19. WASTE MANAGEMENT SERVICES

Waste Management Services include a wide range of collection, disposal, diversion and processing activities for the majority of residential households, and a portion of these services may be provided to businesses. The goal of Waste Management Services is to reduce and/or divert the amount of waste ending up in landfill sites, and to lessen the detrimental impact on the environment.

Objectives of Waste Management Services include:

- minimize the impact on the environment and maximize landfill capacity by providing a variety of waste diversion programs to residential and industrial, commercial and institutional sectors (ICI)
- provide efficient and economical waste collection, waste diversion and disposal services that meet the needs of the community and regulatory bodies
- increase awareness of waste management issues and promote waste reduction through education

What should you consider when reviewing the results?

Each municipality's results are influenced to varying degrees by a number of factors, including:

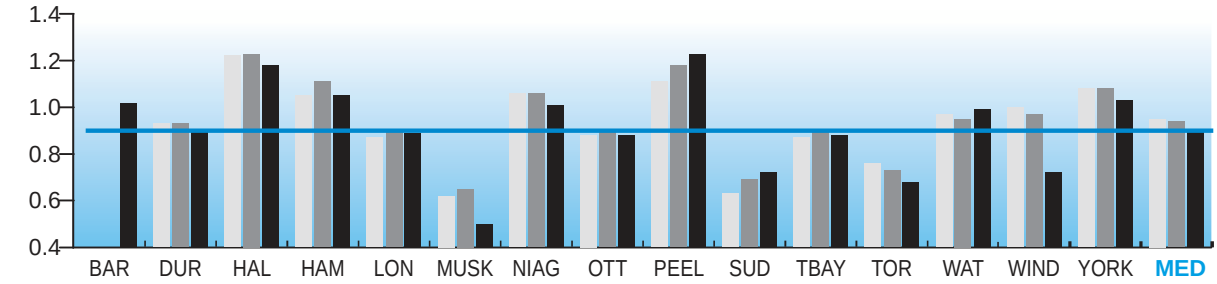
- governance: single-tier vs. upper-tier systems
- program design: based on urban/rural mix of single-family homes, multi-unit residential buildings, commercial, industrial, seasonal homes and tourists, age of infrastructure, proximity to collection sites, processing sites and sellable markets
- service levels: frequency of collection, bag limits, single stream waste collection vs. co-collection programs, hours of operations and the number and types of materials collected
- education: how municipalities promote, manage and enforce their garbage collection, disposal, recycling and diversion programs and services

NOTE: Durham is responsible for the collection of solid waste in five out of eight of its local municipalities.

What are the results?

How many tonnes of residential waste is collected per household?

Fig. 19.1 Tonnes of all Material Collected per Household - Residential



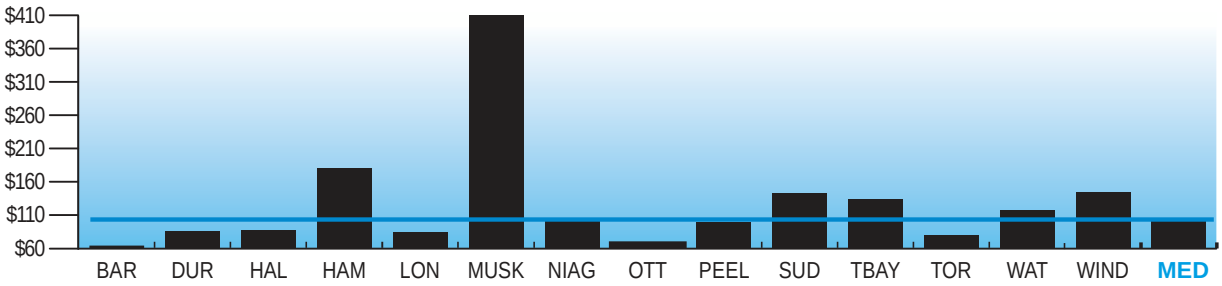
2009	1.02	0.93	1.18	1.05	0.89	0.50	1.01	0.88	1.23	0.72	0.88	0.68	0.59	0.72	1.03	0.90
2008		0.93	1.23	1.11	0.90	0.65	1.06	0.90	1.18	0.69	0.90	0.73	0.95	0.97	1.08	0.94
2007		0.93	1.22	1.05	0.87	0.62	1.06	0.88	1.11	0.63	0.87	0.76	0.87	1.09	1.08	0.85

Source: SWST205 (Service Level)

Figure 19.1 illustrates the number of tonnes of waste collected from residential households, which includes organics, blue box, leaf and yard, municipal hazardous or special waste and other recyclable materials such as wood, metal and tires. The labour disruption in both Toronto and Windsor contributed to the reduction of total tonnes collected.

How much does it cost to collect a tonne of residential garbage?

Fig. 19.2 Operating Costs for Garbage Collection per Tonne – Residential (MPMP)



2009	64	86	87	160	85	410	105	70	100	142	134	79	117	145	103

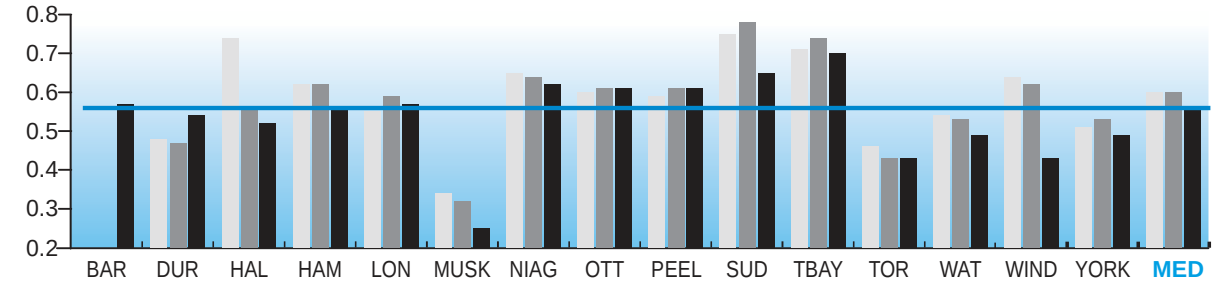
Source: SWS311 M (Efficiency)

NOTE: The Regional Municipality of York operates a two-tier system and is not responsible for the collection of garbage.

Figure 19.2 indicates how much it costs to collect a tonne of residential garbage. Increased cost can be attributed to aging infrastructure, fuel prices, service contracts and the addition of new services, i.e. green cart program.

How many tonnes of residential garbage is disposed in landfills?

Fig. 19.3 Tonnes of Solid Waste Disposed per Household - Residential



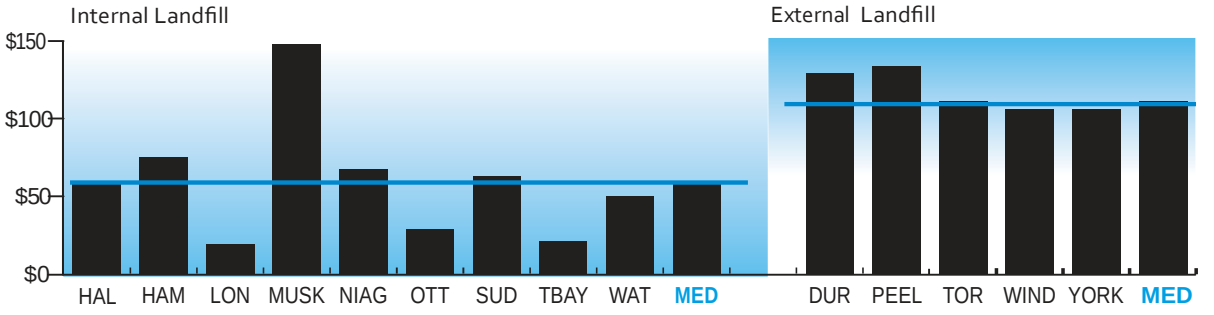
2009	0.57	0.54	0.52	0.56	0.57	0.25	0.62	0.61	0.61	0.65	0.70	0.43	0.49	0.43	0.49	0.56
2008		0.47	0.56	0.62	0.59	0.32	0.64	0.61	0.61	0.78	0.74	0.43	0.53	0.62	0.53	0.60
2007		0.48	0.74	0.62	0.55	0.34	0.65	0.60	0.59	0.75	0.71	0.46	0.54	0.64	0.51	0.60

Source: SWST220 (Service Level)

Figure 19.3 indicates the total tonnes collected and going to landfill. Given the life expectancy of several landfills across the province and the fact there are many diversion programs and services in place, there is still a high volume of waste going to landfills.

How much does it cost to dispose of a tonne of garbage?

Fig. 19.4 Operating Costs for Solid Waste Disposal per Tonne – All Property Classes (MPMP)



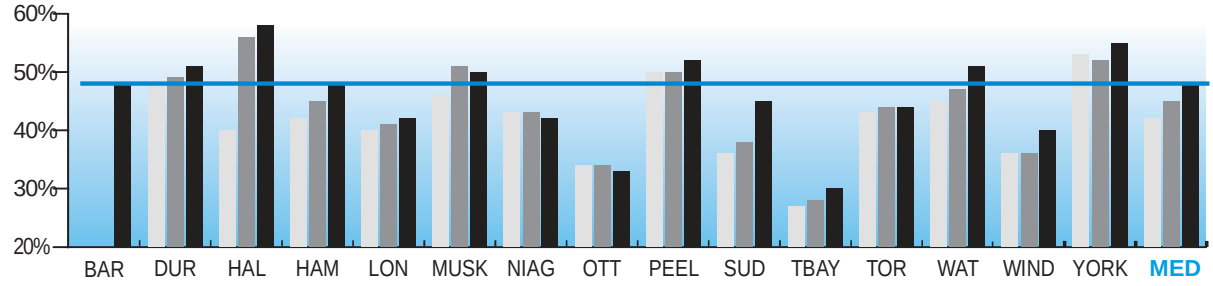
2009	59	75	19	148	67	29	63	21	50	59	129	134	111	106	106	111

Source: SWST325M (Efficiency)
NOTE: Barrie's result of $340 includes a one-time adjustment for landfill post closure costs and does not fit within the limits of the graph.

Figure 19.4 illustrates how much it costs to dispose of a tonne of garbage. Costs can be attributed to declining landfill capacities, thereby resulting in increased landfill rates, additional costs of transporting waste outside a community, aging infrastructure, capital costs, costs associated with the incineration of garbage, service agreements, increase in leachate treatment, and fluctuating fuel costs.

What percentage of residential waste is diverted away from landfill sites?

Fig. 19.5 Percentage of Solid Waste Diverted - Residential (MPMP)



2009	48%	51%	58%	48%	42%	50%	42%	33%	52%	45%	30%	44%	51%	40%	55%	48%
2008		49%	56%	45%	41%	51%	43%	34%	50%	38%	28%	44%	47%	36%	52%	45%
2007		48%	40%	42%	40%	46%	43%	34%	50%	36%	27%	43%	45%	36%	53%	42%

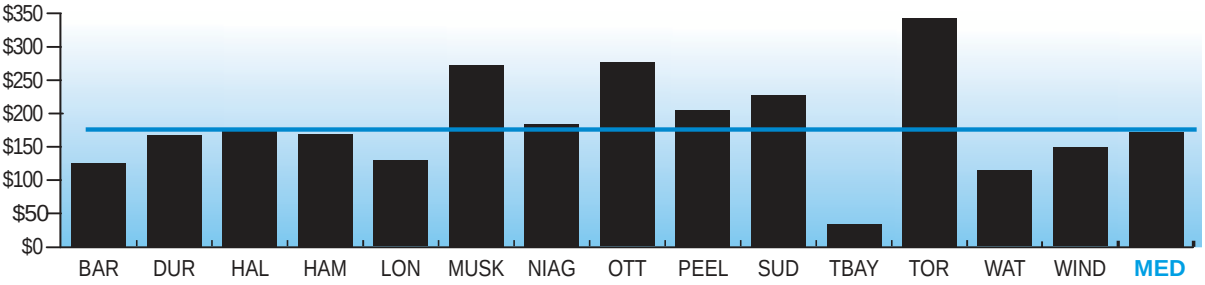
Source: SWST105M (Community Impact)

Figure 19.5 demonstrates the amount of residential waste diverted away from landfills and incineration through programs such as organics, blue box, leaf and yard, municipal hazardous or special waste and other recyclable materials (wood, metal and tires).

Year over year results show the majority of municipalities continue to increase the percentage of waste diverted, with Halton showing the largest diversion rate. Municipalities who do not have an organics program tend to be under the 40% diversion rate.

How much does it cost to divert a tonne of garbage?

Fig. 19.6 Operating Costs for Solid Waste Diversion per Tonne – Residential (MPMP)



2009	125	167	174	170	129	273	184	276	205	227	33	343	114	149	172

Source: SWST330M (Efficiency)
NOTE: York operates a two-tier system and is not responsible for the diversion of garbage.
NOTE: In 2009 all municipalities experienced a decrease in commodity revenue which affected the operating cost of diversion.

Figure 19.6 depicts the cost to divert a tonne of garbage. While costs of diverting waste have increased, diversion is more cost-effective than the combined cost of collecting and disposing of waste, making diversion activities beneficial from both an environmental and financial perspective.