²	Recycled ¹	Recycled all ²
	percent			
Canada	98	55	92	34
Newfoundland and Labrador	91	33 ^E	90	32
Prince Edward Island	99	56	F	F
Nova Scotia	99	53	98	F
New Brunswick	93	33	86	23
Quebec	98	58	77	F
Ontario	99	57	95	49
Manitoba	95	41	89	30
Saskatchewan	99	27	93	22
Alberta	95	38	93	32
British Columbia	99	56	92	38

1. Participating households as a percentage of households with the given type of access.

2. Households that recycled all waste as a percentage of participating households with the given type of access.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Table 7
Recycling participation in Canada by household composition and province, 2007

	18 and 19 year old members only	20 to 24 year old members only	25 to 44 year old members only	45 to 64 year old members only	Members 65 and over only	Adults and children 0 to 12 year old only	Adults and teens 13 to 19 year old only	Adults and members 0 to 19 year old only	Other compositions
	percent ¹								
Household distribution	F	2	11	21	16	18	11	6	15
Canada									
Had access to a recycling program	96	89	94	94	93	94	96	96	96
Participated in a recycling program	F	93	98	98	98	98	98	97	99
Recycled all waste	F	32 ^E	39	55	67	44	49	48	54
Province - participated in a recycling program									
Newfoundland and Labrador	F	F	F	95	89	89	98	F	99
Prince Edward Island	F	F	F	100	100	94	100	F	100
Nova Scotia	F	F	95	100	99	100	100	100	100
New Brunswick	F	F	80	89	92	92	93	97	91
Quebec	F	100	99	97	98	99	97	100	99
Ontario	F	99	99	99	100	99	99	98	99
Manitoba	F	F	96	97	97	92	96	97	93
Saskatchewan	F	F	98	98	98	99	98	91	95
Alberta	F	F	95	96	99	91	98	85	97
British Columbia	F	F	98	98	98	98	99	100	99

1. As a percentage of households with access to a recycling program.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Table 8
Recycling participation in Canada by income categories and province, 2007

	Less than \$20,000 ¹	\$20,000 to less than \$40,000	\$40,000 to less than \$60,000	\$60,000 to less than \$80,000	\$80,000 to less than \$100,000	\$100,000 to less than \$150,000	\$150,000 and over
	percent ²						
Household distribution	11	18	17	14	10	13	7
Canada							
Had access to a recycling program	88	92	96	97	99	98	99
Participated in a recycling program	96	98	98	98	99	98	99
Recycled all waste	55	52	52	49	47	51	48
Newfoundland and Labrador	89	95	93	96	97	96	F
Prince Edward Island	100	100	100	100	100	100	F
Nova Scotia	96	99	100	100	100	100	100
New Brunswick	83	91	93	92	93	90	F
Quebec	97	98	98	99	99	97	99
Ontario	98	99	99	99	99	100	100
Manitoba	96	97	95	97	96	95	93
Saskatchewan	91	98	96	98	97	98	100
Alberta	98	92	96	91	96	93	99
British Columbia	94	99	96	99	98	99	100

1. Including income loss.

2. As a percentage of households with access to a recycling program.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Table 9
Recycling participation in Canada by educational categories and province, 2007

	0 to 8 years or some secondary	Grade 11 to 13, graduate	Postsecondary ¹	University
	percent ²			
Household distribution	9	14	42	33
Canada				
Had access to a recycling program	87	94	94	97
Participated in a recycling program	97	98	97	99
Recycled all waste	62	52	50	51
Newfoundland and Labrador	92	99	93	96
Prince Edward Island	100	100	97	100
Nova Scotia	98	99	100	99
New Brunswick	83	90	91	94
Quebec	97	97	99	98
Ontario	99	99	99	100
Manitoba	94	95	95	97
Saskatchewan	98	99	96	95
Alberta	92	98	92	99
British Columbia	96	97	97	99

1. Some postsecondary or postsecondary certificate or diploma.

2. As a percentage of households with access to a recycling program.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Table 10
Recycling participation in Canada by dwelling characteristics and province, 2007

	Owned		Rented		Type of dwelling						
	Single detached unit	Multi-unit	Multi-unit	Multi-unit	Apartment	Apartment		Mobile home			
						Double	Row or terrace		Low-rise apartment	High-rise apartment	
	percent ¹										
Household distribution	70	30	58	15	5	6	5	25	17	8	2
Canada											
Had access to a recycling program	97	88	97	96	98	96	95	89	90	86	88
Participated in a recycling program	98	97	98	98	99	97	98	97	97	97	94
Recycled all waste	54	46	54	52	52	51	54	46	46	46	49
Newfoundland and Labrador	96	88	96	89	F	F	F	F	F	F	F
Prince Edward Island	99	100	98	F	F	F	F	100	100	F	F
Nova Scotia	100	98	100	99	99	F	F	97	99	F	98
New Brunswick	92	87	91	93	F	F	F	85	84	F	F
Quebec	98	97	99	98	100	97	98	96	96	96	99
Ontario	100	98	99	99	100	99	100	99	99	98	100
Manitoba	96	95	96	97	F	F	F	94	95	92	91
Saskatchewan	97	95	97	91	F	F	F	95	100	F	F
Alberta	95	95	96	91	95	83	98	96	97	95	95
British Columbia	99	96	99	98	96	100	94	96	96	96	91

1. As a percentage of households with access to a recycling program.

2. Distribution may not equal zero due to refusals or out-of-scope responses.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Table 11
Recycling in Canada, by material

	1991	1994	2007
	percent		
Access to recycling ¹			
Paper	53	70	92
Metal cans	49	67	89
Glass bottles	50	67	89
Plastic	42	63	91
Use of recycling ²			
Paper	86	86	96
Metal cans	86	86	92
Glass bottles	86	86	94
Plastic	85	85	96
Use for households overall ¹			
Paper	45	58	88
Metal cans	42	56	82
Glass bottles	43	56	84
Plastic	36	51	87

1. As a percentage of all households.

2. As a percentage of households with access to a recycling program.

Source(s): Statistics Canada, Households and the Environment Survey, 1991, 1994, 2007 (survey no. 3881).

Table 12
Access to recycling for materials in Canada, by province, 2007

	Access to recycling ¹	Of households with access to recycling ²			
		Able to recycle all four materials	Able to recycle three of the four materials	Able to recycle two of the four materials	Able to recycle one of the four materials
	percent				
Canada	95	89	7	3	1
Newfoundland and Labrador	71	27	36	19	14
Prince Edward Island	100	96	2	1	1
Nova Scotia	99	91	4	2	2
New Brunswick	90	54	26	12	5
Quebec	94	96	3	1	0
Ontario	96	96	3	1	0
Manitoba	91	87	6	2	2
Saskatchewan	90	62	24	8	5
Alberta	93	75	14	6	3
British Columbia	97	83	11	4	2

1. As a percentage of all households.

2. As a percentage of households with access to a recycling program.

Source(s): Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Table 13
Recycling access and usage in Canada, by material and province, 2007

	Paper			Plastics			Glass			Metal		
	Access to program ¹	Used program ²	Recycled all ³	Access to program ¹	Used program ²	Recycled all ³	Access to program ¹	Used program ²	Recycled all ³	Access to program ¹	Used program ²	Recycled all ³
	percent											
Canada	98	96	62	96	96	67	94	94	74	94	92	71
Newfoundland and Labrador	54	83	33	81	93	58	72	89	50	60	73	46
Prince Edward Island	98	97	61	98	98	80	98	97	84	99	97	82
Nova Scotia	97	97	63	96	98	75	94	96	79	96	94	76
New Brunswick	87	83	40	92	85	48	71	80	50	77	78	51
Quebec	99	97	64	99	97	69	97	95	73	97	94	70
Ontario	99	98	66	99	98	73	98	97	82	98	96	80
Manitoba	97	93	54	94	91	53	92	88	59	92	86	60
Saskatchewan	95	88	43	86	90	46	78	84	47	82	77	44
Alberta	95	91	48	90	89	49	88	85	59	85	80	50
British Columbia	98	96	65	94	96	67	90	94	74	90	92	70

1. As a percentage of households with access to a recycling program.
 2. As a percentage of households able to recycle the given material.
 3. As a percentage of households able to recycle the given material that participated in recycling.
- Source(s):** Statistics Canada, Households and the Environment Survey, 2007 (survey no. 3881).

Appendix I — Definitions

Glass waste

The 2007 Household and the Environment Survey defined glass waste to include: any jars, juice bottles, wine bottles, and all other glass containers that were or that could be accepted by a recycling program.

Hazardous waste

Includes all materials designated as hazardous, as a result of their nature or quantity, and requiring special handling techniques as specified by legislation or regulation.

Reference period

Respondents of the Households and the Environment Survey (HES) were asked to refer to recycling behaviour in an average week during the 12-month period preceding the survey interview.

Metal waste

The 2007 Household and the Environment Survey defined metal waste to include: any metal cans and containers, including soft drink cans, soup cans, and juice cans, and all other metal food containers that were or that could be accepted by a recycling program.

Paper waste

The 2007 Household and the Environment Survey defined paper waste to include: any paper waste, including newsprint and cardboard, that was or that could be accepted by a recycling program.

Plastic waste

The 2007 Household and the Environment Survey defined plastic waste to include: any plastic waste, including plastic soft drink bottles, polycoats such as milk containers, and any other plastic waste that was or that could be accepted by a recycling program.

Recyclable material

Any material that has reached the end of its useful life in the form, or for the purpose, for which it was produced and that can be recycled into a material that has value as feedstock in a different production process.

Recycling

Recycling is the process whereby a material (for example, glass, metal, plastic, or paper) is diverted from the waste stream and remanufactured into a new product or is used as a raw-material substitute.

Appendix II — Methodology

Quantity recycled

The proportion of waste recycled was calculated by taking the un-weighted average of the amount of waste that was recycled by a household. Only materials that could be recycled by a given household were added to either the numerator or the denominator. The final total was mapped to a set of values between 0 (no waste recycled for any type) and 3 (all waste recycled for all types).

Range

0
More than 0 to less than 1
1 to less than 2
2 to less than 3
3

Category

Recycled none of their waste
Recycled more than none to some of their waste
Recycled more than some but less than most of their waste
Recycled more than most but less than all of their waste
Recycled all of their waste

Calculations

Rates are used to express the proportional significance of a behaviour or a characteristic in a population.

Recycling participation rate

Numerator:

Number of respondents that indicated that they had recycled some quantity of waste during an average week in the 12 months preceding the 2007 Household and the Environment Survey.

Denominator:

Number of respondents that potentially could have recycled some quantity of waste during the reference period. Excludes all households that did not have access to any recycling program and all households that did not state any information about their recycling practices.

Recycled all waste rate

Numerator:

Number of participating respondents who indicated that they had recycled all their waste for each of the waste types that they were able to recycle during the reference period.

Denominator:

Number of participating respondents who potentially could have recycled all their waste. Includes all households that recycled during the reference period.

Access to Recycling Rates

Numerator:

Number of respondents who indicated that they did not have access to a recycling program of any kind.

Denominator:

All households