

Appendix B: Jurisdictional Review of Collection Service Comparisons

Jurisdictional Review of Municipal Collection Service Delivery Approaches

Staff reviewed approaches to collection service delivery in thirteen other jurisdictions. The City of Toronto Solid Waste Management Services was compared to other large North American cities with a similar number of curbside customers and/or characteristics (i.e. age, climate, housing density and market conditions). The review focused on residential curbside customers.

This section provides a summary of: 1) different collection models; 2) key factors of the models; and 3) key findings of the jurisdictional review.

1. Collection Service Delivery Models in North American Cities

There are a variety of curbside collection service delivery approaches used by North American cities. The five most common service delivery models include:

1. Full Public Sector: City of Vancouver, City of San Diego, City of Los Angeles, New York City
2. Full Privatization, One Contractor: City of San Francisco
3. Full Privatization, Multiple Contractors in Exclusive Geographic Zones: Peel Region, City of Winnipeg
4. Mixed Service Providers Public/Private, based on area: City of Toronto, City of Hamilton, City of Ottawa, City of Edmonton, City of Montreal
5. Mixed Service Providers Public/Private, based on material: City of Calgary, City of Chicago, City of Hamilton, City of Montreal

Each model has its advantages and disadvantages.¹ An advantage of the full public sector model is greater control over scope and quality of service, which may result in higher quality service, but this may conflict with pressures to limit tax and fee increases. A fully privatized collection service delivery model may have lower operating costs, but there are costs for the city in monitoring service and managing contracts. With fully privatized services, costs can increase over time through service changes during a contract or in future bidding, particularly with a reduction in competition. While a number of large North American municipalities provide fully public collection service, and others fully private (including most GTA municipalities), it has become increasingly common for municipalities to choose mixed service models.

Mixed service models allow municipalities to test privatization while applying existing skills and resources, maintaining some control over waste collection and comparing private contractor costs with known city costs. Competition between the public and private sides can also lead to innovation, greater efficiencies and better service overall. The City of Hamilton, for example, developed an Activity Based Costing model to regularly compare the costs and performance of public sector delivery with those of private service delivery.

Mixed Service-Managed Competition Model

Several municipalities such as the City of Toronto, including the City of Hamilton, the City of Ottawa and the City of Edmonton, contract out approximately half of their curbside collection services. Typically, municipalities divide their jurisdictions into several collection districts based on geographical features, neighbourhoods or political districts, including current or former municipal boundaries.

¹ An August 2014 CH2M HILL report prepared for the City of Calgary includes a detailed description of all the models and their advantages and disadvantages.
<http://agendaminutes.calgary.ca/sirepub/cache/2/3eypljceytkhbut011z1mifu/30220802232015030154652.PDF>

In mixed service delivery models, collection may vary by district and have different public-private service ratios. Collection may also vary by waste material type (i.e. garbage, recycling, organics, yard waste etc.). In the City of Hamilton, staff collects garbage and organics in about half of the city. A private contractor collects garbage and organics from the rest of the city and collects recycling across the entire city. In the City of Chicago, staff collects garbage across the entire city and recycling in select areas. Private contractors collect recycling in the remaining areas of the city.

The mixed service delivery model can be implemented in various ways. Cities may choose service delivery models which:

- Select areas for public sector collection while contracting out other areas
- Select materials for public sector collection while contracting out other areas and/or
- Opt for a managed competition approach for collection areas or collection of materials

Under managed competition, public sector staff competitively bid against private contractors for collection contracts. The City of Calgary recently used a managed competition process for recycling collection, while retaining public sector collection for its garbage. The process resulted in an award to the City for recycling collection services. This made City staff the sole provider of waste collection services in Calgary. The City of Chicago recently followed a similar process which resulted in the City being awarded recycling collection contracts for two out of the six service areas.

2. Key Factors of Collection Service Delivery Models

Collection service delivery models are determined and influenced by many local factors and conditions, which include but are not limited to the following:

- number of curbside customers
- size of city (square km)
- housing density (urban, suburban, rural)
- waste materials collected (i.e. garbage, recycling, organics, etc.)
- collection frequency (i.e. weekly, bi-weekly)
- collection method (bags vs. bins)
- vehicle types and collection technology (manual vs. automated)
- staffing and terms of existing collective bargaining agreements
- competition amongst private waste collection firms
- cost

3. Key Findings in Comparing Toronto to Other Jurisdictions

The City of Toronto Solid Waste Management Services was compared to other North American cities based on number of curbside customers and other characteristics (i.e. age, climate, housing density and market conditions). The jurisdictions include the City of Calgary, City of Chicago, City of Edmonton, City of Hamilton, City of Los Angeles, City of Montreal, New York City, City of Ottawa, Peel Region, City of San Francisco, City of Winnipeg and City of Vancouver.

Despite some similarities, there is significant variation in the collection services provided, including materials collected, the frequency of collection and collection methods:

- The number of curbside customers ranges from 110,000 (city of Vancouver) to 3,280,000 (New York City), with the vast majority in urban and suburban areas. The City of Toronto services 503,545 residential curbside customers.
- Six municipalities, including the City of Toronto, use a mixed service model. Three municipalities use a full privatization model and four use a full public sector model.
- All municipalities collect garbage and recycling (majority have single stream). The majority collect organics (food and/or yard waste) separately.
- Most municipalities collect garbage and recycling on a weekly basis. The City of Toronto and the City of Ottawa collect garbage and recycling biweekly.
- The City of Toronto is the only municipality that regularly collects electronic waste at the curb.
- The City of Toronto uses a combination of fully and semi-automated collection. Approximately 30% of households have on-street parking that cannot be serviced by fully automated collection vehicles. Collection of bulky items and electronic waste (e-waste) requires a soft load manual process and separate lift-gate trucks. Collection methods in other municipalities range from fully manual to fully automated collection, depending primarily on housing density.

A summary of collection services in the City of Toronto and thirteen North American municipalities is provided in Table 1.

Table 1: Summary of Waste Collection Service in Fourteen North American Cities

Municipality	Number of Curbside Customers	Housing Density	Collection Model	Materials Collected & Collection Frequency	Stream - Collection Method
City of Calgary	310,000	urban, suburban	Mixed Service (divided by material)	Garbage, Recycling (1 stream) - Weekly	All - Fully Automated
City of Chicago	600,000	urban, suburban	Mixed Service (divided by material)	Garbage, Bulky Items - Weekly Recycling (1 stream) -	All - Semi-automated
City of Edmonton	225,000	urban, suburban	Mixed Service (divided by area)	Garbage, Recycling (1 stream) - Weekly	All - Manual (side loaders)
City of Hamilton	218,827	urban, suburban, rural	Mixed Service (divided by area and material)	Garbage - Biweekly Recycling (2 stream), Food Waste, Yard Waste, Bulky Items - Weekly	Garbage - Manual (Co-collection w/ Organics), Recycling - Manual, Organics - Manual w/ some semi-automated (Co-collection w/
City of Los Angeles	750,000	urban, suburban, rural	Full Public Sector	Garbage, Recycling (1 stream), Yard Waste - Weekly	All - Automated
City of Montreal	246,336	urban	Varies by borough - either Full Privatization or Mixed Service (divided by area and material)	Varies by borough - garbage and recycling is generally collected weekly. Just over 25% of residents have organics collection. Yard waste is generally weekly from spring to fall.	Garbage - Manual, Recycling - Semi-automated
New York City	3,280,000	urban	Full Public Sector	Garbage & Bulky Items - 2-3 times a week Recycling - Weekly	All - Manual
Region of Ottawa	280,000	urban, suburban, rural	Mixed Service (divided by area)	Garbage, Recycling (2 Stream), Bulky Items - Biweekly Food Waste & Yard Waste - Weekly	Garbage - Manual, Recycling - Manual (Co-collection w/ Organics), Organics - Semi-automated (Co-collection)
Peel Region	325,000	urban, suburban, rural	Full Privatization, Multiple Haulers	Garbage, Recycling (1 stream), Food Waste, Yard Waste, Bulky Items - Weekly	All - Manual
City of San Diego	289,000	urban	Full Public Sector	Garbage - Weekly Recycling (1 stream), Yard Waste - Biweekly	All - Fully Automated, w/ some manual collection of Yard Waste
City of San Francisco	380,000	urban	Full Privatization, One Hauler	Garbage, Recycling (1 stream), Food Waste, Yard Waste - Weekly Bulky Items, HHW & E-waste - Twice per year by	All - Semi-automated
City of Toronto	464,146	urban, suburban	Mixed Service (divided by area)	Garbage, Recycling (1 stream), Yard Waste, Bulky Items, E-waste - Biweekly Food Waste - Weekly	All - Fully and Semi-automated (some co-collection w/ garbage or recycling)
City of Winnipeg	195,800	urban, suburban	Full Privatization, Multiple Haulers	Garbage, Recycling (1 stream) - Weekly Yard Waste - Biweekly from spring to fall	Garbage - Fully Automated, Recycling - Fully Automated, Yard Waste - Manual
City of Vancouver	110,000	urban	Full Public Sector	Garbage - Biweekly Recycling (3 stream), Food Waste, Yard Waste - Weekly	Garbage - Fully Automated, Recycling - Manual, Organics - Fully Automated