



# Waste Plan Regina Report

Project No. MA-08-108-00-MA

## Executive Summary



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Prepared by:  
**GENIVAR Consultants LP**  
438 Victoria Avenue East, Suite 200  
Regina, Saskatchewan, S4N 0N7

Prepared for:  
**City of Regina**  
Public Works Division  
2425 4th Ave. Box 1790  
Regina, Saskatchewan, S4P 3C8



## Executive Summary

Over the past decade, the City of Regina (Regina or The City) has experienced unprecedented growth in population and the economy which has resulted in higher waste generation rates. Regina's citizens generate about 1,000 kilograms per capita of solid waste annually; most of which (84%) is disposed in the Regional landfill with only about 16% diverted. Furthermore, waste can be an environmental liability and, therefore, requires special attention to ensure that it is being managed in an appropriate and sustainable manner. The City of Regina recognizes that it needs to address this situation and identify opportunities to move away from a disposal society to a conserver society.

To address the growing demands on its waste management system, Regina has developed a solid waste management plan, known as Waste Plan Regina to review the way in which the City currently manages solid waste and to consider alternatives for meeting and managing long term solid waste management and diversion needs. In addition, Regina sees this review as an opportunity to further promote and incorporate the five "R's" of waste management – Refuse, Reduce, Reuse, Renew and Recycle.

The primary objective of Waste Plan Regina is to ensure that the public health and safety needs of the community are met, with a focus on environmental protection and customer service. The goals of this strategy are to provide an integrated solid waste management plan for collection and disposal of residential and commercial waste, and to balance program affordability with community needs, while implementing a plan that considers both efficiencies and revenue opportunities for collection and disposal.

Waste Plan Regina examines; waste management, waste diversion service level options, support mechanisms, waste reduction and diversion best practices in the residential, industrial/commercial/institutional (IC&I) and construction/demolition (C&D) sectors. Broad environmental issues in terms of public health, environmental and social aspects are considered. The study includes an evaluation of how to finance solid waste programs, possibly using a tax based system or a user fee system approach. Other areas of exploration include consideration of enhanced services, including recycling and composting options, bulky waste collection and policies to minimize landfill disposal.

To ensure the timely completion and support for the Plan, the project implemented two key consultation components. The day-to-day activities were administered by a Steering Committee, comprising key City representatives from the following City departments: Solid Waste, Quality and Innovation, Communications, and Planning and Development. Additional support was provided by the Internal Working Group comprised of representatives from other City departments with a stake in the Plan. In addition, Waste Plan Regina established a robust public consultation strategy to engage key citizen, business and institutional stakeholders within the City.

### ES-1 Current Waste Management System

Residents, businesses, and institutions located within the City limits of Regina generated approximately 203,000 tonnes of solid waste in 2008. Businesses and institutions generate about 70% of the solid waste, with about 30% generated by residents.

The average cost of waste management services for a typical Regina household is \$110 per year or \$9.16 per month. Regina's 2008 Waste Management Operating Budget was just over \$12 million (\$12,649,927) with a transfer of about \$5 million (\$5,034,127) to the Landfill Reserve. Annual revenue is about \$8.9 million (\$8,973,930), leaving a net cost paid by General Revenues of about \$3.5 million (\$3,675,966).

Until recently, Regina employed three methods of residential garbage collection:

- Residential Manual Collection – City crews manually collected garbage from the curb using rear-loading compaction trucks. Residents who received manual garbage collection were subject to a material limit of 8 garbage bags or 23 kilograms. This service was completely discontinued in May 2009 with the conversion to Residential Automated Front Street Collection.

- Residential Automated Front of Street Collection – This service, recently introduced to the City of Regina, consists of automated garbage collection. As part of this service, residents are provided with 360-litre rollout garbage carts that need to be placed on the front street property line once weekly for collection. Approximately 34,000 homes receive this service.
- Residential Mechanical Collection – For residents with back alleys, garbage collection is provided through large steel garbage communal containers located in the alleys. These containers are emptied mechanically once weekly using side-loading trucks. Approximately 26,000 homes receive this service. Plans call for this service to be phased out, as the required collection equipment is no longer available.

City crews provide all curbside and back alley residential garbage collection services.

Regina is one of only two Canadian cities without a publicly-funded curbside recycling program. Residents have access to recycling depots, affectionately called the Big Blue Bins, which are situated at 13 locations around the City where residents can drop off paper and cardboard. Regina's residents also have the option of subscribing to residential curbside recycling programs provided by two private sector companies.

In addition, the City manages a variety of waste diversion programs including:

- Tinsel Mulch – residential natural Christmas tree composting;
- Backyard Composting Program – residential organic diversion;
- thINK Food – residential inkjet cartridge recycling;
- Call2Cycle – a national stewardship program for used batteries;
- School Visits – over 50 schools visited in 2007;
- Public Events – numerous displays, parades and media appearances; and
- Special Events – Household Hazardous Waste events.

Regina owns and operates the Fleet Street Landfill, located in the northeast quadrant of the City. The landfill services all residents, businesses and institutions in the City and acts as a regional landfill for neighbouring communities. The current Fleet Street Landfill is expected to reach capacity within three years. The Landfill will be undergoing an expansion, beginning in 2009. Phase 1 of the Landfill Expansion is expected to be ready to receive waste in the fall 2010, subject to regulatory approval.

The vast majority of waste management and diversion services targeting the IC&I and C&D sector are provided by the private sector, with minimal involvement by the City. However, the City recognizes that the IC&I and C&D sectors produce the majority of waste going to the City landfill and therefore sees a need to become more involved in promoting waste diversion activities within these sectors.

Regina presently delivers the above waste management services in an efficient and cost effective fashion. Given the basic level of service provided, it is unlikely that the City could cut back on any of the existing services in order to free up additional funds for new programs. Given this current situation, additional funds will likely have to be allocated to waste management in order to provide any new or expanded programs such as the household collection and processing of recyclable materials.

## ES-2 Waste Plan Regina Process

A key component of Waste Plan Regina involved identifying and evaluating a comprehensive list of waste management and waste diversion best practices employed by other North American communities. In the first phase of the process, the consulting team drew on their extensive experience in waste management planning and developed the Long List of Waste Management and Diversion Practices (Long List). The Long List was divided into three sectors – residential, IC&I (industrial, commercial & institutional) and C&D (construction & demolition), which was further divided into two distinct categories:

- Waste management and diversion service options – Collection and processing services (primarily to the residential sector) including curbside recycling, curbside organic collection, leaf and yard waste collection, bulky waste collection, etc.
- Waste diversion innovative practices – defined as supporting policies and programs implemented by the municipality to promote waste reduction and diversion in the residential or IC&I or C&D sectors.

Over 120 measures were identified in the Long List. The next step in the process involved developing a screening procedure to remove, from further consideration, any opportunities that were not practical or in keeping with the goals, objectives or vision for the study.

A total of eight evaluation criteria were developed for the screening process. The evaluation criteria highlighted key issues that needed to be considered in determining whether the selected opportunity made practical sense in Regina. The screening process applied the set of evaluation criteria to assess the more than 120 opportunities. Further discussion of the screening process is provided in Section 3.

Following lengthy consultations with the City's Steering Committee and Internal Working Group, the Long List was reduced to approximately 57 Short Listed Waste Management and Diversion Practices. The Short List of Waste Management and Diversion Practices represented the most promising and realistic waste management and waste diversion opportunities for the City to consider for future implementation and were divided into the three sectors:

#### Short List of Waste Management and Diversion Practices

1. Residential Measures (25)
2. IC&I Measures (18)
3. C&D Measures (14)

A detailed description of each Short Listed Waste Management and Diversion Practices is provided in Section 4 of the report. The next phase of work involved combining the Short List of Waste Management and Diversion Practices into different packages.

For the Residential Sector, direction was provided to create three Service Level Options. These Service Level Options were broadly defined as:

- “Basic” (later changed to “**Current Plus**” on the basis of input from the Citizens Working Group) comprising the current service level with minor enhancements;
- “**Enhanced**” comprising measures comparable to service levels provided in most Canadian cities and including the household collection of recyclables; and
- “**Comprehensive**” comprising measures comparable to service levels provided in leading Canadian municipalities and including the household collection of both recyclables and organics, such as food wastes.

These Service Level Options are in addition to the alternative which is to keep the existing system (status quo) as is and not make any modifications to the system.

For the IC&I and C&D sectors, it was decided to formulate the Short Listed Waste Management and Diversion Practices into two Packages for each sector:

- “**Basic**” representing a fairly low impact Package, emphasizing voluntary waste diversion initiatives; and
- “**Extended**” representing a more comprehensive approach with more mandatory initiatives.

Formulation of the three residential Service Level Options and the two waste diversion Packages for the IC&I sector and the C&D sector involved developing a series of exercises and engaging four sector-based working groups including:

- Citizen's Working Group;
- IC&I Working Group;
- C&D Working Group; and
- Waste Management Industry Working Group.

These Working Group meetings were held early in the spring of 2009 and resulted in the formulation of the Residential Service Level Options and the IC&I and C&D Waste Diversion Packages, further described in Section 5 and summarized below.

These Service Level Options and Waste Diversion Packages will be presented to the public for comment and input received will be used by the Elected Officials to ultimately decide on the preferred systems for Regina.

## Residential Service Level Options

### Current Plus

**Service Options:**

Curbside Garbage & Landfill  
Active promotion of Backyard composting  
Expanded Recycling Depots Leaf & Yard Waste Depots  
Christmas Tree Collection & Processing  
Household Hazardous Waste (HHW) events

**Supporting Mechanisms:**

Promotion & Education  
Goods Exchange Events  
Customer Reward Program  
Voluntary Grasscycling

**Current Plus:**

Potential diversion – 16% to 20% (current 16% diversion)  
Cost - \$120 to \$140 /hhld/year (current \$110 /hhld/year)

### Enhanced

**Service Options:**

Curbside Garbage & Landfill  
Active Promotion of Backyard Composting  
Single Family Curbside Recycling  
Multi-Family Recycling  
Curbside Seasonal Leaf & Yard (+ Christmas Tree) collection  
Permanent HHW Facility (less frequent operation)  
Curbside Bulky/White Goods Collection

**Supporting Mechanisms:**

Promotion & Education  
Goods Exchange Events  
Customer Reward Program  
Grass Ban  
Green Procurement Education  
Outreach Program  
User Pay for Garbage

**Enhanced**

Potential Diversion – 30% to 40%  
Cost - \$220 to \$240 /hhld/year\*

### Comprehensive

**Service Options:**

Curbside Garbage & Landfill  
Single Family Curbside Recycling  
Multi-Family Recycling  
Curbside Biweekly Leaf & Yard (+ Christmas Tree) collection  
Curbside Food Waste Collection  
Permanent HHW Facility (more frequent operation)  
Curbside Bulky/White Goods Collection

**Supporting Mechanisms:**

Promotion & Education  
Goods Exchange Events  
Customer Reward Program  
Grass Ban  
Green Procurement Education  
Outreach Program  
User Pay for Garbage  
Reduced Frequency of Garbage collection  
Mandatory Recycling

**Comprehensive**

Potential Diversion – 50% to 65%  
Cost - \$280 to \$320/hhld/year\*

\* If the Potential provincial Multi Material Resource Recovery Fund were to cover 50% of the costs of the household recycling program, then these costs would be reduced by about \$50 per household per year.

## IC&I Service Level Options

<b>IC&amp;I Basic</b>	<b>IC&amp;I Extended</b>	<b>Items for Future Consideration</b>
<p>IC&amp;I Sector Working Group</p> <p>Market Development</p> <p>City-Based Green Procurement</p> <p>Promoting Green Procurement in other Sectors</p> <p>Voluntary Diversion at Special Events</p> <p>School Waste Diversion Programs</p> <p>Diversion Assistance Program</p>	<p>IC&amp;I Basic</p> <p>+</p> <p>Voluntary LEED/BOMA Best Certification</p> <p>Voluntary Take Back</p> <p>Voluntary Food Waste</p> <p>Differential Tipping Fee (premium and discounted fees)</p> <p>Landfill Bans</p>	<p>Landfill Permits for Waste Haulers and Recyclers</p> <p>Mandatory IC&amp;I Waste Audits and Waste Reduction Plans</p> <p>Mandatory Recycling (covered under landfill bans)</p> <p>Packaging Bans</p>

Note: The City provides an open landfill as service to the IC&I and C&D sectors.



### C&D Service Level Options

<b>C&amp;D Basic</b>	<b>C&amp;D Extended</b>	<b>Items for Future Consideration</b>
<p>C&amp;D Sector Working Group</p> <p>Market Development</p> <p>Green Building Technical Assistance</p> <p>Differential Tipping Fees* (premium/discounted fees)</p>	<p>Basic</p> <p>+</p> <p>C&amp;D Material Recycling Facility (MRF)</p> <p>LEED for Municipal Buildings</p> <p>LEED Certification for Private Sector Developments</p> <p>Landfill Bans</p>	<p>Mandatory Recycling (covered under landfill bans)</p> <p>Landfill Permits for Waste Haulers and Recyclers</p> <p>Mandatory Waste Reduction Plans</p> <p>Mandatory C&amp;D Recycling Targets</p> <p>Refundable Deposits on C&amp;D Projects</p>

Note: The City provides an open landfill as service to the IC&I and C&D sectors.

\* The City already offers a differential tipping fee (discounted fee) for source separated shingles.

### ES-3 Sustainable Waste Management System Financing

Regina employs a traditional municipal cost and revenue allocation structure, with revenue from outside sources, such as landfill tipping fees, flowing directly into the General Fund and solid waste management costs, along with other departmental costs such as social services, being funded from the General Fund.

Following the adoption of a preferred waste management system for Regina, the City may face significant increases in costs associated with provision of its new waste management and diversion services. At this point it may be practical for the City to move away from the traditional funding model towards a utility type model.

Under a utility type model, the City would establish its waste management department into a “business unit” that captures all waste management revenues and costs. The City could apply a variety of approaches for charging residential waste management services including an annual flat fee, an annual fee for a chosen level of service (variable fees), etc.

The following table provides a summary of the various approaches for charging for residential waste management services that are available for consideration by Regina.

**Summary of Approaches for Charging for Waste Management Services**

Issues	Assessment Based (Property Taxes)	Flat Annual Fee	Annual Fee For Chosen Level of Service	Fee for Individual Container/Bag Collection
Factor determining cost of waste management service to householder	Assessed value of property	All households pay the same	Size of garbage container selected	Number and frequency of garbage containers or bags set out for collection
Mechanism for collecting revenue	Tax bill	Included on tax bill as separate line item or separate invoice	Separate invoice or possibly included on tax bill as line item	Sale of tags or stickers
Administrative effort required to implement	None (this is status quo)	Small	Medium	Medium
Suitability for financing new diversion initiatives	Not well suited	Well suited	Well suited	Less well suited than annual fees
Incentive for additional diversion from disposal	None	None	Yes, major incentive	Yes, major incentive
Potential to cause illegal dumping	None	None	Some	Some
Uncertainty associated with financing revenue stream	Minimal	Minimal	Minimal	Some
Constraints to implementation	None (this is status quo)	Small	Medium	Medium
Early public acceptance	Not applicable (this is status quo)	Low, due to regressive nature of fee	Medium, as residents given some choice and ability to control size of fee	Low, due to inconvenience of having to acquire and use tags
Need for strong Council support and communication	None (this is status quo)	High	High	High

A detailed description of the need for a different financing mechanism and potential financing systems used by other municipalities is provided in Section 6.

## ES-4 Implementation Considerations

The City will need to start planning for the implementation of its preferred waste management and diversion system. Implementation considerations include:

- Consulting on the Service Level Options and Waste Diversion Packages presented in this report and ultimately deciding on preferred packages for:
  - Residential Sector;
  - Industrial, Commercial and Institutional Sector;
  - Construction and Demolition Sector.
- If the City decides to provide the service, conducting a detailed implementation study on the provision of residential recycling services, collecting and processing services to address:
  - Materials to be collected;
  - Level of sorts – single stream or two streams;
  - Frequency of material collection;
  - Type of collection – automated or manual;
  - Who collects - public or private sector forces;
  - Who processes - private sector contractor or at a new public sector facility;
  - Marketing of materials - City staff or a private sector contractor;
  - Development of a communication strategy during launch of the enhanced program.
- Determining the timing of service level delivery, which may include a phased in approach.
- Moving towards a waste management utility and utilization of alternative revenues sources to fund provision of additional services.

These implementation considerations are further addressed in Section 7.

## ES-5 Project Consultation Process

Consultation plays a critical role in the development and successful implementation of a solid waste management master plan, and Waste Plan Regina is no exception. Therefore, a comprehensive public and stakeholder consultation was designed as a cornerstone of the project. Some of the key highlights of the consultation process are presented below.

### Residential Survey

The City of Regina surveyed 1,000 Regina residents in May 2008. The following are some highlights from this survey:

- The majority of respondents (97%) feel that the City provides very good waste management services;
- More than 85% of respondents feel strongly that it is important to reduce the amount of garbage going to landfills;
- Almost 70% felt that providing a convenient way to recycle materials through curbside recycling would have a lot of impact on their decision to recycle;
- Most respondents support by-laws, policies and programs to promote waste diversion by residents;
- About 90% of Regina residents support the introduction of bylaws requiring businesses to separate their recyclables for disposal; and

- Two thirds of the respondents were willing to pay up to \$10 per month (and in some cases more) for curbside recycling and over 60 percent were willing to pay up to \$10 per month (and in some cases more) for curbside food waste collection.

## Public Open House

On June 17<sup>th</sup> 2008 a Waste Plan Regina Open House was held at the City Hall Forum to introduce the project and the current waste management system to the public and to provide them with an opportunity to express their aspirations and expectations for the process through direct discussions with Regina staff and the Consultants. The Public Open House was very well attended with 110 attendees registering on the sign-in sheet. The majority of attendees identified their support for the planning process.

## Waste Plan Regina Website

The City launched a dedicated Waste Plan Regina website at [www.regina.ca](http://www.regina.ca) to provide the community with access to information about Waste Plan Regina and provide feedback through a dedicated Waste Plan Regina email. The website has been used extensively by Regina citizens and City staff have received over 600 emails and input from citizens through the website.

## Stakeholder Working Groups

To facilitate effective discussions and input with key stakeholder groups within the City, a series of four working groups was established in the early stages of the project. The four working groups include:

- Citizen's Working Group – comprised of residents and representatives from community organizations (e.g. community zone boards);
- IC&I Working Group – comprised of members from a variety of sector groups including Health, Education, Retail, Tourism, Food Services, Office Building (e.g. BOMA) and Chamber of Commerce.
- C&D Working Group – comprised of members from construction and demolition companies, the Homebuilder's Association, and reuse organizations (e.g. Habitat for Humanity Reuse Store);
- Waste Management Working Group – comprised of members of the local waste management and recycling industry.

The working groups, or in some cases individual sectors, met four times during key milestones in the project to provide advice, input and direction in the formulation of the service level options and waste diversion packages. These working groups played a major role in the Waste Plan Regina process, ensuring that the Plan reflects the needs, concerns and preferences of the different sectors.

## Elected Official Involvement

Throughout the process, the consultants maintained close working relations with the Elected Officials ensuring that they were kept abreast of all project milestones and activities. Information sessions with the Elected Officials were held five times throughout the project. This ensured that the Councillors could discuss the Waste Plan Regina with their constituents and knowledgeably address any questions or concerns that might arise. It also ensured that they continued to support the process and felt involved throughout.