

Recent Preliminary Waste Characterization and Public Survey Results

The following information is preliminary. The surveys are completed, but their final reports are upcoming. The contracted waste characterization study for the upcoming Waste Reduction and Diversion report is currently underway, with results of its first of four studies available. These results are fairly comparable to the 2016 waste characterization study¹, which has been used for planning purposes in the interim.

Waste Composition Study: Spring 2019

In a sampling of 100 single family residential curbside households, of the average 17.25 kg of generated waste disposed in the garbage cart per household per week, 10.11 kg, or 58.60%, was material that could be diverted and/or recovered through identified potential services offered at Recovery Park. Specifically:

- Yard waste: 7.30 kg, 42.34%
- Recyclables: 1.12 kg, 6.46%
- Mixed/Rigid Plastics: 0.88 kg, 5.09%
- Construction & Demolition waste: 0.49 kg, 2.86%
- Waste Electrical & Electronic Equipment: 0.15 kg, 0.86%
- Mixed metals: 0.09 kg, 0.51%
- Household Special Waste: 0.08 kg, 0.43%

It should be noted that while less than 1% of what was disposed was identified as Household Special Waste, such as paints, oil, fertilizers, batteries, aerosols, the hazardous nature of the material requires a specialized form of disposal that cannot be accomplished through landfilling.

In a sampling of 22 inbound Self Haul loads disposed in the landfill's waste bins, of the average 136.80 kg per load disposed, 110.69 kg, or 81%, was material that could be diverted and/or recovered through identified potential services offered at Recovery Park. The material identified included bulky material (mattresses, furniture), construction and demolition waste, yard waste, mixed/rigid plastics, recyclables, waste electrical and electronic equipment, mixed metals, and household special waste, with its portion of the total waste visualized in Figure 1:

¹ https://www.saskatoon.ca/sites/default/files/documents/corporate-performance/environmental-corporate-initiatives/waste-minimization/waste_diversion_opportunities_report_-_final.pdf

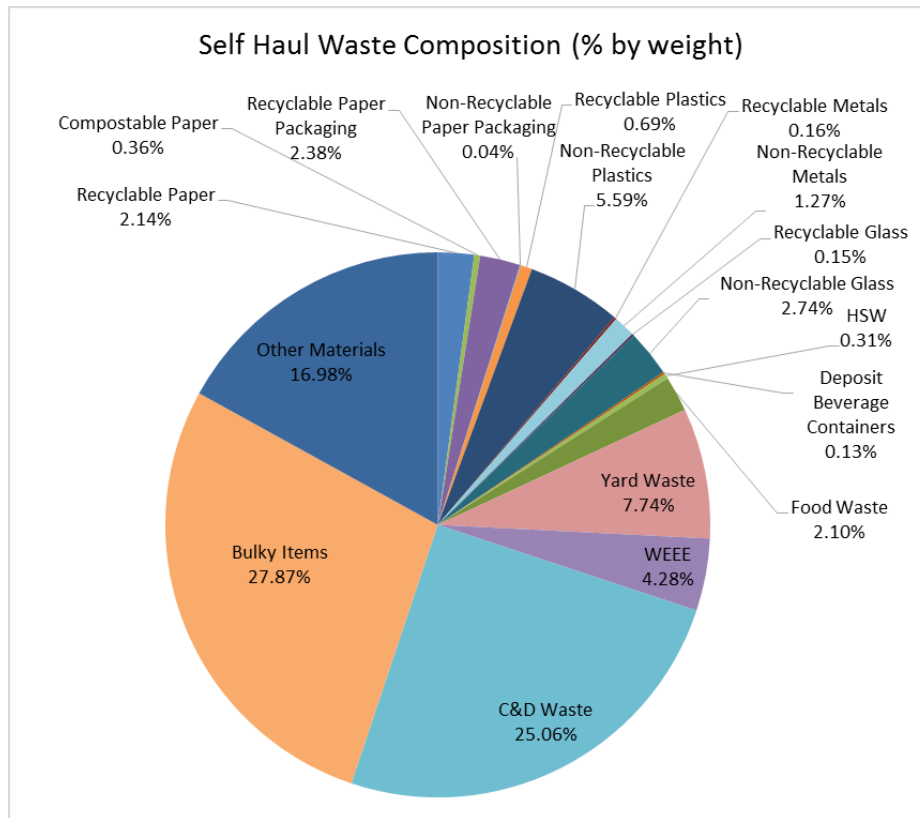


Figure 1: Self-Haul Waste Composition

The self-haul waste characterization is more indicative of possible users of Recovery Park, since these haulers have already made the effort to bring the waste to the Landfill, and have paid the tipping fees for materials that could be accepted at a discounted or no rate at Recovery Park.

In a sampling of garbage from 12 Industrial, Commercial and Institutional (ICI) locations, of the average 65.82 kg per load disposed, 19.23 kg, or 29%, was material that could be diverted and/or recovered through identified potential services offered at Recovery Park. Specifically:

- Bulky material (mattresses, furniture): 1.24 kg, 1.88%
- Construction & Demolition waste: 4.93 kg, 7.49%
- Yard waste: 5.19 kg, 7.88%
- Mixed/Rigid Plastics: 1.90 kg, or 2.89%
- Recyclables: 5.29 kg, 8.04%
- Waste Electrical & Electronic Equipment: 0.048 kg, 0.072%
- Mixed metals: 0.16 kg, 0.24%
- Household Special Waste: 0.47 kg, 0.71 %

Waste & Recycling Awareness Study: Summer 2019

A statistically representative sampling of 1005 residents were surveyed by a contractor for the Waste & Recycling Awareness Study in the summer of 2019. The following responses are for questions related to Recovery Park and identified potential materials to accept for recovery.

Included in the key findings was overall satisfaction with recycling options in public places, as shown in Figure 2.

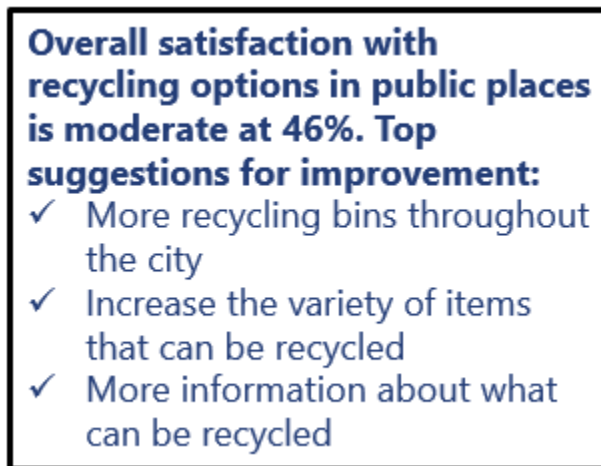


Figure 2: Key Finding

When asked “What do you do with recyclable material if your recycling cart/bin is full?” 24% of single-family respondents who have had full recycling bins/carts stated they use a recycling depot, as shown in Figure 3.

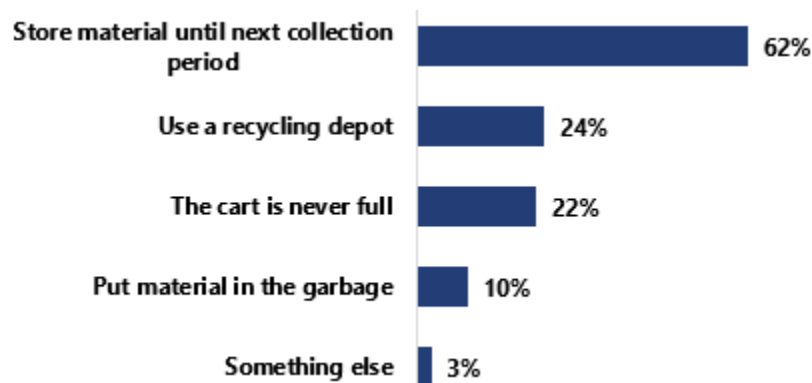


Figure 3: Responses for when Recycling Cart is full

When asked whether items listed be put in the recycling cart/bin, 45% of respondents were either not sure or in agreement that plastic toys could be in their cart/bin, which is not the case, but has been identified as a possible stream at Recovery Park.

Figure 4 shows what respondents did with yard and garden waste; large branches and tree stumps; and elm wood. The preferred method of disposal is highlighted in brighter green. As the figure shows, about a quarter to a half of the respondents that have these items to dispose of will haul it to either the compost depots or the landfill. All three

categories are materials that have been identified as a possible stream at Recovery Park.

	Yard and Garden Waste	Large Branches and Tree Stumps	Elm Wood
Put in my Green Cart (*subscribers only)	17%	2%	0%
Put them in the garbage	36%	11%	5%
Put in my blue cart/communal bin	1%	0%	0%
Compost them at home/in my backyard	20%	4%	1%
Compost in my community	2%	0%	1%
Feed them to pets/animals	0%	0%	0%
Haul to City of Saskatoon Compost Depots	17%	25%	2%
Haul to landfill	4%	11%	5%
Hire a private company/contractor to haul away	1%	5%	2%
Another way not listed above	4%	8%	2%
I never have this kind of waste	23%	45%	84%

Figure 4: Disposal of Organic Items

When asked “What do you do with organic material (such as food and yard waste) if your Green Cart is full?” 16% of respondents subscribed to the green cart program stated they haul to the City of Saskatoon (City) Compost Depots, as shown in Figure 5.

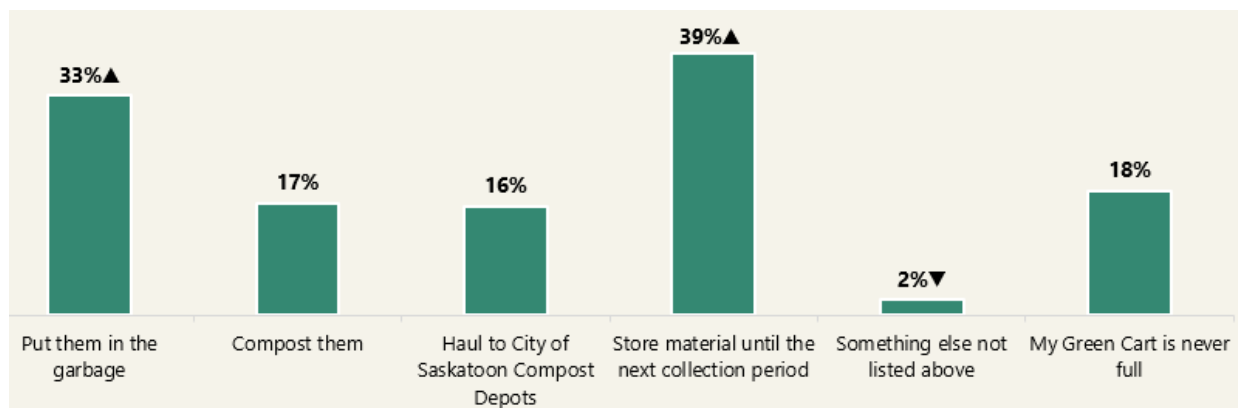


Figure 5: Disposal of Organics When Green Cart is Full

Figure 6 shows what respondents have done with fabric such as worn out clothing, quilts, rags, etc.

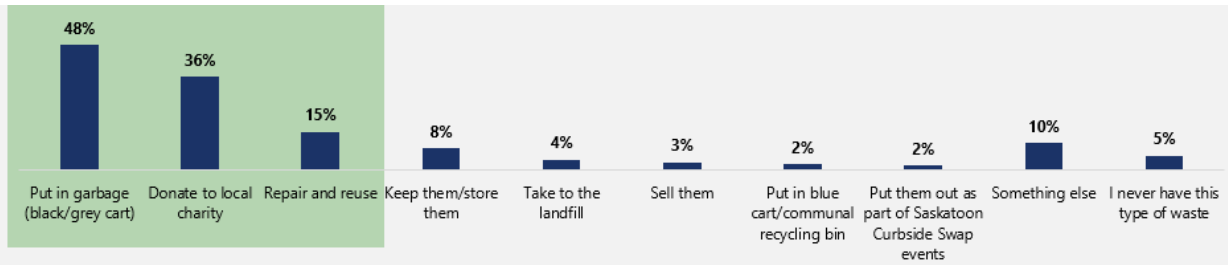


Figure 6: Disposal of Fabric (Worn-Out Clothing, Quilts, Rags, etc.)

Figure 7 shows what respondents have done with home renovation or construction waste.

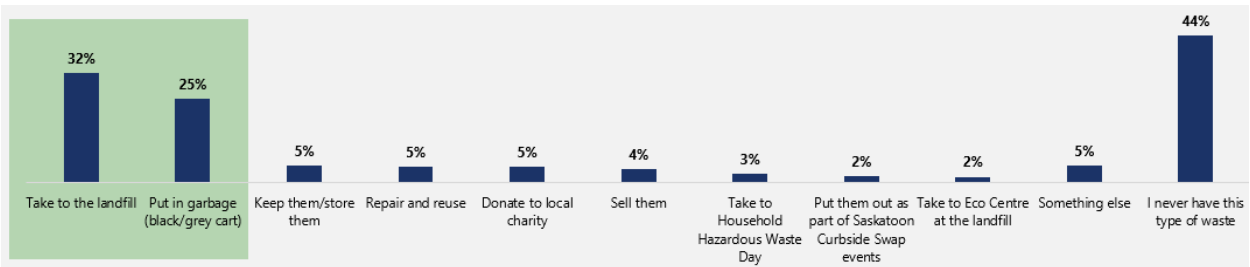


Figure 7: Disposal of Renovation or Construction Waste

Figure 8 shows what respondents have done with broken appliances.

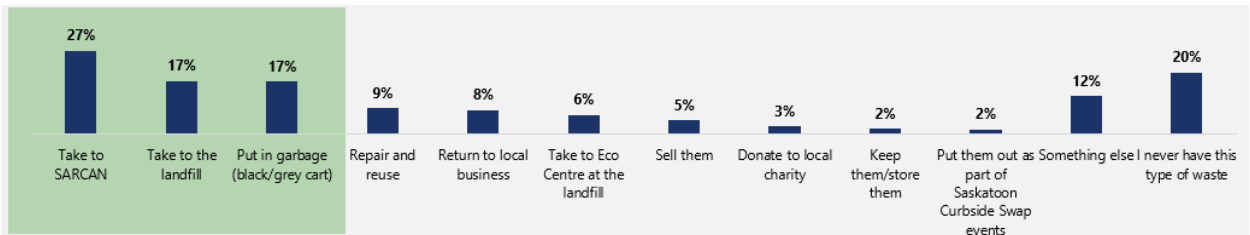


Figure 8: Disposal of Broken Appliances

Figure 9 shows what respondents have done with broken furniture.

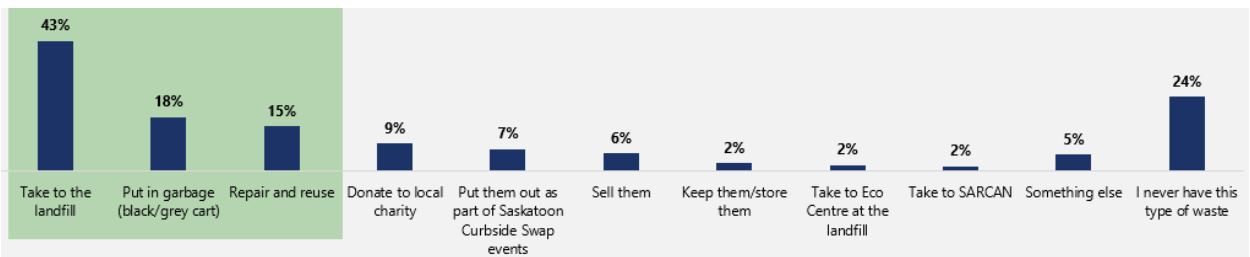


Figure 9: Disposal of Broken Furniture

Figure 10 shows what respondents have done with paint.

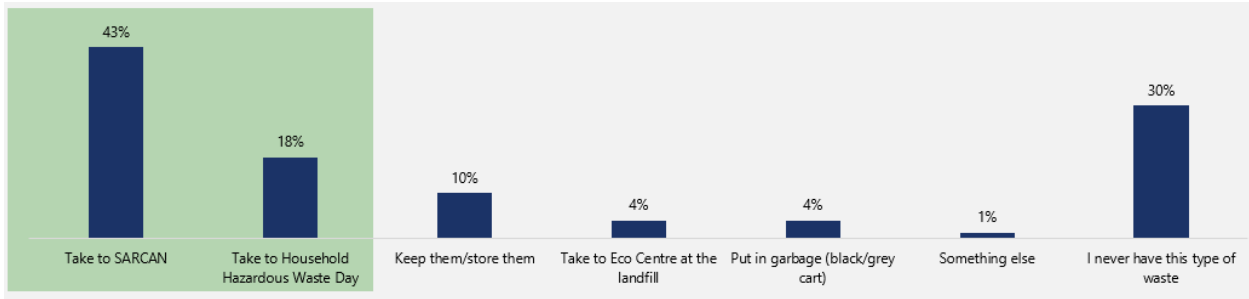


Figure 10: Disposal of Paint

Figure 11 shows what respondents have done with used oil, antifreeze, and oil filters.

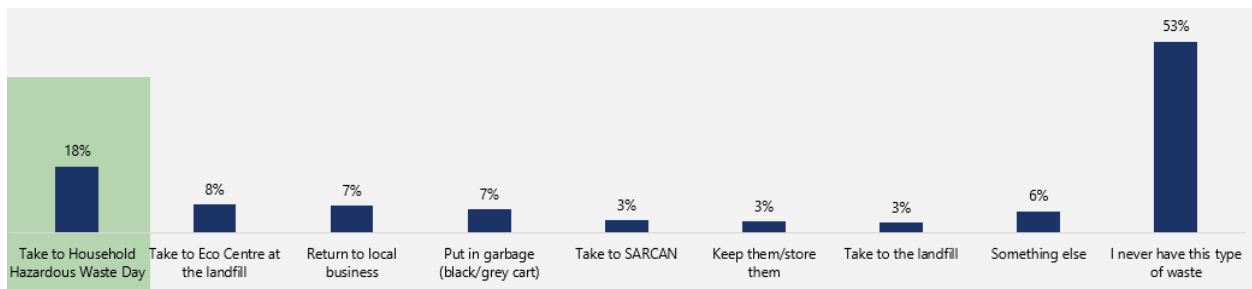


Figure 11: Disposal of Used Oil, Antifreeze and Oil Filters

Figure 12 shows what respondents have done with household hazardous waste.

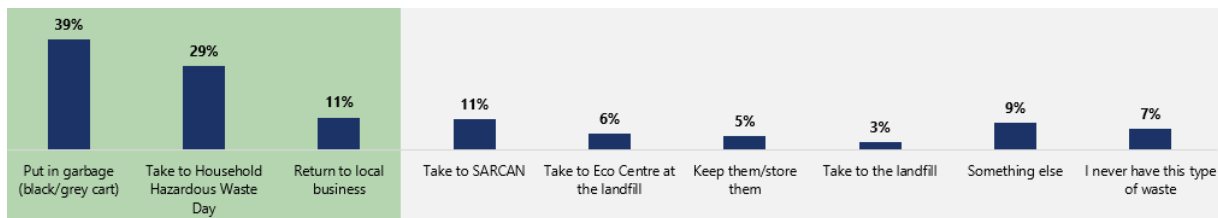


Figure 12: Disposal of Household Hazardous Waste

Figure 13 shows what respondents have done with broken electronics.

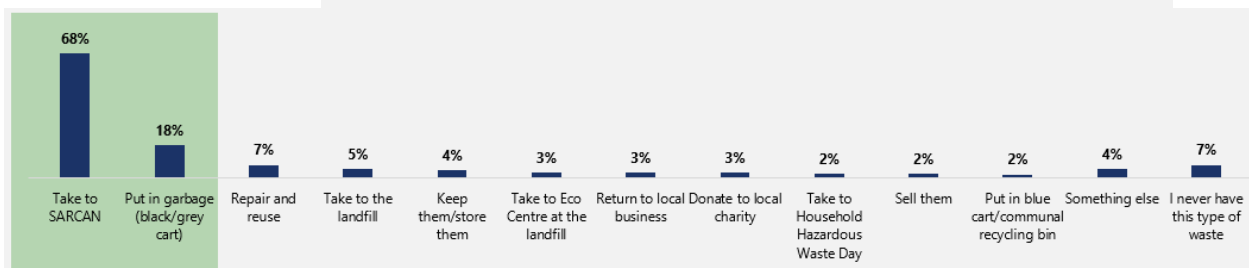


Figure 13: Disposal of Broken Electronics

Figure 14 shows the frequency of use of the City's Recycling Depots by respondents.



Figure 14: Frequency of Use of City of Saskatoon Recycling Depots

When asked “The City is considering an expansion to waste diversion at the landfill where residents can drop off a variety of materials such as those listed below to be recycled or repurposed by a third party. What materials would you like to see accepted at the landfill drop off depot to be recycled or repurposed?” The following materials in Figure 15 received the highest level of support.

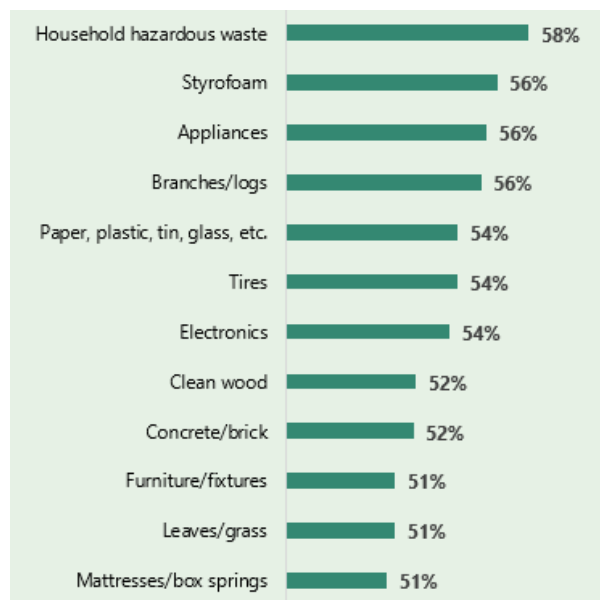


Figure 15: High level of Support

The following materials in Figure 16 received a moderate level of support to be accepted at the landfill drop off depot to be recycled or repurposed.

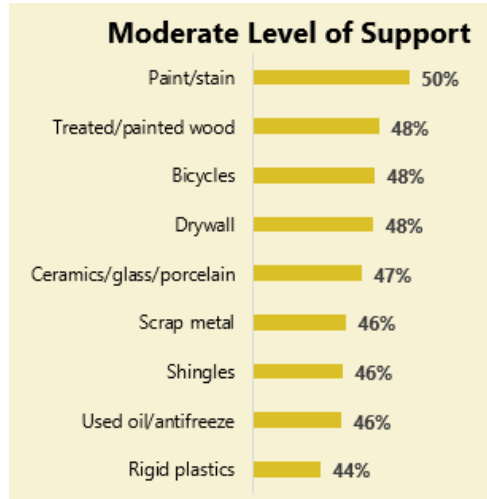


Figure 16: Moderate Level of Support

The following materials in Figure 17 received a low level of support to be accepted at the landfill drop off depot to be recycled or repurposed.

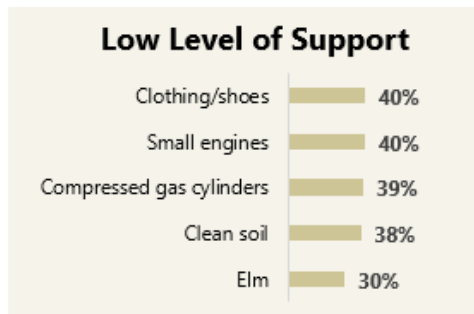


Figure 17: Low Level of Support

10% of respondents would not want to see any of the listed material accepted at the landfill to be recycled or repurposed.

43% of respondents were willing to pay a separate fee at the landfill for recycling or repurposing construction and demolition waste. This question did not clarify that the materials would be charged if disposed in the landfill, which may alter the response.

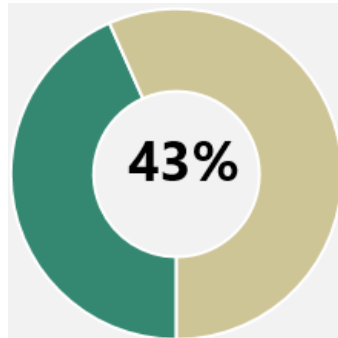


Figure 18: Willing to Pay a Separate Fee for Recycling and Repurposing Construction/Demolition Waste

ICI Study: Summer 2019

A statistically representative sampling of 150 ICI organizations were surveyed by a contractor for the ICI Study in the summer of 2019. The following responses are for questions related to Recovery Park and identified potential materials to accept for recovery. Figure 19 provides the study's key findings:



Figure 19: ICI Study Key Findings

When asked “What do you do with recyclables, such as paper, cardboard, plastics #1 to 7, household glass, aluminium foil and cans?” 27% of respondents that have this type of waste stated they put them in their garbage or landfill, and 91% stated they recycled them.

When asked “What do you do with organics, such as yard waste, inedible food waste, and food soiled paper?” 87% of respondents that have this type of waste stated they put them in their garbage or landfill, and 6% stated they composted them.

When asked how their organization disposes of its compostable items, the following results in Figure 20 were found:

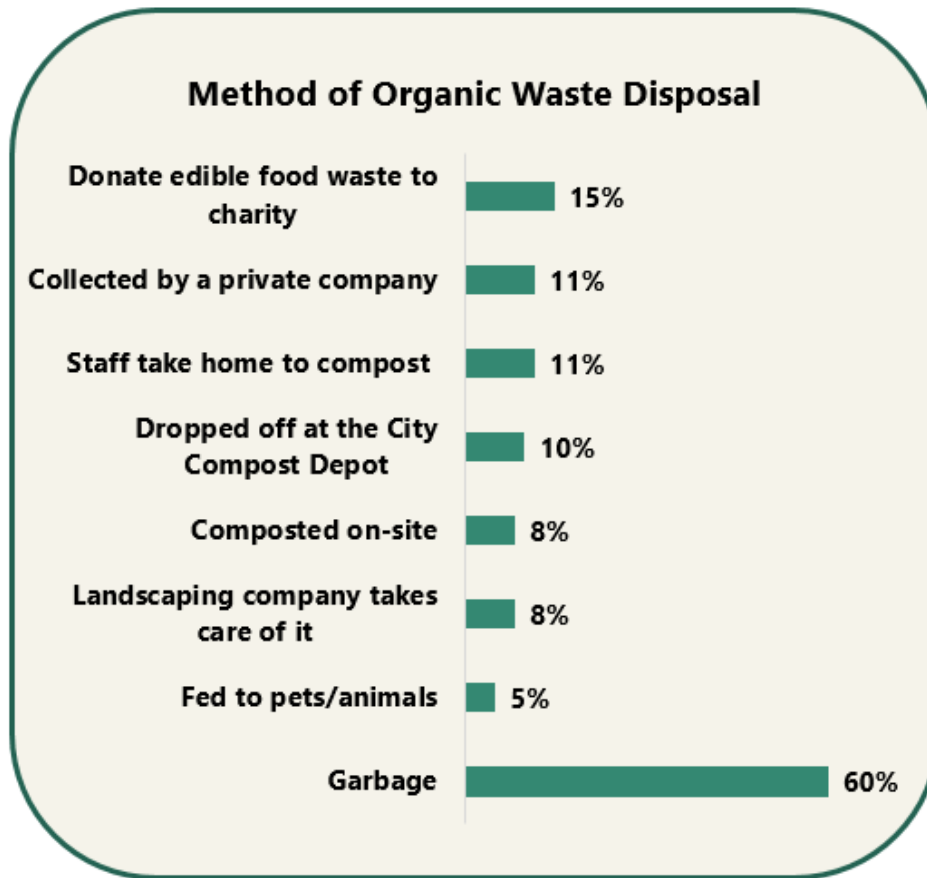


Figure 20: ICI Method of Organic Waste Disposal

When asked “What do you do with construction and demolition waste, such as lumber, drywall, shingles, concrete, bricks?” 73% of respondents that have this type of waste stated they put them in their garbage or landfill, and 29% stated they recycled them.

When asked “What proportion of your organization’s recyclable waste is recycled or otherwise diverted from the landfill?” yielded the below responses in Figure 21:

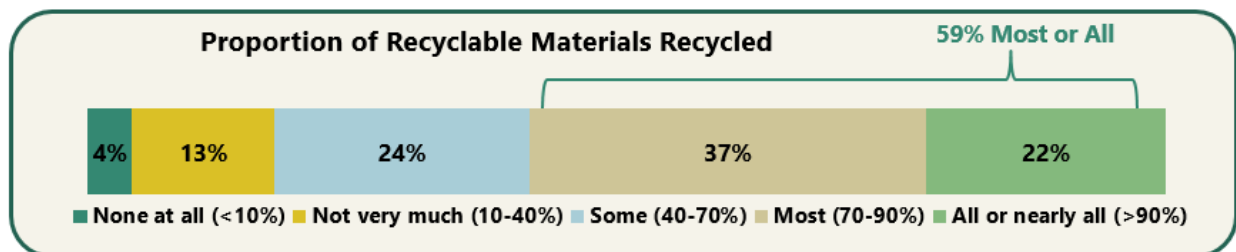


Figure 21: Proportion of Recyclable Materials Recycled

When asked how their organization recycles its recyclable items, 60% of respondents dropped them off at SARCAN, and 17% respondents dropped them off at one of the City’s recycling depots.

When asked “What construction and demolition materials do you recycle or divert?” the following materials had the corresponding percentages of participants in Figure 22:

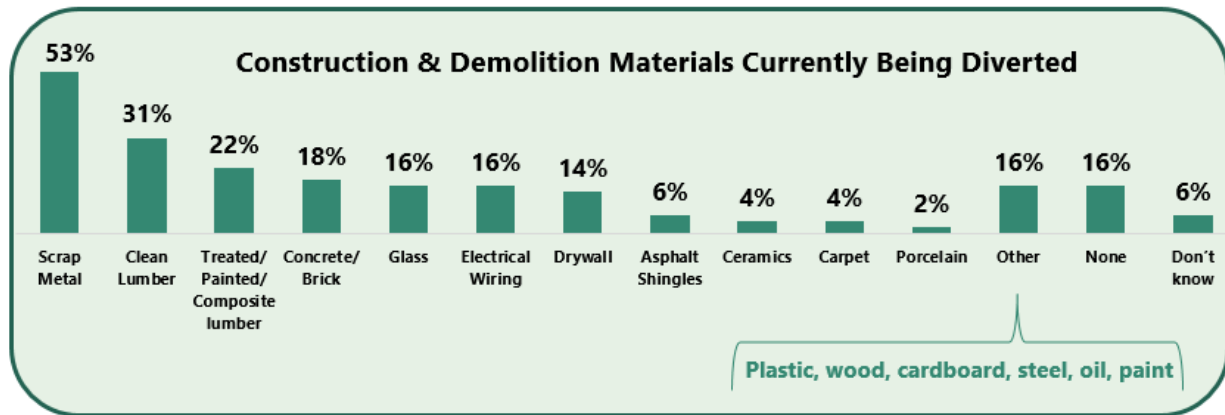


Figure 22: Construction and Demolition Materials Currently Being Diverted

Of the 34% respondents that dealt with construction and demolition waste, when asked “How often does your organization carry out construction or demolition activities?”, the below responses in Figure 23 were:

Frequency of Construction/Demolition Activities	
Day-to-day operations	16%
Monthly/quarterly	10%
Annually	4%▼
Intermittent	59%▲

Figure 23: Frequency of Construction/Demolition Activities

Of these same respondents, their method of diversion is illustrated below in Figure 24:

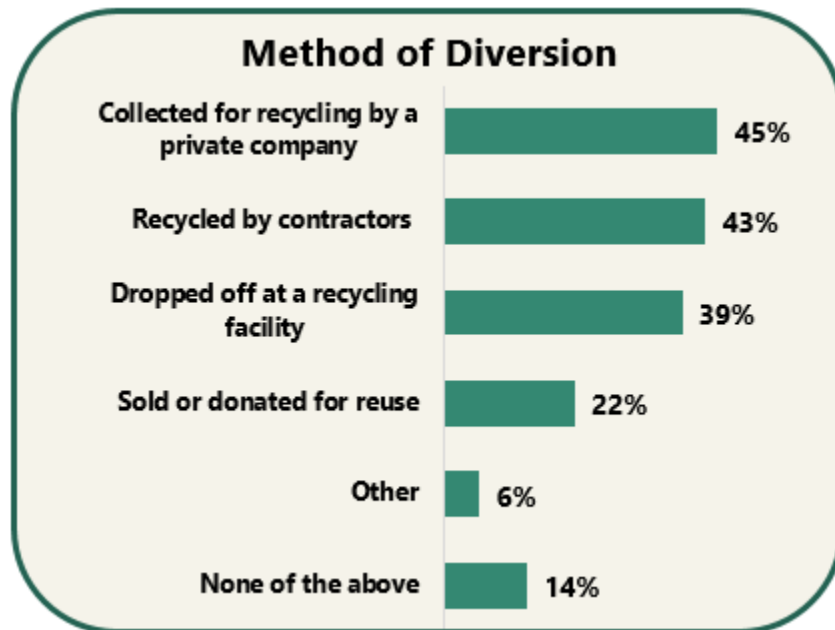


Figure 24: Method of Diversion

When asked “Does your organization use any of the following City services?” the following responses were provided in Figure 25:

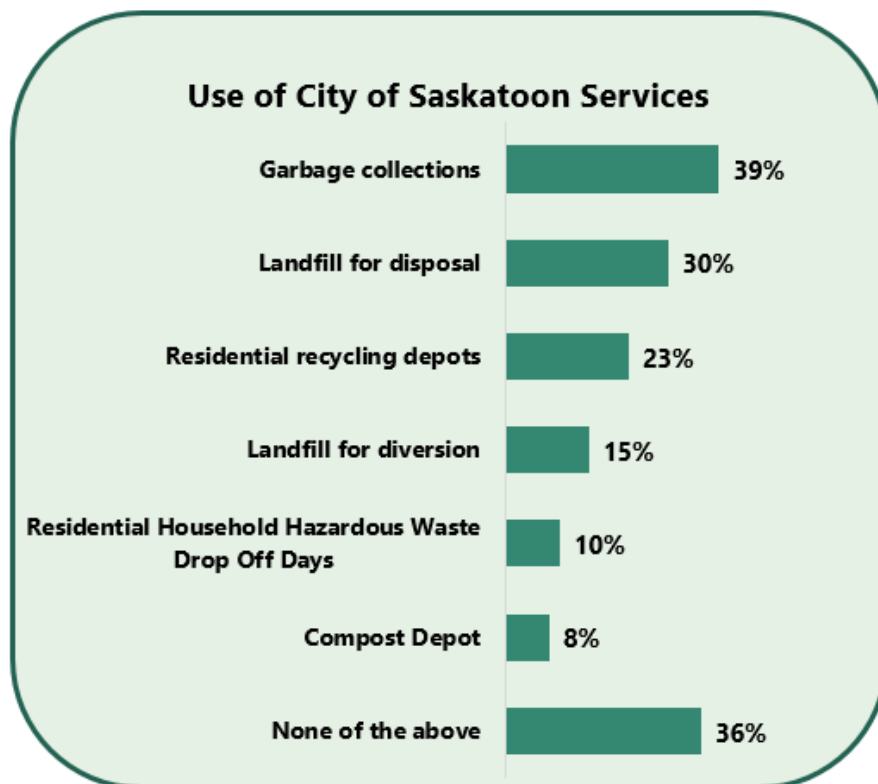


Figure 25: Use of City of Saskatoon Services

When asked “How satisfied are you with waste diversion and management services provided by the City?” the following responses were provided in Figure 26.



Figure 26: Satisfaction with City of Saskatoon Waste Diversion and Management Services