CITY OF WINNIPEG
COMPREHENSIVE INTEGRATED WASTE MANAGEMENT PLAN
SUMMARY – DRAFT WASTE MANAGEMENT OPTIONS REPORT
IC&I AND C&D DIVERSION

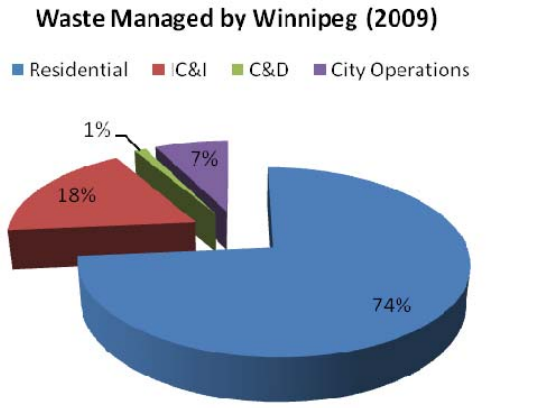
Introduction

The City has retained Stantec, to work with the City Staff and Elected Officials, the Stakeholder Advisory Committee (SAC) and other stakeholders, to develop a Comprehensive Integrated Waste Management Plan (the CIWMP) that will establish a long-term approach to manage the municipal waste stream.

The purpose of the CIWMP will be to provide direction for the City's waste management system through recommendations to improve current waste diversion programs, and to address processing and disposal needs over the next twenty years.

The Draft *"Waste Management Options Report"* is part of Stage 1 of the CIWMP and is intended to provide a compendium of waste management approaches that could be included in the CIWMP for the short (over the next five years), mid (over the next ten years) or long (over the next twenty years) term. The primary focus of the CIWMP is the residential waste management system, as residential waste makes up the majority of waste material managed by the City. City programs and facilities also manage waste generated by other sectors. This includes waste generated by the Industrial, Commercial & Institutional (IC&I) Sector, construction and demolition (C&D) waste and waste generated by City Operations, which altogether make up 26% of the total waste managed by the City.

Total Tonnes of Waste Managed in 2009	
Residential	341,542
IC&I	83,099
C&D	5,310
City Operations	34,369
Total	464,320



It is estimated that overall, approximately 350,000 tonnes of IC&I waste and 125,000 tonnes of C&D waste is generated in the City. C&D material quantities are difficult to estimate as they are often generated periodically based on construction starts and as much of the material is not tracked.

The majority of these materials are managed at private sector facilities and operations outside of the City's system.

It is estimated that the City manages around 20% of the IC&I and C&D waste generated in the City.

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The options for diversion of IC&I and C&D materials considered for the CIWMP must acknowledge that the majority of these materials are managed outside the City's system. The City can encourage and support diversion but is not in the position to control the level of diversion by these sectors.

The majority of IC&I and C&D materials are managed at private sector facilities, such as the Mid-Canada landfill south of Winnipeg, or the BFI Prairie Green Landfill which is located around 17 km northwest from the City Centre and disposes of around 200,000 tonnes per year of material and has a remaining operating life of around 36 years.

There are other private sector facilities like the Rocky Road Recycling plant that accepts and recycles used concrete, the Drywall Recycling Plant located around the Kenaston Commons on McGillvary Blvd and the Greensite Recycling facility that accepts and recycles used roofing shingles into a product that can be used in asphalt paving.

Rocky Road Recycling Yard

In circumstances where there are few options for IC&I and C&D disposal other than municipal facilities (e.g. the City of Owen Sound in Ontario), the municipality has taken the lead on developing and promoting IC&I and C&D diversion activities which include a mandatory diversion by-law and regulations on the amount of divertable materials that are permitted in the waste stream sent for disposal. In other jurisdictions where most of the IC&I and C&D waste are managed by the private sector (e.g. City of Ottawa), the municipalities have developed a strategy to encourage diversion in general.

Overall given how this waste is managed, in order to maximise IC&I and C&D diversion, the material should be regulated at the provincial level. Regulations could include requirements for generators to develop and implement diversion plans (e.g. Ontario Regulation 102 and 103/94) and/or to ban materials from landfill disposal (e.g. Nova Scotia ban on organics disposal in landfill). It would be reasonable for Winnipeg to encourage and support the Province in developing initiatives that support IC&I and C&D diversion.

Conceptual Near-term IC&I and C&D Diversion (first five years)		
Component	**Additional Cost**	**IC&I Diversion and GHG Emission Reductions**
Reduction, Reuse: • Promotion and Education • Develop and Issue a Green Procurement Guide • Support for Commercial Reuse Programs, Organize an on-line Waste-Exchange • Ongoing IC&I Diversion Dialogue, with increased interaction between the City, generators and private sector operators • Recognition of Diversion Leaders through programs such as annual diversion awards. Develop through diversion dialogue with industry • Determine if the City has the ability to require C&D diversion as part of site plan approvals • Encourage use of LEED standards in commercial development to avoid and divert waste during construction and demolition	**Annual Operating: $300,000 to $500,000**	**1 to 5% of IC&I Waste** **1 to 5% of C&D Waste** **(targets all generators)** **Difficult to quantify GHG Emission Reductions**
Resource Recovery: • Strategic Partnerships – Support for Entrepreneurs by providing location for developing new facilities (e.g. Green Industry Park at Brady Road) and promoting use of existing and new facilities to divert IC&I and C&D materials. This would include promotion of existing opportunities to divert concrete, shingles, drywall and wood pallets as well as blue box materials. • IC&I and C&D Materials Depot (at Brady Road) for materials where there may be strong demand for alternatives. • Research Partnerships with Post-Secondary Institutions such as U of M (e.g. Calgary Biocell project developed with support from U of C).	**Capital: $2 to $4 million or more** **Annual Operating: $1,000,000 to $2 million** (may break even depending on revenues from sale of materials and/or tip fees)	**Up to 10% of IC&I Waste** **Up to 10% of C&D Waste** **(targets mainly generators currently using City's system, may attract other material)** **Difficult to quantify GHG Emission Reductions**

Conceptual Near-term IC&I and C&D Diversion (first five years)		
Recycling: • The City only serves a small number of IC&I locations with curbside recycling. Could expand curbside recycling for small business. • Establish garbage disincentives or recycling incentives to increase use of program (e.g. commercial volume limits) • Work with MMSM and the Public School system to support and/or expand in-school recycling and curriculum. Schools can be used as conduit for broader community education programs on diversion. • Develop and implement Special Event Recycling in conjunction with CBCRA. Use funding from "away from home" program to focus on capturing beverage containers and other easy to recycle materials from public events.	**Capital: $100,000 to $500,000** (recycling containers) **Annual Operating:** (to be determined, may 'break-even')	**Up to 5% of IC&I Waste (targets mainly generators using City's system)** **GHG Emission Reductions of up to 16,000 tpy**
Brady Road: • Implement Differential Tipping Fees, charging up to five times the normal fee for mixed loads that contain targeted divertable material • IC&I loads of divertable material directed to new drop-off areas at the landfill • C&D loads of divertable material (wood, soil etc.) directed to new drop-off areas at the landfill • IC&I loads of Leaf & Yard and wood waste, directed to composting • "Green Park" for Private Enterprise. Ensure that land use planning for Brady Road landfill will allow for use of landfill property and surrounding area for green enterprise.	**Capital: noted above** **Annual Operating: noted above** (fee recovery through differential tipping fees)	**5 to 10% of IC&I Waste** **5 to 10% of C&D Waste** **Brady Road shifts from 'Disposal' to Resource Management Facility (targets current generators using City's system, may manage materials from other generators)** **GHG Emission Reductions Difficult to Quantify**
In Summary	**Capital: from $2.1 to $4.5 million** **Annual Operating: from $1.3 to $2.5 million (**some additional costs to be determined)	**Increase IC&I diversion rate** (IC&I waste managed by the City) **to between 21 to 30%** **Increase C&D diversion rate** (C&D waste managed by the City) **to between 16 and 25%** **Potential to divert 33,000 to 50,000 tpy if just targeting current generators using the City's system.**

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Conceptual Near-term IC&I and C&D Diversion (first five years)		
		May divert materials from other generators.

Over the 20-year planning period, the system could evolve to include additional diversion initiatives like diversion of IC&I food wastes. A balance of disincentives for IC&I and C&D waste disposal would have to be developed (move to landfill bans), to encourage source separation while recognizing that the IC&I and C&D sectors have the option to manage their material outside of the City's system. Further infrastructure would be developed to support the transition to a system where the majority of the waste is managed as a resource, not disposed.

Conceptual Mid to Long-term IC&I and C&D System (ten to twenty years)		
Component	**Additional Cost**	**Additional Diversion**
Reduction & Reuse: • Incentives and social marketing • Advocate for IC&I diversion regulations/waste policies.	**Capital: no new capital** **Annual Operating: no new operating**	**Up to 1% of IC&I Waste** **Up to 1% of C&D Waste** **(targets all generators)** **Difficult to quantify GHG Emission Reductions**
Resource Recovery: • Mandatory Diversion By-law (for IC&I and C&D generators that use the City's system for collection, processing or disposal)	**Capital: minimal** **Annual Operating: $200,000 to $400,000** (by-law enforcement, would have some cost recovery)	**Works in Conjunction with Landfill Ban**
Recycling: • Further Incentives to participate • Long-term Processing capacity (additional MRF)	**Annual Operating:** (to be determined, may 'break-even')	**Up to 1% of IC&I Waste** **(targets mainly current generators using City's system)**
Organics: • Process commercial food wastes • Develop processing facility at Brady Road	**Annual Operating (processing):** **(**likely to 'break-even' based on tipping fees)	**Up to 6% of IC&I Waste** **(targets all generators)** **24,000 tpy of GHG Emission Reductions**
Brady Road: • Landfill Ban, apply prohibitive fee (10X normal) for loads with greater than 5% of a banned material • Expand "Green Park" for Private Enterprise	**Capital: $500,000 to $1,000,000** **Annual Operating: $300,000 to $500,000** (cost recovery through fees)	**Up to 15% of IC&I Waste** **Up to 25% of C&D Waste** **(targets mainly current generators using the City's system)** **Brady Road shifts from 'Disposal' to Resource Management Facility** **GHG Emission Reductions Difficult to Quantify**

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In Summary	**Full costs to be determined**	**Over 50% or more of IC&I and C&D Waste Diverted** **Potential to divert over 50,000 tpy from current generators using the City's system. Plus around 30,000 tpy from other generators.**

Next Steps

The City needs feedback on:

- **Promotion and Education programs**. What do you currently do to divert waste? What information or program access do you need to effectively participate in diversion programs? How can we engage IC&I and C&D generators in support of diversion programs?
- **Proposed additional diversion programs**. What are the current barriers to diversion (lack of services, cost of diversion services)? Should the City develop depot(s) for diversion of loads of IC&I and C&D materials like wood waste, shingles, cardboards etc.?
- **Changes to the recycling program**. Should the City provide all small commercial generators with a blue box or cart program to pick up recyclables?
- **Diversion of organics**. Does the IC&I sector need access to a City Leaf & Yard waste composting facility? In the longer term, what would the demand be for processing IC&I food wastes?
- **Changes at Brady Road**. Should the City develop new IC&I and C&D waste diversion facilities at the landfill? What form of differential tipping fee would encourage diversion and discourage disposal of mixed loads of garbage (e.g. two, three or four times the normal fee)? When and how should the City ban certain materials like cardboard from disposal in the landfill?

The Draft Waste Management Options Report is part of the first Stage of the CIWMP, and is part of the longer CIWMP process.

Consultation will be ongoing over the next few months with the SAC, and other stakeholders such as commercial generators, on the Draft Options Report and other study documents. Following the outcome of this consultation, the next Stages of the CIWMP (to be completed later in the spring) will include:

- Selection of the Preferred System and Development of the Implementation Plan
- Preparation of the Draft and Final CIWMP Reports.

We welcome your comments and questions. Please access the study information and find out about opportunities to participate at speakupwinnipeg.com or by calling 311.

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