



# KC ENVIRONMENTAL GROUP LTD.

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Cleanit Greenit Composting Systems<sup>ltd</sup> ■

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March 1, 2010

Mark Barrett  
Director, Engineering Services  
City of Camrose  
5204 - 50 Avenue  
Camrose, Alberta T4V 0S8

Dear Mr. Barrett,

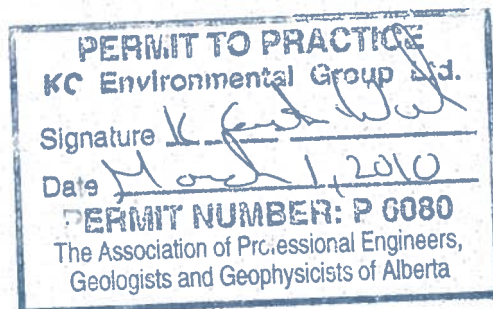
We are pleased to submit the following report to you, completed by KC Environmental Group Ltd. and its consultants in March 2010.

If you have any questions or require further information, please contact Stacey Aidun at 780-488-7926.

Sincerely yours,  
KC Environmental Group Ltd.  
APEGGA Permit to Practice Number P 6080



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**City of Camrose**  
Solid Waste Collection and Diversion Study

# **Executive Summary**



**KC ENVIRONMENTAL  
GROUP LTD.**



## **EXECUTIVE SUMMARY**

KC Environmental Group Ltd. conducted a Solid Waste Collection and Diversion Study for the City of Camrose. The study included a review of the current waste management system, a survey of Camrose residents to measure interest in a range of solid waste options, and an analysis of feasible collection and diversion options.

Based on results of this work, KC Environmental made recommendations for a comprehensive solid waste management system that is environmentally responsible and meets the needs of its citizens in a cost effective manner.

### **REVIEW OF CURRENT SYSTEM**

The City of Camrose's current waste management system provides a strong foundation for an integrated solid waste management system. The programs current services which include collection, recycling and composting divert 21% of the residential waste stream, and 18% of the municipal solid waste (MSW) stream which includes construction and demolition (C&D) waste, as well as industrial, commercial and institutional (ICI) waste. Approximately 6000 tonnes of residential waste and 25,000 tonnes of MSW are sent to landfill each year.

Areas of strength in Camrose's current program are:

#### **1. Recycling Depot:**

- The depot is a key component in achieving Camrose's current residential diversion rate of 21%. This is a high diversion rate for depots and indicates strong public support and usage of the depot.
- The depot is manned and centrally located with operations contracted out. This is the most cost-effective method of operating a depot as it allows for concentrated identification of best value markets, reduces contamination and provides opportunity to educate depot users.

#### **2. Organics:**

- Organic bins at the depot and the compost pad at the landfill provide opportunities to address the largest component of the waste stream and diverted 2180 tonnes in 2008.
- Composting infrastructure is in place to implement more diversion programs to address this waste stream (50% of municipal solid waste).

#### **3. Concrete Recycling Program**

- The Concrete Recycling Facility at the landfill diverts significant quantities of commercial waste from the landfill (3364 tonnes in 2008).
- This program reduces costs both in terms of landfilling and in the City's purchasing costs for concrete.

#### **4. Public Education Program**

- Camrose has a strong educational program already established that can form the foundation of an extremely effective solid waste education and social marketing program which will result in increased participation and capture rates for solid waste programs.

Areas of particular strength include:





- Public Educational Coordinator, Vicki Cole and delivery of successful waste reduction education programs particularly with children and youth
- Effective website with easy access to solid waste information
- Brochures which inform the public of the available programs and diversion results from these programs
- Development of the “Paint Your World Green” theme which reflects Camrose’s interest and strength in green spaces, and incorporates sustainability and environmental responsibility
- Green Action Committee

These programs have resulted in a municipal solid waste diversion rate of 18%, compared to a provincial average diversion rate of 14.6%.

Despite this strong base, Camrose residents dispose of 360 kg/capita annually compared to the provincial average of 290 kg/capita; and dispose of 1560 kg/capita/year of MSW compared to a provincial average of 1130 kg/capita and Alberta Environment’s goal of 500 kg/capita.

In its goal to be environmentally responsible, it is important for the City to implement additional diversion programs to reduce the amount of waste sent to landfill. In identifying effective diversion programs it is important to note that 76% of Camrose’s MSW is comprised of commercial waste and 24% is residential waste.

## **SURVEY RESULTS**

In general, the survey reflects a desire among residents for more information. The survey provided direction in the following areas:

1. Residents are in favour of establishing a goal to reduce waste to landfill (only 5% of residents selected “No goal” (most wanted to reduce MSW sent to landfill to at least 1000 kg/capita/year).
2. Residents want more options for plastics.
3. There is a willingness to pay an additional amount to reduce waste to landfill. Approximately 71% selected options other than \$0, 63% selected at least \$1 to \$5 and the remainder selected a higher amount.

## **SOLID WASTE MANAGEMENT STRATEGY**

Based on the review of the current system and the survey results, and through application of solid waste management “best practices” and KC Environmental’s experience and knowledge of successful programs, KC Environmental recommends the following Solid Waste Management Strategy for the City of Camrose.



## 1. Establish Goal (January, 2010)

### 1.1 *KC Environmental recommends the following goals be established:*

- **Reduce residential waste generation to 195 kg/capita by 2015.** This represents a 45% reduction in residential waste sent to landfill and moves the City towards the overall provincial target of 500 kg/capita of MSW of which Camrose' residential waste comprises 24%.
- **Reduce Municipal Solid Waste generation to 1000 kg/capita (including commercial waste) by 2015.** This represents a 36% reduction in MSW sent to landfill of which Camrose's commercial waste comprises 76%.

Targets should be reviewed after 3 years, with new goals set for reductions in waste generation by 2020. These goals should reflect the achievements made over the 3 years.

### 1.2 *KC Environmental recommends that the following annual data be collected and compared to 2008 bench line data to measure progress towards the established goal:*

- Waste Generation Rate: Residential and MSW
- Diversion Rate: Residential and MSW
- Capture Rates for Diversion Programs

## 2. Waste Collection

### 2.1 *Implement Bag/Cart Limit (Phased In, Beginning May 2010)*

Implement a phased in bag/cart limit on the following schedule:

May 2010:	6 bag limit
May 2011:	4 bag limit
May 2012:	2 bag = 1 cart limit

This provides residents with an incentive to reduce waste. Bag limits can achieve approximately 30% reduction in waste through change in behaviour as a result of increased awareness of waste habits. Other than administrative costs to change the bylaw and to educate the public, there is no cost to implement.

### 2.2 *Implement Cart System in 2 to 3 Years*

KC Environmental recommends that the City implement a cart system for the following reasons:

1. This is the future trend in municipal collection. Currently 30% of municipalities across Canada have implemented the program with more and more municipalities implementing carts each year. In the Edmonton region, Devon, Beaumont, Stony Plain, Spruce Grove, and Strathcona County have moved to the cart system.



2. A portion of the operational benefits of the automated cart system that accrue to the hauler are passed on to the municipality in most cases.
3. Carts make waste limits easy to implement. One cart of waste per household (carts = minimum of 2 bags).
4. Carts make other future diversion programs feasible (i.e. biweekly waste collection, organic collection).
5. Carts are neat and fit in with Camrose's image of a clean city.

However, because residential collection currently includes back lane collection (fully automated collection requires front lane pick up) and Camrose residents' appear to have a strong desire for more information, KC Environmental recommends that carts not be implemented until 2012. This will provide time for a public education and social marketing campaign to prepare residents for the change.

The cost to implement a one-cart system is estimated at \$80/household landed (including delivery to each house). If amortized over 5 years at 6%, the annual cost to implement a cart system is \$1.60/hh/month. If amortized over 10 years, this is reduced to \$0.90/hh/month. Maintenance of the cart system can either be contracted out or completed in house. Assuming \$20,000/year in maintenance costs, the total cost per household for 5 years is \$1.85/hh/month.

It is recommended that the City begin with one waste cart/household in 2012 and expand to an organics cart once the landfill has the organic processing capacity (2014).

### **2.3 Issue Tendering Documents (February 2010)**

KC Environmental recommends that the City use the tendering process required for waste collection as an opportunity to collect bids for a range of collection options.

Specifically, KC Environmental recommends that a Request for Proposals for the following services be issued:

- Curbside Collection of Household Waste (Manual Collection)
  - Tender should inform bidders of phased in waste limits
- Curbside Collection of Household Waste (Automated Collection)
  - Tender should inform bidders that City may implement cart system within the contract period and that if so, the automated collection rate would apply for the years it is implemented
- Curbside Collection of Yard Waste Spring through Fall
  - Tender should request information on collection requirements from hauler
  - Tender should state collection requirements for compost facility (i.e. if bags are allowed, compost facility must debug)
  - Tender should state yard waste collection dates (May 1 through October 1 of each year)
- Curbside Collection of Household Recyclables
  - Tender should request information on collection requirements (blue bag/blue box)





One tender document can be issued with bidders providing proposals for only those services they are bidding on.

### **3. Enhance Recycling Options**

#### **3.1 *Curbside Collection of Recyclables (Obtain Quotes February 2010, Consider Implementing in 2012)***

KC Environmental recommends that the City obtain quotes for the provision of curbside collection of recyclables when it issues its tender documents for waste collection.

The estimated cost/household for this service is \$3.50 to \$5.00/household. Although curbside collection of recyclables increases convenience to residents, KC Environmental does not recommend this be implemented over other options at the same or less cost for the following reasons:

- The depot is already achieving high diversion rates for this waste stream
- The expected increase in diversion from implementing the program is 8%
- Considering current diversion rate and expected diversion rate, program is not as cost-effective as other programs

KC Environmental recommends this option be considered in 2012 once other more cost-effective programs have been implemented and the City has moved to a 2 bag/1 cart limit which requires a full suite of options for residents.

#### **3.2 *Expand Plastics Options at Recycle Depot***

It is recommended that the recycling depot expand acceptable plastics to include #1 and #6 plastics both of which are widely accepted at recycling depots and have a high rate of marketability. This will address resident's strong desire for more plastics options.

#### **3.3 *Provide HHW Collection Services at Depot Spring through Fall***

KC Environmental recommends that services at the depot expand to include residential HHW collection spring through fall. Key to higher capture rates of HHW is convenience. The recycling depot is the most convenient location for residents and spring through fall drop off integrates well with other seasonal programs (i.e. yard waste). Spring through fall captures the peak periods for HHW collection, avoids storage of HHW over the winter and related issues with freezing, and reduces the number of processing events required over a year.

Airdrie implemented spring through fall HHW collection at the depot and is very pleased with its program.

#### **3.4 *Hours at Depot***

To reduce operational costs the recycling depot can be closed on an additional day. The best day based on survey results may be Tuesday.



### **3.5 Enhance Education Offered at Depot**

A depot staff member should be trained to provide educational information to depot users both to reinforce the City's waste management strategy and to reduce contamination. The staff member should focus on incoming commercial OCC to reduce contamination of this stream.

## **4. Enhance Composting Options**

### **4.1 Implement Spring through Fall Yard Waste Collection (May 2010)**

KC Environmental estimates yard waste collection costs will be between \$3.50 and \$5.00/household. To reduce collection costs for yard waste it is recommended that curbside collection for this waste stream only be provided initially from spring through fall (6 months) when yard waste generation is at its peak. This will reduce collection costs to between \$1.75 and \$2.50/hh when spread over the year.

KC Environmental recommends this option be implemented for the following reasons:

1. It is the most cost-effective option as it provides the largest diversion at a lower cost. I.e. it can achieve double the diversion of curbside recyclables at half the cost.
2. Camrose already has the ability to process the organics at the compost pad at the landfill.

Although carts are the best method for the collection of yard and food waste, it is recommended that the City begin spring through fall yard waste collection with Kraft brown bags or in carts supplied by the homeowner with "organic" labels provided by the City.

For maximum diversion the bylaw should be changed to prohibit yard waste to landfill by the year 2012. This will also require the commercial sector to divert yard waste. The public education program should be timed to educate both the residential and commercial sector of this change.

A compost expert should be hired to advise the City on best management and operations for the composting of the yard waste.

### **4.2 Consider Implementing Organic Waste Carts by 2014**

Once waste carts have been implemented, KC Environmental recommends expanding the cart system to include organic carts. This allows the City to divert both food and yard waste which makes bi-weekly waste collection a feasible option.

As this requires time to implement an education campaign, to build on learning from programs implemented in 2012 and earlier, and to develop the organics processing capacity, KC recommends that this be considered for implementation in 2014 or later.

### **4.3 Engage a Composting Consultant to Expand Organics Processing Capacity**

The current composting system at the landfill should be continued and expanded. To improve the capacity of the system with local resources and to update the system to include food waste,



it is recommended that the Landfill Authority engage the assistance of a compost expert in two to three years time.

Once the compost facility expands to include food waste, KC Environmental recommends that the City contract out the operations and management of the organics processing to reduce the risk of odour and associated costs.

#### **4.4 Use Finished Compost in Parks and Recreation Projects**

Finished compost should be tested according to CCME Criteria and then used in the City's Parks and Recreation projects. This closes the loop and incorporates Camrose's green space beauty with the solid waste management strategy.

### **5. Enhance Commercial Waste Diversion**

#### **5.1 Implement OCC Ban (May 2010)**

KC Environmental recommends an OCC (old corrugated cardboard) ban be implemented at the landfill. This is relatively easy to implement as OCC collection bins are already in place in some downtown locations, there are private service providers and the landfill has the room to provide an OCC bin.

This involves the commercial sector and may start them working towards implementing changes to reduce waste.

Bylaws should be updated at the same time to include waste limits and waste bans.

#### **5.2 Implement C&D (Construction and Demolition) Diversion Program**

A C&D (construction and demolition) diversion program should be established at the landfill to meet the demand that will result from Alberta's C&D Waste Reduction Stewardship Program expected to be implemented in 2010. Items to focus on are drywall, drywall with wood ends, wood and asphalt shingles.

The Landfill Authority will need to provide areas for separation of these materials. Differential fees are used to encourage source separation (i.e. the rates for separated materials is less than comingled, and less than landfill).

#### **5.3 Encourage ICI (Industrial, Commercial and Institutional) to Work towards Goal**

The City should work closely with the University of Alberta Augustana campus and keep apprised of waste management strategies employed by the campus. This information should be shared with both the residential and commercial sector.

As part of this project, a letter was sent to the commercial sector requesting their ideas on ways to reduce waste; however, no response was received. The City should continue to educate both the residential and commercial sector regarding its solid waste management strategy and goals.





## **6.0 Move Landfill towards Resource Recovery Facility (RRF)**

The landfill should move away from being primarily a “dumping” location to a Resource Recovery Facility (RRF). This should be reflected both through signage, and through ease of use for diversion and separation.

### **6.1 *Incorporate “Paint Your World Green” Theme in Diversion Signage at Landfill***

All diversion programs should present a unified theme. This reinforces the integrated aspects of a solid waste system and encourages program users to focus on diversion first.

### **6.2 *Develop C&D Diversion Compound according to Alberta’s C&D Stewardship Program***

A C&D compound for the diversion of drywall, drywall with wood ends, wood and asphalt shingles should be developed at the site by May 2010.

### **6.3 *Implement OCC ban at landfill.***

Loads containing OCC are either rejected or fined. An OCC bin should be provided to divert the material at the landfill.

### **6.4 *Provide Area for Waste or Swap Exchange***

A “swap shed” or waste exchange area should be developed at the landfill where reusable items can be dropped off or picked up free of charge. Items can include books, toys, clothing, sporting goods and furniture.

### **6.5 *Apply Differential Tipping Fees***

Differential tipping fees should be applied to waste. Source separated loads (e.g., those excluding specified recyclables) would receive preferential tipping rates to mixed waste loads.

## **7. Expand Public Education and Social Marketing Program**

Program implementation, management and review should include public education and involvement throughout. This ongoing education program can be done in house through the City’s Educational Coordinator position with a consultants’ assistance as needed. As more diversion programs are implemented the City should consider increasing the current Educational Coordinator position to full-time.

The public education program should build on the foundation already established by the City and should:

1. Reflect a unified theme (i.e. Paint Your World Green).
2. Inform the public of the City’s Solid Waste Management Strategy and goals.
3. Provide information on Camrose’s waste stream and waste generation rates.



4. Incorporate social marketing techniques to market the social good of participating in existing and new diversion programs.

The City may also consider the following educational recommendations:

1. Mail Executive Summary of this report to households with the utility bill.
2. Hold ½ day session focused on solid waste management with key stakeholders (City staff, community representatives, haulers, recycling depot staff, etc). KC Environmental would present the findings of this study and recommendations for the waste management strategy would be consulted on.

## STRATEGY TIMELINE

The following table shows the recommended timeline for implementing the solid waste management strategy.

ACTION/STRATEGY	TIMING
2010	
Confirm Waste Management Goals	January 2010
Confirm 2010 Waste Management Strategy	January 2010
Initiate public education program to inform public of goals, strategy and timeline	January 2010 and ongoing
Issue Tender Documents for range of collection services	February 2010
Consult with depot regarding expansion of plastics	February 2010
Consult with depot and HHW processor regarding spring through fall HHW collection at depot	February 2010
Change Bylaws to reflect waste limit and OCC waste ban	Implement May 2010
Select service providers	March 2010
Implement Spring through Fall Yard Waste Collection	May 1 to October 1, 2010
Hire compost expert to advise on best procedures for composting yard waste and to expand compost site to handle commercial and residential organics.	Summer 2010
Implement Landfill Enhancements: <ul style="list-style-type: none"> <li>• OCC ban</li> <li>• Differential rates</li> <li>• C&amp;D Diversion area</li> <li>• Swap Shed</li> </ul>	Spring and Summer 2010
Estimated Additional Cost/Household for 2010 Enhancements (Yard Waste Collection, Spring through Fall HHW Collection, landfill enhancements) \$3.50/hh (this does not reflect savings achieved through diversion).	
2011	
Compare waste and diversion data against bench line	January 2011
ACTION/STRATEGY	TIMING
Confirm 2011 Waste Management Strategy	January 2011
Continue public education campaign focusing on review of initial results of Strategy and informing public of next stages	January and ongoing



ACTION/STRATEGY	TIMING
Implement 2 <sup>nd</sup> phase of waste limit (4 bags)	May 2011
Review C&D Stewardship program and expand diversion compounds at landfill as required	Summer 2011
Examine opportunities to receive funding for cart system	September 2011
No additional cost/household to implement 2011 strategy.	
2012	
Compare waste and diversion data against bench line	January 2012
Confirm 2012 Waste Management Strategy	January 2012
Continue public education campaign focusing on review of initial results of Strategy and informing public of next stages	January and ongoing
Issue tender for cart supply, request bids for both one stream (waste) and two stream (waste and organics)	January 2012
Implement automated waste collection	May 2012
Implement 3rd phase of waste limit (1 cart)	May 2012
Implement curbside collection of recyclables if price right	May 2012
Estimated cost/household to implement one cart system is \$1.85/month for 5 years	
2013	
Compare waste and diversion data against bench line	January 2013
Confirm 2013 Waste Management Strategy	January 2013
Monitor diversion results and set new goals for 2020	Spring 2013
Expand composting capacity at landfill to incorporate food wastes	Spring 2013
Continue public education campaign focusing on review of initial results of Strategy and informing public of next stages	January and ongoing
Continue to review options to reduce commercial waste – i.e. increase differential rates, expand ICI bans	Spring 2013
2014	
Compare waste and diversion data against bench line	January 2014
Confirm 2013 Waste Management Strategy	January 2014
Implement organic cart if not implemented earlier with waste cart	Summer 2014
Expand yard waste collection to organics (yard and food waste), year round	Summer
Implement bi-weekly waste collection	Summer

This implementation plan achieves significant diversion results within a five year time frame. KC Environmental recognizes that Camrose residents have a strong desire for information and may need to move a long a more drawn out timeline.

If this is the case, KC Environmental recommends that the City continue to refer to the Action Plan and to continue to work towards implementing the recommendations as they move forward. The most immediate areas of focus for this approach are:

1. Implement Waste Limit (6 bags – 2010; 4 bags – 2012)
2. Implement Spring through Fall Yard Waste Collection
3. Implement Enhanced Public Education and Social Marketing Campaign aimed at increased capture and participation rates for all implemented programs.





**City of Camrose**  
Solid Waste Collection and Diversion Study

# **Section 1: Current System Review**



**KC ENVIRONMENTAL  
GROUP LTD.**

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS .....</b>	<b>II</b>
<b>FIGURES AND TABLES .....</b>	<b>III</b>
<b>1.0 INTRODUCTION .....</b>	<b>1</b>
<b>1.1 WORK CONDUCTED .....</b>	<b>1</b>
<b>2.0 CURRENT WASTE MANAGEMENT SYSTEM .....</b>	<b>3</b>
<b>2.1 EXISTING SYSTEM .....</b>	<b>3</b>
<b>2.2 SOLID WASTE AND DIVERSION DATA REVIEW .....</b>	<b>5</b>
2.2.1 WASTE TO LANDFILL .....	5
2.2.2 RESIDENTIAL WASTE DIVERSION RATE .....	7
2.2.3 MUNICIPAL SOLID WASTE DIVERSION RATE .....	8
2.2.4 PER CAPITA WASTE DISPOSAL .....	9
<b>2.3 WASTE STREAMS AND QUANTITIES .....</b>	<b>10</b>
<b>2.4 REVIEW OF CURRENT WASTE MANAGEMENT PROGRAMS .....</b>	<b>11</b>
2.4.1 SOLID WASTE MANAGEMENT PLAN AND GOALS .....	11
2.4.2 WEEKLY RESIDENTIAL WASTE COLLECTION .....	12
2.4.3 RECYCLING DEPOT .....	12
2.4.4 REGIONAL LANDFILL SITE .....	17
2.4.5 NON – RESIDENTIAL WASTE (ICI AND C&D) .....	20
2.4.6 OTHER CAMROSE PROGRAMS .....	22
2.4.7 EDUCATION PROGRAM .....	22
<b>3.0 PRELIMINARY LIST OF PROGRAM ENHANCEMENTS .....</b>	<b>23</b>
<b>3.1 SOLID WASTE MANAGEMENT GOALS .....</b>	<b>24</b>
<b>3.2 WEEKLY RESIDENTIAL WASTE COLLECTION .....</b>	<b>24</b>
<b>3.3 RECYCLING DEPOT .....</b>	<b>24</b>
<b>3.4 LANDFILL .....</b>	<b>25</b>
<b>3.5 ICI AND C&amp;D .....</b>	<b>26</b>
<b>3.6 COMMUNICATIONS .....</b>	<b>26</b>
<b>3.7 OTHER .....</b>	<b>27</b>
<b>4.0 APPENDIX .....</b>	<b>28</b>
<b>4.1 LETTER TO COMMERCIAL SECTOR .....</b>	<b>28</b>
<b>4.2 INTERVIEW FIELD NOTES .....</b>	<b>30</b>

## FIGURES AND TABLES

Figure 1. Waste Sent to Landfill: 2006 - 2008.....	6
Figure 2. Comparison of MSW Composition for Alberta and Camrose .....	7
Figure 3. Percent of MSW Landfilled, Recycled, and Composted: 2008 .....	9
Figure 4. Typical MSW Compositions in Alberta.....	10
Figure 5. Centra Cam Recycling Depot .....	14
Figure 6. Signage at Depot.....	14
Figure 7. Signage & Access at Recycling Depot.....	15
Figure 8. Recycling Bins at Depot .....	15
Figure 9. Plastic Bag Bins .....	16
Figure 10. Baled Materials at Recycling Depot .....	16
Figure 11. Camrose Regional Landfill .....	19
Figure 12. Wire and Cable Separation at Landfill .....	20
Figure 13. CFC Separation at Landfill .....	20
Table 1. Waste Sent to Landfill: 2006 - 2008.....	5
Table 2. Residential Diversion Rates: 2007 & 2008.....	7
Table 3. Capture Rates for Residential Waste Stream .....	8
Table 4. MSW Diversion Rates: 2007 & 2008.....	8
Table 5. Adjusted MSW Diversion Rates for the City of Camrose: 2008.....	9
Table 6. Comparison of Current Camrose Diversion Rates with Alberta MSW .....	10
Table 7. Landfill Tipping Rates: 2007 – 2009 .....	18



## 1.0 INTRODUCTION

KC Environmental Group Ltd. (KC Environmental) is conducting a Solid Waste Collection and Diversion Study for the City of Camrose. The goal of this study is to make recommendations to the City of Camrose on a comprehensive solid waste management system that is environmentally responsible and meets the needs of its citizens in a cost effective manner.

The project is divided into five phases:

1. Local Research
2. Other Municipal Systems Review
3. Survey
4. Diversion Option Analysis
5. Action Plan/Implementation Report

This interim report presents the findings of Section 2.1 Local Research as outlined in our proposal.

### 1.1 Work Conducted

**Phase 1: Local Research** involved review of the City of Camrose's existing waste management systems and identification of available options and/or specific "issues/desires" of those involved with the activities.

As part of Phase I the following work was conducted:

1. Held Project Start Up Meeting May 13, 2009
2. Interviewed City of Camrose personnel associated with waste management activities (interview field notes are included in the Appendix) :
  - Mayor Clarence Mastel
  - City Councilors serving on Green Action Committee:
    - Max Lindstrand
    - Ray McIsaac
  - City Councilors serving on Regional Solid Waste Management Authority :
    - Daryl Shillington
    - Max Lindstrand
  - City Manager: Brian Hamblin
  - City Engineer: Ted Gillespie

- Assistant City Engineer: Jeremy Enarson
  - Director, Engineering Services: Mark Barrett
  - Director, Public Works: Jim Kupka
  - School Resource and Public Communications: Vickie Cole
  - Green Action Committee Members:
    - Barbara Olsen
    - Gary Gibson
    - Maurice Samm
    - Dittmar Mundel
3. Conducted site visits of existing waste management components and interviewed city private service providers:
- Toured city of Camrose
  - Observed waste collection
  - Toured Centra-Cam Recycling Depot and interviewed Centra-Cam Vocational Training Association staff:
    - Supervisor: Brent Wahlberg
    - Business Manager: George Lepard
  - Toured Camrose Regional Sanitary Landfill and interviewed current landfill operator: Adrian Maplethorpe, MCL
  - Solicited suggestions from commercial sector through letter to Chamber of Commerce and City Centre Camrose

(Note: KC Environmental made several attempts to interview the current waste hauler, including leaving at least five phone messages and sending emails. The interview could not be completed despite numerous attempts).

4. Reviewed existing reports, documentation and information related to waste management and demographics including:
- City of Camrose Residential Waste Collection Contract 2005 – 2010
  - Recycling Agreement with Centra Cam
  - Waste Collection and Disposal Bylaw
  - Council Report – Solid Waste Services
  - Strategic Action Plan
  - Letter of Agreement, Recycling Depot Expansion Partnership – City and Centra Cam

- Operator's Period Reports, 2007-4 and 2008-4, Camrose Regional Sanitary Landfill
- Operator's Tonnage Summary, 2006
- Green Action Committee Terms of Reference
- Recycling in Camrose Pamphlet, City of Camrose, Winter: Feb - 2009
- Outdoor Composting in Camrose Pamphlet, February 2, 2008
- Guide to Safer Cleaning in Camrose , Safe Disposal, January 2009
- Be Wise with Water Pamphlet – Water Quality Awareness Festival
- “Pay as You Throw” Info for Council, March 1999
- The Current, Battle River Watershed Alliance Newsletter
- City of Camrose Report to the Citizens 2007
- Camrose Booster and Camrose Canadian Newspaper Advertisements and Articles
- Camrose City Map
- City of Camrose Website

Analyses of the results from this work are summarized in Section 2.

## **2.0 CURRENT WASTE MANAGEMENT SYSTEM**

Section 2 provides a brief summary of the current waste management system, an analysis of current waste data and a review of each of the components of the current system.

### **2.1 Existing System**

The City of Camrose's existing waste management system includes the following programs:

1. Waste Collection:
  - Weekly residential waste collection for approximately 5000 units
  - Waste collection from a number of municipal facilities
  - Waste collection from approximately 20 garbage receptacles in the downtown area
2. Recycling:
  - Recycle With Centra Cam Depot
    - Paper and Cardboard

- Fluorescent Tubes
  - Glass
  - Computers and TVs
  - Tin Cans
  - Plastics
  - Paints
  - Batteries
  - Phone Books
- City of Camrose Concrete Recycling Facility (at Camrose Regional Sanitary Landfill)
- 3. Composting and Organics Recycling:
  - Compost Bunker at Centra Cam Depot (yard waste goes to landfill)
  - Pumpkin Program
  - Christmas Tree Program
- 4. Camrose Regional Sanitary Landfill (landfill and the following services):
  - Herbicide/Pesticide Container Removal
  - Battery Removal
  - Waste Oil, Oil Filter and Plastic Oil Container Removal
  - Propane Bottle Removal
  - Scrap Metal Removal
  - Tire Removal
  - CFC Removal (fridges)
  - Composting of Grass, Leaves, Yard Waste
  - Fall Clean Up Week
  - Asphalt
  - Concrete
  - Metal
- 5. Communications Program and Other Tools:
  - Part-time Educational Promotions Coordinator focusing on education programs for children and youth on waste, water and traffic safety
  - City of Camrose Engineering Brochures
    - Recycling in Camrose
    - Outdoor Composting in Camrose
    - Guide to Safer Cleaning in Camrose
  - Newspaper Ads
  - Green Action Committee



## 2.2 Solid Waste and Diversion Data Review

Solid waste and diversion data for 2007 and 2008 was reviewed and analyzed to establish solid waste generation and diversion rates and a baseline for measurement of future progress.

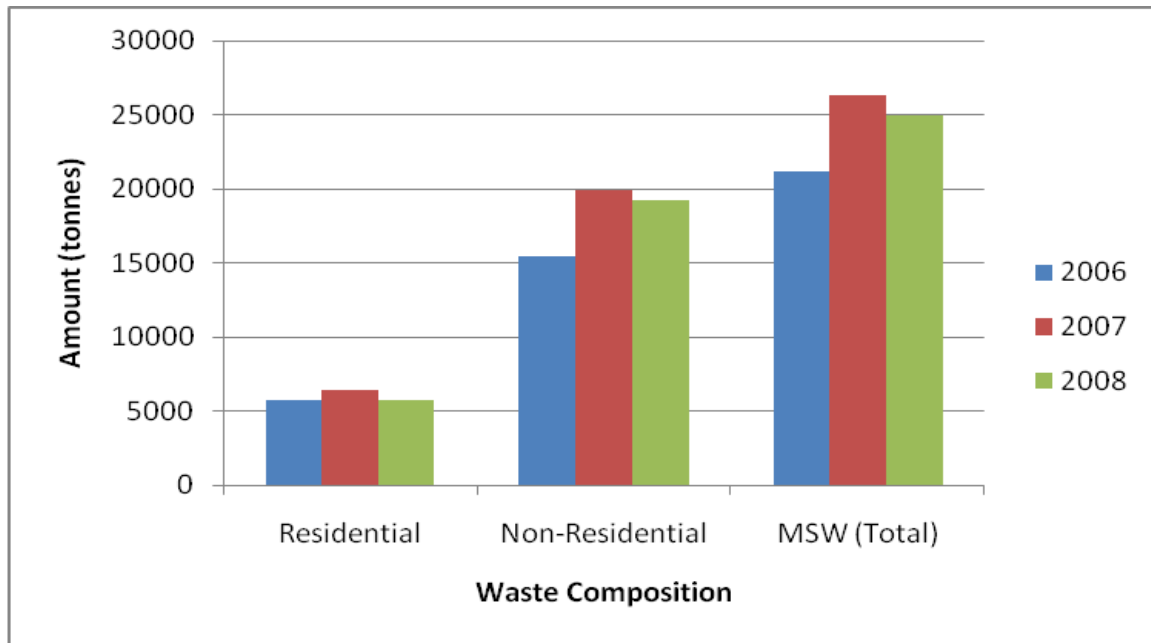
Records were reviewed from the Centra Cam Recycling Depot, the Camrose Regional Landfill, and the City of Camrose.

### 2.2.1 Waste to Landfill

Municipal solid waste (MSW) is comprised of residential and non-residential waste. Non-residential waste includes industrial, commercial and institutional waste (ICI) as well as construction and demolition waste (C&D). The annual tonnes of solid waste sent to landfill for the years 2006 to 2008 is provided in Table 1 and illustrated in the bar graph in Figure 1.

**Table 1. Waste Sent to Landfill: 2006 - 2008**

Year	Waste in Tonnes		
	Residential	Non-Residential	Total (Municipal Solid Waste)
2006	5 748.08	15 436.44	21 184.52
2007	6 453.41	19 859.04	26 312.45
2008	5 774.581	19 220.77	24 995.35

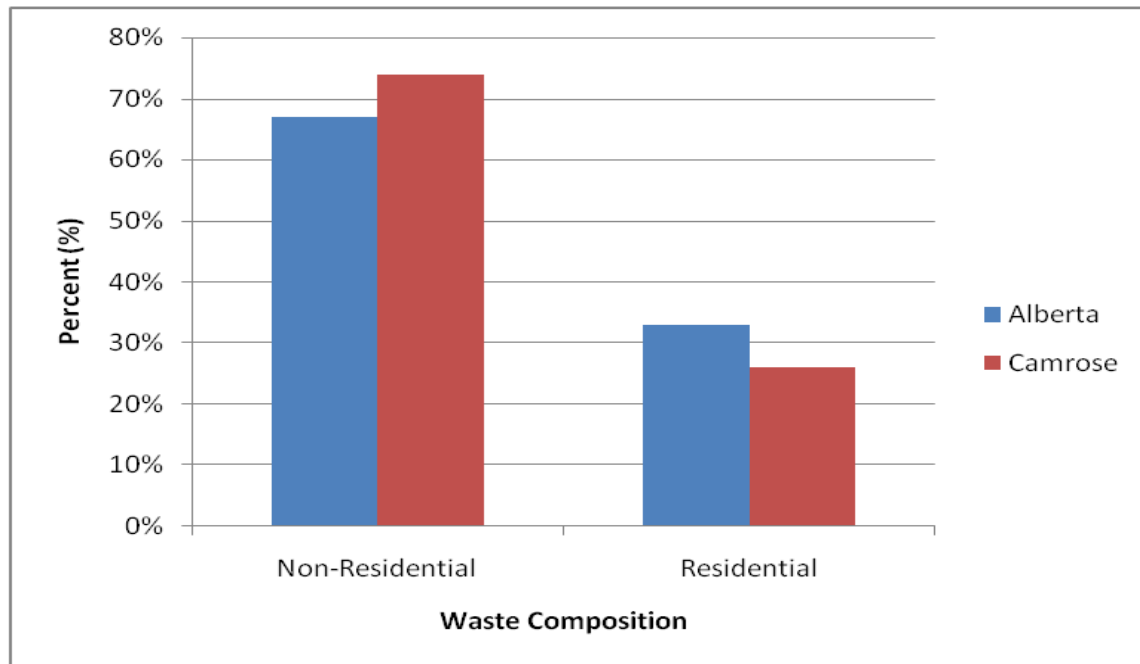


**Figure 1. Waste Sent to Landfill: 2006 - 2008**

As illustrated in Figure 1, MSW sent to the landfill was highest in 2007, likely a reflection of the economic boom period. Residential waste remained generally constant with only a slight increase in 2007. In 2008, residential waste was slightly less than 2006 quantities. Over a two year period MSW increased by 18% as a result of a 24% increase in non-residential waste.

This finding is consistent with municipalities across Alberta where the increase in construction and commercial activity as a result of an economic boom has led to significant increases in non-residential waste.

The impact of increases in non-residential waste is significant, as Camrose's MSW has a higher than normal percentage of non-residential waste at 74%. Figure 2 compares Camrose's MSW composition to the provincial average. As illustrated Camrose's non-residential waste percentage is 7% greater than the provincial average.



**Figure 2. Comparison of MSW Composition for Alberta and Camrose**

### **2.2.2 Residential Waste Diversion Rate**

Table 2 below shows the diversion rates for the City of Camrose's residential waste. Diversion was achieved through recycling and composting at the Camrose Recycling Depot. To determine the residential portion of the waste brought to the recycling depot, it was assumed that all waste other than OCC was residential and that 82.5% of OCC was commercial based on information provided by Centra-Cam staff. It is assumed that all residential waste is from the city of Camrose residents, although the County also uses the depot.

**Table 2. Residential Diversion Rates: 2007 & 2008**

Year	Residential Waste to Landfill & Diversion			
	Total Residential Waste Generated	Tonnes to Landfill	Recycling Depot Tonnes	Diversion Rate
2007	7745.53	6453.41	1292.12	17%
2008	7274.68	5774.58	1500.1	21%



The City of Camrose's current residential waste diversion rate is 21%.  
Table 3 compares the largest components of typical residential waste with the percentages actually being diverted through Camrose's current WMS.

**Table 3. Capture Rates for Residential Waste Stream**

Waste Stream	% of Typical Residential Waste Stream	% Currently Diverted	Capture Rate
Organics	52%	5%	10%
Paper & Cardboard	22%	13%	58%
Plastics, Metal & Glass	13%	1.3%	11%

### **2.2.3 Municipal Solid Waste Diversion Rate**

In municipal goal setting, MSW (residential, ICI and C&D) is used as a standard measure of waste generation and diversion. Table 3 shows Camrose's MSW diversion rates for 2007 and 2008. Total MSW generated includes MSW sent to landfill, MSW sent to recycling depot, concrete, and organics at landfill.

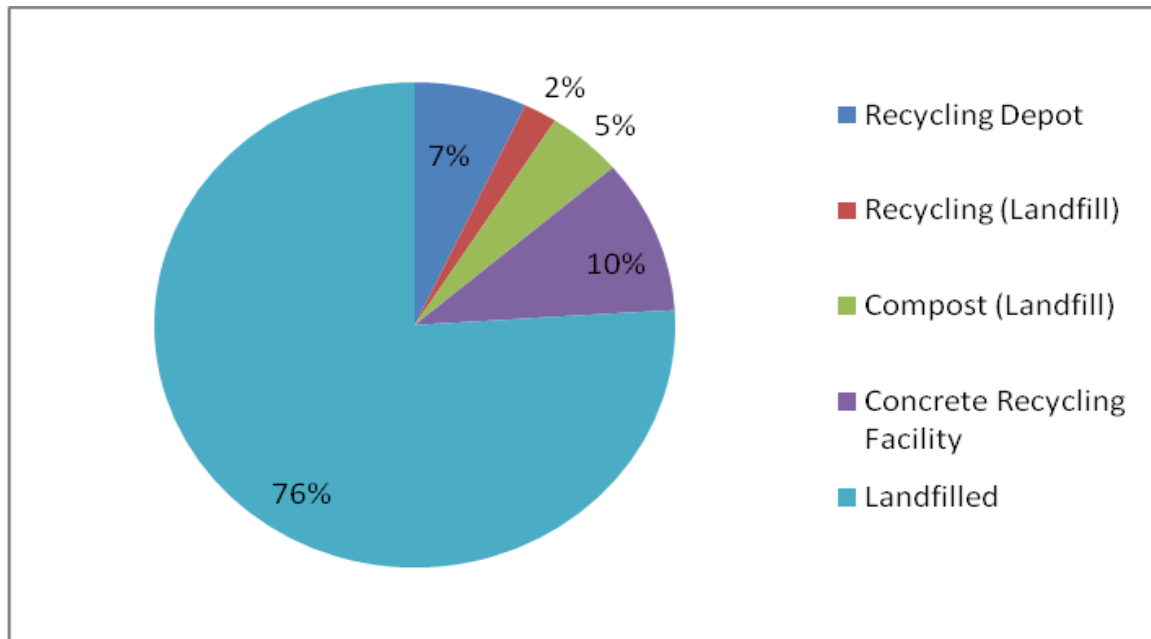
**Table 4. MSW Diversion Rates: 2007 & 2008**

Year	Total MSW Generated	MSW Diverted (tonnes)				
		Recycling Depot	Landfill Recyclables	Landfill Compost	Concrete Facility	Diversion Rate
2007	33 583.25	2 052.99	560.60	1654.06	3 364	22%
2008	32 892.36	2 297.76	685.71	1549.54	3 364	24%

Assumptions: Camrose's percentage of recyclables is the same as its percentage of MSW; compost from recycling depot was subtracted from total organics at the landfill, then % was applied; concrete recycled = 2000 m<sup>3</sup>/yr, density = 1.682/ m<sup>3</sup>

MSW diversion from 2008 is illustrated in Figure 3.





**Figure 3. Percent of MSW Landfilled, Recycled, and Composted: 2008**

As ceramics (concrete and asphalt) are generally estimated to be between 2% and 4% of the waste stream, the concrete data may be skewing the actual diversion rate. Assuming concrete is 4% of the waste stream, and Camrose is diverting all of it, then the adjusted MSW diversion rate is 18%.

The adjusted data is provided in the table below.

**Table 5. Adjusted MSW Diversion Rates for the City of Camrose: 2008**

Year	Total MSW Generated	MSW Diverted				
		Recycling Depot	Landfill Recyclables	Landfill Compost	Concrete Facility	Diversion Rate
2008	30 758.71	2 297.76	685.71	1549.54	1 230.35	18%

#### **2.2.4 Per Capita Waste Disposal**

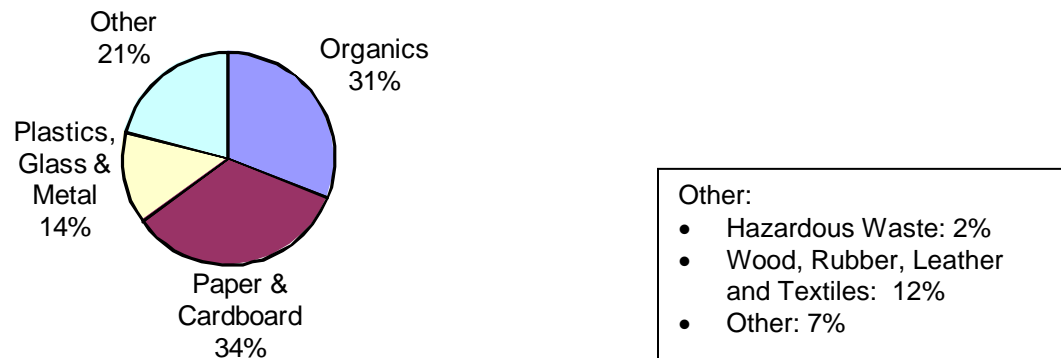
Alberta Environment's target in its *Municipal Waste Action Plan 2004-2006* is to reduce the amount of MSW deposited each year in landfills to 500/kg/person by 2010. (AENV recognizes that this goal will not be achieved) Based on 2004 data from Statistics

Canada, Alberta leads the country in the per capita disposal of MSW at about 1000 kg/person.

The city of Camrose sends 1650 kg/person of MSW each year to the landfill. To achieve Alberta Environment's target, Camrose would need to increase its diversion to 70%.

## 2.3 Waste Streams and Quantities

Figure 4 provides an estimate of the components of a typical municipal solid waste stream.



**Figure 4. Typical MSW Compositions in Alberta**

Source: Alberta Environment

The majority of typical municipal solid waste (MSW) is comprised of two waste streams: Paper & Cardboard (34%) and Organics (31%). Table 5 compares the largest components of typical MSW with the percentages being diverted through Camrose's current WMS.

**Table 6. Comparison of Current Camrose Diversion Rates with Alberta MSW**

Waste Stream	% Of Typical MSW	% Currently Diverted* (Landfill & City Depot)	Capture Rate**
Paper & Cardboard	34%	6%	18%
Organics	32%	7%	22%
Plastic, Metal & Glass	14%	7%	50%

\* Does not include source reduction initiatives by residences i.e. backyard composters and/or garburators, etc.

\*\* Assume Camrose's MSW composition is the same as typical Alberta MSW

Assuming Camrose's MSW composition is similar to typical Alberta MSW; Camrose is currently capturing 50% of waste plastic; 18% of waste paper and cardboard; and 22% of organics.

## **2.4 Review of Current Waste Management Programs**

### **2.4.1 Solid Waste Management Plan and Goals**

The City of Camrose currently has no specific solid waste management goals established, however general goals for environmental responsibility and green action are documented in the city's Strategic Plan. For example, the mission for Council and Administration refers to progressive development through responsible leadership including fiscal, environmental and social responsibilities. Work has also begun on a municipal sustainability plan in partnership with Augustana College with the environment forming one of the pillars of the plan.

One of the deliverables of the Action Plan for the city's Actively Green strategic priority is the articulation of the City's environmental plan and policy. This study will provide recommendations for this plan and policy.

A consistent theme throughout the interviews was a recognition that Camrose residents want to be environmentally friendly.

Commercial, social and demographic characteristics that should be considered for Camrose include the following:

- Camrose is building to be the regional center for eastern Alberta providing exceptional quality of life and a centre of excellence for healthcare, education, recreation and environment
- Focus for area business development is retirement, education, agribusiness, and some oil and gas
- Out of town traffic increased significantly with the opening of big box stores
- With Augustana College becoming a University of Alberta campus student population is expected to double in the next several years
- Camrose's popularity as a retirement community will continue to grow
- Common first impression of Camrose is that it is a clean city. Jubilee Lake is a show piece and reflects both Camrose's desire for green spaces and its clean city image

### **2.4.2 Weekly Residential Waste Collection**

The following are the findings related to weekly residential waste collection:

- The current residential waste contract with Waste Services Inc. will expire April 1, 2010. Collection costs are expected to increase significantly
- Residents want neighborhoods to appear clean and “neighbors” to waste less
- Current collection includes back lane pickup
- Hauler currently collects a lot of large items
- There is no incentive for residents to reduce waste
- There is no limit on the quantities of waste residents can set out at curbside
- There are no limits on the types of waste residents can set out at curbside

### **2.4.3 Recycling Depot**

The recycling depot was established in 1996 and was expanded to its current size in 2008, approximately double the size of the original depot. Operation of the recycling depot is contracted to Centra Cam Vocational Training Association. The recycling depot land is leased to Centra Cam under a five year contract that expires July 1, 2011 with an optional 5 year extension. Additional terms of agreements such as for the recycling depot expansion and fees are negotiated annually.

The partnership between the City and Centra-Cam is viewed as a win-win situation as Centra-Cam provides services at a lower price than a private sector contractor, and the facility provides jobs for Centra Cam clients. Depot operations comprise the largest part of Centra Cam’s operations at approximately 25%.

Residents pay a monthly recycling fee (currently \$3.25/household) to offset operational costs.

The City owns all equipment, buildings, and land as well as a large baler used for cardboard crushing. Centra–Cam owns two vertical balers, tools, a forklift, and drop off bins. Under the recycling contract, 85% of revenue from recyclables goes back to the City. Market rates for recyclables were down in 2008. Details regarding the specific markets are provided below:

- In addition to residential OCC (Old Corrugated Cardboard), the depot receives commercial OCC from Waste Management, OPT and McDonald’s. OCC tip rate was down in 2008

- Newsprint is profitable as there is steady demand from Can-Cell Industries Ltd. which manufactures insulation
- Fluorescent tubes are shipped to Edmonton
- Glass goes to Harvey Enterprises. Currently, the depot only collects clear glass as it has a better market. Glass could also go to Gray's in Edmonton
- Computer and TV recycling is now part of a provincial program where Centra-Cam is paid to accept the electronic waste (e-waste) at the depot. This program works quite well
- E-waste will increase as Alberta legislation is expanding its program to include 56 new items (VCR's microwaves, etc.)
- Bottles go to local bottle depot if they are not brought directly by residents
- Tin cans go to General Recycling for \$15/tonne
- Depot collects #2 plastics
- Depot collected 7 tonnes of film grocery bags which are baled and shipped to Metro at no cost
- Milk jugs are sent to Metro. New provincial milk jug program beginning June 2009 will charge a refundable recycling fee
- Paint and batteries are new items accepted at the depot. Batteries are shipped to EnviroSort in Red Deer and are a break even project. Paints are also sent to EnviroSort. The paint program is well used and the depot requires more bins from EnviroSort. Centra-Cam receives \$50 /bin and there is no cost for transportation
- The depot does not have a paint exchange program
- Compost bunker accepts yard waste only, pumpkins during pumpkin program, and Christmas trees after Christmas. The bunker was put in by the City and is regularly emptied by the City. Material is taken to landfill compost area

George Lepard, Business Manager, at Centra Cam conducts public education programs in schools on an on call basis and schools come out to the depot on a regular basis.

Centra Cam used to do out of town pickups but stopped in March as it was not cost effective. The depot is used by County residents as well.

Photographs of the depot are provided below.



Figure 5. Centra Cam Recycling Depot



Figure 6. Signage at Depot





**Figure 7. Signage & Access at Recycling Depot**



**Figure 8. Recycling Bins at Depot**



**Figure 9. Plastic Bag Bins**



**Figure 10. Baled Materials at Recycling Depot**



The following are the findings related to the recycling depot:

- The recycling depot provides a good public image both for the City and Centra Cam
- People use the depot and like it
- Depot is centrally located and a second depot location is low priority
- At time of site visit, new signs had not been installed. New signs with “Paint Your World Green” theme should be incorporated at all diversion program sites. Depot appeared neat
- Christmas tree program works well
- OCC from McDonald’s has a lot of contamination
- Residents want more plastic programs
- Need an option for Styrofoam
- There is little room for a colored glass bunker. Safety of the glass bunkers is also a concern. There is some interest in colored glass recycling from residents
- No program for construction and demolition waste at the depot
- Centra cam would like to reduce hours and close on Sundays because this is the least traffic day. Currently, the depot is open 7 days a week but, an opening in the evening could be an option
- Manned depots work well as it reduces costs due to less contamination and increases revenues by getting materials to highest value markets.

#### **2.4.4 Regional Landfill Site**

The Camrose Regional Sanitary Landfill is managed by the Camrose Regional Landfill Authority which is a partnership between the City of Camrose (3 members), Camrose County (1 member), and the Village of Bittern Lake (1 member). The landfill is fully funded by tipping fees.

The landfill serves a population of 20,000 residents and based on current historical disposal rates, the permitted area for waste disposal is expected to last more than 40 years.

Operation of the landfill is contracted out to Maplethorpe Contractors Ltd. (MCL). MCL also manages the Hinton, Roseridge, Red Deer, Leduc and Aspen (Drayton Valley) landfills. MCL has been contracted to operate the landfill under 3 to 5 years contracts since approximately 1988 with the most recent contract renewed in late 2007.

The City received a new Alberta Environmental Approval to operate Camrose Regional Landfill September 6, 2007. The new approval increased requirements for groundwater

monitoring, surface runoff control, waste cell lining and leachate monitoring, and collection and treatment; as well as requirements for reporting and timelines for implementation which has resulted in increased costs.

Current landfill tipping rates which are set by the Regional Landfill Authority are provided in the table below.

**Table 7. Landfill Tipping Rates: 2007 – 2009**

<b>Year</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>Minimum Fee</b>	\$5.00/vehicle	\$5.00/vehicle	\$5.00/vehicle
<b>Fee/Tonne</b>	\$26.00/tonne	\$30.00/tonne	\$31.50/tonne

The Class II landfill is a quarter section in area, but includes sections such as a ravine that are not scheduled for use. MCL employs a scale operator as well as two equipment operators.

Landfill facilities include a scale and scale office, scale equipment building, Recycling Compound “A” – Waste Oil and Batteries, Recycling Compound “B” – Scrap Metal and Tires, Equipment Building, and Herbicide/Pesticide Container Storage Compound. Waste diversion programs at the landfill included the recycling program, composting program and a burn pit program. The city operates a separate section of landfill for asphalt and concrete recycling.

Tires are recycled through local companies such as Canadian Tire, so tires received at landfills are only old ones. Recycled tires are brought back and are used in landfills as part of an engineered leachate collection system, a local tire recycling success story. This system is used in many Alberta landfills.

The following are the findings related to the landfill:

- Landfill capacity is not an issue
- Landfill is seen more as an efficient dump than a resource recovery center
- Landfill is not user friendly, i.e. need to drive back to pay



- Landfill signage could reflect an increased emphasis on diversion rather than landfilling
- Landfill signage could coordinate with the downtown recycling depot
- Landfill has the physical space for more diversion projects
- Recycling and reuse aspects are not promoted
- Compost has not been tested to meet finished compost criteria
- Generally landfill appears roomy with lots of space, looks neat, and signs are easy to read and clear
- Burning of wood, although permitted and inexpensive, does not encourage reuse
- Mixed loads are landfilled i.e. If organic loads come with several plastic bags – material is sent to landfill
- Landfill fees are low when compared to other Alberta landfills

Photographs of the landfill are shown below.



**Figure 11. Camrose Regional Landfill**



**Figure 12. Wire and Cable Separation at Landfill**



**Figure 13. CFC Separation at Landfill**

#### **2.4.5 Non – Residential Waste (ICI and C&D)**

Commercial waste management programs are left to the discretion of the individual industries and are currently separate from the City of Camrose. As non – residential

comprises a significant portion of Camrose's MSW at 74%, diversion rates can be significantly impacted by programs aimed at this sector (for example: banning cardboard from landfill).

Camrose city centre has a business revitalization zone (BRZ), a nonprofit group that is mandated to improve the zone and was formed to respond to increased competition from the big box stores. The City Centre group currently has joint bins for OCC which is collected for a fee by WSI. This was arranged jointly by the City and the BRZ to ensure a better rate than simply landfilling the material. Bins for bottle depots will soon be in place in the city centre area.

TK is a private company that picks up recyclables for both commercial and residential sectors and takes recyclables to Centra Cam twice a week. The current fee for pickup is \$5/week based on a couple of hundred customers. TK estimates that if they are able to get 1000 customers they could charge \$5/month.

A letter was sent to the BRZ as well as the Chamber of Commerce requesting their input on ways to reduce ICI waste sent to landfill. A copy of this letter is provided in the Appendix. No responses were received.

The benefits of an ICI waste program for businesses include an improved public image, enhanced staff appreciation and therefore increased retention and, reduction in landfill costs. This also prepares the sector for the possibility of future landfill bans.

The following are the findings related to commercial waste:

- TK is interested in working on a sorting system with Centra Cam to allow expansion of commercial collection services to include: tins cans, milk containers, bottles, paper, and glass at \$10/month
- WSI and OPT also provide commercial OCC recycling services
- Drivers for business are generally cost, then convenience, then being green. Goals assist to ensure action. Currently, there are no solid waste management goals related to commercial waste
- Infrastructure exists for OCC ban



#### **2.4.6 Other Camrose Programs**

##### ***Household Hazardous Waste (HHW) Roundup and Paint Exchange***

A HHW roundup for residential waste is held twice a year, once in June and once in October. The roundup is held at the City of Camrose Public Works facility. Paint from the exchange goes to local paint contractors.

Residents are allowed to bring HHW and paint to public works facility a few days before and after the actual specified days. Residents are turned away during other times of the year.

##### ***Asphalt and Concrete Recycling***

The City has a Concrete Recycling Facility at the landfill. A fee is charged for concrete disposal and a contractor crushes the concrete into usable gravel material. The crushed concrete is then placed in city inventory. As gravel is used, it is charged at a fixed rate per cubic meter with the cost applied to the project or account material is used.

All costs related to this program (operation, maintenance, crushing, reclamation and overhead) are recovered by the disposal and unit charges. It is managed by the city in a separate area (not by MCL) with few large customers using this service.

##### ***Mulch***

The Parks and Recreation department chip branches for use in parks. Excess wood is sent to the landfill where it is burned.

#### **2.4.7 Education Program**

The City has a half-time School Resource and Public Communications officer (Vickie Cole) who works with the City to carry out education programs on waste, water, and traffic safety. Vickie works closely with the schools, particularly Grade 4's, and the Waste in Our World curriculum unit. Vickie has conducted waste audits in the schools, established recycling centers and implemented a waste reduction campaign with the theme "paint your world green". A monthly challenge, advertised in the local paper, was initiated and there are plans to continue this.

Signs for the recycling depot which promote this theme have been made and are to be installed

Vickie also submitted a proposal to conduct a composting demonstration project at a community garden located by the school.

Newspapers and print advertising are also used extensively for both articles and to advertise solid waste management information including Household Hazardous Waste Roundup, and recycling data and information. The Engineering department has a budget of \$10,000 per year for advertising.

A Green Action Committee was established in the fall of 2008 and includes two City council members and 7 citizens at large.

The objectives of the committee are:

- To serve as a 'think tank' to generate proposals aimed at improving Camrose as a green community
- To research environmental 'best practices' in other communities
- To provide an educational function by informing citizens of Camrose in order to create an enhanced understanding and appreciation of prudent environmental practices
- To accept referrals for further study from City Council
- To provide City Council with recommendations for green action

Communication mechanisms for Camrose include direct email, local radio, newspaper, web sites, Facebook, high school environmental groups, student newsletters for both high school and Augustana, a school newsletter and Welcome Wagon.

The following are the findings related to the City's Education Program:

- The City has the foundation for an excellent communication program with Vickie Cole, the Green Action Committee and other communication tools currently used by the City
- The Green Action Committee will benefit from specific goals for waste reduction and a solid waste management plan

### **3.0 PRELIMINARY LIST OF PROGRAM ENHANCEMENTS**

Based on the local research findings relating to the City of Camrose's current waste management program, the following preliminary list of alternative solutions was developed. This is a "Laundry list" of options including suggestions from interviews with more defined options provided in Section 4 and Section 5 reflecting the results of the survey and costing analysis.

### **3.1 Solid Waste Management Goals**

- Establish a specific waste management goal to measure future progress
- Articulate goals in solid waste management plan. Goals can be as simple as diverting more waste than last year, can be per capita or per household or can target specific diversion rates i.e. 50% diversion
- Get residents' feedback on survey regarding a specific waste reduction goal
- Set goals for both residential and commercial waste reduction
- Time implementation of diversion activities to manage budget. This allows diversion activities to increase as landfill costs go up in the future therefore having the net effect of keeping costs controlled
- Time implementation of diversion option depending on percent diversion to help control program implementation costs

### **3.2 Weekly Residential Waste Collection**

- Implement cart system at curbside to reduce collection costs through a reduction in workers compensation claims and reduction in collection time
- Implement bag or cart limit to provide incentive to reduce waste and control collection costs
- Phase in bag or cart limit
- Include a menu of program components in collection Request for Proposal. Ask for prices to collect major waste streams i.e. recyclables at curbside, organics at curbside, refundable bottles for downtown, OCC as a separate item for all residents, residual waste, etc. Price can be based per tonne and not per household as quantities per household will vary over the implementation of the program and this allows for price flexibility. Allow program components to be turned on at anytime in the next five years
- Curbside collection of recyclables - blue box
- Curbside collection of recyclables - blue bag
- Curbside collection of organics - carts
- Implement plastic bags ban
- Determine preference for pickup same day every week or a rotating schedule

### **3.3 Recycling Depot**

- List [www.totallyfreestuff.com](http://www.totallyfreestuff.com) and/or [www.kijiji.com](http://www.kijiji.com) in recycling brochure
- Provide several mechanisms for large item diversion for example: Take It or Leave It Day at central location or curbside. This allows people to get rid of good





quality large items before automatically putting it in landfill Have permanent drop-off depot to encourage reuse

- Consider seasonality in depot opening hours
- Close depot one day of the week; possibly lengthen hours during another day
- Gets residents' feedback regarding opening hours and days
- Enclose compost bunker within the recycling depot to accommodate compost bunker during opening and closing hours for more control
- Accept more plastics
- Provide information on plastics market and Styrofoam so depot users understand why more plastics are not accepted
- Provide more tips at depot regarding recycling (i.e. don't need to remove labels from tin cans as they are burned off anyway)
- Future physical enhancements to depot: site paving within storage compound areas, relocation of facility to larger site
- Include year round HHW depot either at recycling depot or public works facility
- Hold toxic roundup as a joint activity with an open house at Centra Cam depot
- Charge contamination rate for contaminated OCC loads and/or wood loads

### **3.4 Landfill**

- Tie in signage at landfill with signage at Centra Cam. Use an overall theme and logo throughout all solid waste management programs and facilities. Visually give the image that the landfill and recycling centre are all waste diversion activities and are one program to achieve Camrose's diversion goals
- Chip woods for use as mulch for landscape contractors, pathway development in Camrose, or as bulking agent for compost. This encourages reuse over burning
- Implement specific waste bans such as OCC, plastic bags, etc. Start with one waste and slowly expand
- Increase fees for unsorted loads to landfill and allow sorting at the landfill in a designated area
- Have higher landfill fees and lower recycling fees. Easy items to start with are wood and OCC
- Increase tipping fees to encourage more recycling
- Have a large item reuse area at landfill. This actually supports business with similar activities such as garage sales, and restore and other reuse type businesses. Focus on very specific waste streams, for example, Airdrie operates a bicycle exchange at the recycling depot
- Existing compost should be tested for completion, screened and offered to landscapers, residents, parks and recreation and farmers on a cost recovery basis as a test market for a larger future composting project



- Sell carbon offsets generated from the compost through a compost aggregation project
- Provide more recycling information to landfill users
- Differential fees at landfill – if organics are free, businesses will be more encouraged to divert – this could be applied to other waste streams you want to divert – differential fees could be a very large part of the diversion solution
- Ban certain waste streams from landfill for commercial sector as well such as cardboard, wood, paper and organics – incentive would be lower fees for recyclables versus garbage disposal
- Develop landfill into a Resource Recovery Facility

### **3.5 ICI and C&D**

- Give commercial sector same goals that are eventually developed for residential sector. Businesses can pick their own methods to achieve goals
- Either mandate or ask commercial organizations to come up with a waste diversion plan that would enhance business, beautify community and come from them; in this case business and environment goals may align
- Start with a ban on commercial OCC and/or organics as infrastructure exists, then expand ban to bottles, move forward on a schedule
- Target C&D waste and/or organics in waste reduction goals for the commercial sector
- Expand bottle recycling in the busy shopping areas to give greener, cleaner image. This can be accomplished simply through tendering the opportunity – due to return on bottles there may not be any costs to City. Centra Cam or a local bottle depot, recycling company or service group may welcome opportunity. Coordinate containers to give excellent recycling image

### **3.6 Communications**

- Systemize and expand education program so it runs consistently
- Continue with monthly waste reduction tip/challenge in newspaper and ensure consistency
- Link communication mechanisms (school newsletter, Welcome Wagon, Augustana, web site, etc) so information can be easily distributed
- Expand City communications position to full time
- Integrate Vickie Cole's work so it is not so isolated and develop integrated Public Education program aimed at waste reduction. Create high level of public awareness of all waste management programs
- Provide more education on waste management truths and the good news stories



- Hold compost seminars at community garden. Centra Cam could build composters for program. Composting garden could be managed by community services; demonstration garden would allow actual onsite composting and demonstration of compost use. An example of a similar project is the John Janzen Nature Centre in Edmonton. Camrose could also implement this at the Four Season Environmental Center in Stony Creek Valley
- Hold half day seminar with council, communications and other select city staff, Green Action Committee, school representatives (Augustana and high school), Centra Cam, and haulers to set environmental direction in Camrose. Seminar would educate stakeholders on waste management realities and provide opportunity for consultation on community issues. The seminar would be educational and a needs identification session. Timing for the session is best after waste management study is complete and everyone has the survey and study results. The session will then generate further information that the Green Action Committee can turn into a 'to do' list including coming up with waste reduction goals for council to adopt. This process allows for broad input from an educated group from a waste management point of view. It also uses councilor time most effectively
- Have Parks and Recreation voice included in waste strategic planning. Len Franson moved green spaces and trail development in Camrose forward and could be asked to participate in seminar

### **3.7 Other**

- Offer rebate program for users of home composters similar to low flush toilet rebate program
- Subsidize and provide education about backyard composters
- Provide credits for reduced garbage
- Newspaper curbside collection
- Ban yard waste from landfill
- Curbside collection of organics during spring and fall
- Require grass cycling
- Require ICI's to institute formal recycling programs
- Require IC&I's to compost organic wastes
- Update bylaws to reflect diversion programs, i.e. garbage limits, certain waste bans, carts, IC&I's, etc
- Use differential fees to encourage diversion

## 4.0 APPENDIX

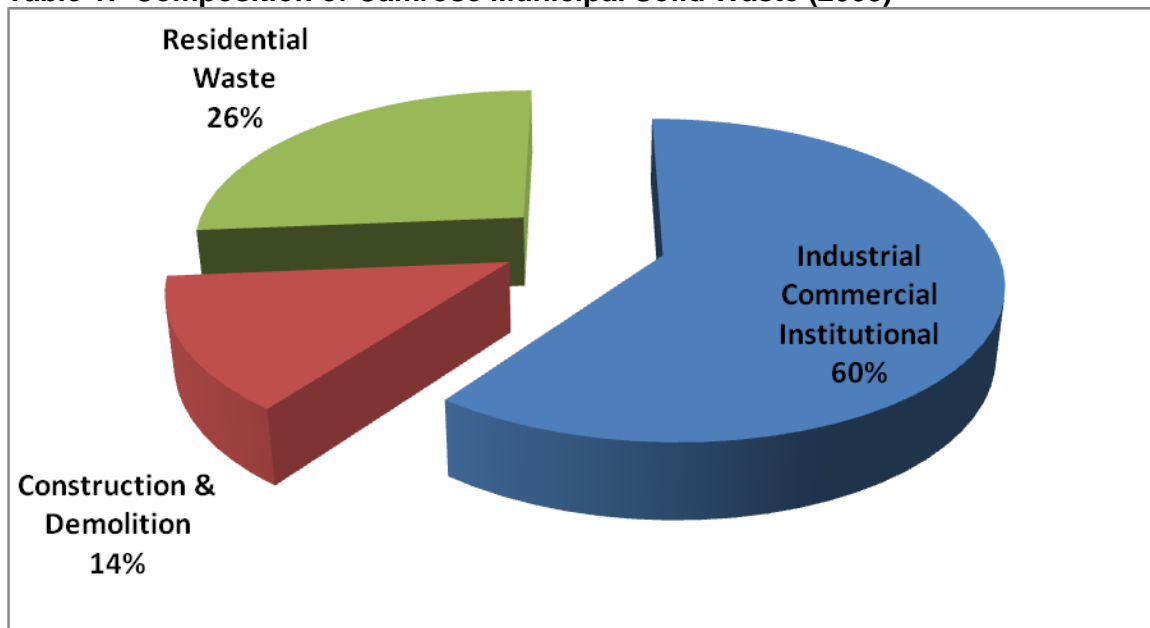
### 4.1 Letter to Commercial Sector

KC Environmental Group Ltd. (KC Environmental) is conducting a Solid Waste Collection and Diversion Study for the City of Camrose. The goal of this study is to make recommendations to the City of Camrose on a comprehensive solid waste management system that is environmentally responsible and meets the needs of the community in a cost effective manner.

The purpose of this letter is to solicit suggestions from the commercial sector as to how commercial waste can be reduced and/or diverted from landfill.

As shown in Table 1, 74% of Camrose's municipal solid waste sent to landfill in 2008 was generated by the non-residential sector (Industrial, Commercial and Institutional waste as well as C&D – construction and demolition waste). This is 7% higher than the provincial average. Implementing programs in the commercial sector will therefore have a significant impact on Camrose's waste diversion rate.

**Table 1: Composition of Camrose Municipal Solid Waste (2008)**



Please forward any suggestions, ideas or questions you may have regarding waste reduction and diversion of the following types of waste:

### **Construction, Renovation and Demolition:**

- Concrete, brick, painted and treated wood, rubble, drywall, metal, cardboard, doors, windows, and wiring

### **Industrial, Commercial and Institutional:**

- Industrial materials which are generated by manufacturing and secondary industries, and managed off-site from the manufacturing operation
- Commercial materials which are generated by commercial operations such as shopping centres, restaurants, offices etc.
- Institutional materials generated by institutional facilities such as schools, hospitals, government facilities, senior's homes, universities, etc.

**65% of Municipal Solid Waste is organic including paper (34%) and other compostables (31% - table scraps, leaf and yard waste, etc.)**

Please forward your responses by July 3, 2009 to:

Mark Barrett, City of Camrose

Email: [mbarrett@camrose.ca](mailto:mbarrett@camrose.ca)

Phone: 780-672-44

Thank you for your participation

Sincerely,

## 4.2 Interview Field Notes

Date: May 29, 2009

### 1. Max Lindstrand, Councillor and Member of Chair Green Action Committee

- First term on council but a long time community member involved in many initiatives.
- Is involved with musical festival, bringing international students to Camrose. Used to be school principle for many years. Involved with solar panel project at the school.
- Green action committee is council appointed. Mark can forward mandate. The interests of the committee vary from watershed, composting, greenspaces, waste diversion etc. The committee started in January.
- Worked on idling policy. Will have Augustana students do more research so can provide better education to the public on this issue.
- He is not aware of a Camrose waste diversion goal beyond Camrose wants to be environmentally friendly.
- He uses a renewable cup and drives a hybrid and tries to lead by good example.
- Kirstin: Camrose has an excellent base of waste diversion programs from which to grow from. However education of council and residents is required to explain what is possible and can cost effectively go forward.
- Gave example of funding council had for a whole bus system but council turned it down for various reasons. More education of the pros and cons may have altered the result of this vote.
- He is a member of the Regional Solid waste management committee.
- No landfill crunch, no real burning issues. A lot of effort on water and have good quality water. Regional water is an issue to ensure everyone has enough and good quality for the future.
- Green spaces are important to Camrose
- Some of the community believes in density but also annexed lots of land and have lots of land.
- Residents in general would like to see incentives for waste reduction.
- Bag limits may be an idea. He wants it sooner rather than later. May not reflect everyone's opinion.
- Garbage collection costs will go up by 50%, this is a driver for the study.
- Kirstin: Get examples of goals from other municipalities. Use as survey question to get insight on what goals should be for waste diversion.
- Depot – people use it and like it – common question - can they take more plastics? (No no markets)– looks fine from outside.



- Christmas tree program seems to work fine.
- Year round hazardous waste depot, he is not sure if needed.
- There is tipping exemption week in spring and fall. (Kirstin: Other options are large item dropoff days or permanent depot. Can also be done at curbside to encourage reuse )
- Expand organics – backyard and possibly door to door for more diversion, both should be done.
- Communication could be more. Love Okotoks web page. More is needed. Vicki Cole's role could be expanded. There is a Social action planning committee – wanted a planner but doesn't make budget each year.
- Construction and Demolition needs education
- Camrose has new web page very nice new in last few weeks have a look at it
- Collection is working fine
- Council could benefit from knowing state of art waste management practices.

## 2. **Brian Hamblin, City Manager**

- Worked in Regina and Moose Jaw before.
- Low cost of collection, it is too low, will go up on contract renewal in fall.
- Long life of landfill so no real solid waste issues. However persons believe in environment.
- Kirstin: Automated collection can reduce costs and reduce work for collector and WCB costs need to be looked at it is time. Bag limits could also help reduce collection costs.
- Thinks they have an 8 bag limit right now.
- Municipal sustainability plan just started. Will be partnership with Augustana college, they will act as consultant. The pillars of the plan are economic, environmental, social , cultural, governance. The solid waste plan fits in well with this process.
- Kirstin: The City's current waste diversion programs have a great base to expand on. Expansion will occur will it be sooner or later. What gets measured gets done. So a waste diversion goal is needed. More education is needed on waste management truths and the good news stories that the community has. Data on common waste management questions is needed. Curbside pickup is coming either blue box or organics. The impact on the total waste stream should be considered in deciding this. For example which component of the total waste stream can be most reduced – for example organics, recyclables are a smaller component.
- Landfill is not that user friendly. Have to drive back to pay.
- Kirstin: Signage could move towards diversion from landfill thinking.



- May be good idea to talk to businesses regarding commercial waste. Talk to Garry Zetzen , homebuilder interested in diversion Zetzen masterbuilder .
- Chamber of Commerce, City Center Camrose are two organizations that could get sent a letter to solicit commercial waste diversion ideas.
- Kirstin: Education is needed. Tell the story more. Tell the story to the younger demographic that do not watch TV or read paper. How to communicate it best. Issue may be systemizing education so it happens consistently.
- Camrose is building to be regional center for east central Alberta for exceptional quality of life with centers of excellence for healthcare, education, recreation and environment. Solid waste fits into this area. Fits in with Camrose's love of green spaces . We need to push ourselves to change.
- Driver for waste study is increased cost collection issue that is pending - Kirstin: maybe the survey will allow for more change that is desired - but when needs to be determined.

### **3. Centra Cam – Vocational Training Association**

**George Lepard – Business manager 1 year; and Brent Wahlberg – Depot Operator 5th year**

- Centra Cam has been in existence since about 1979.
- A key part of organization is a woodworking business that makes pipe bunkers (cradles for rail cars) also custom projects, composters for composting seminars they hold annually. This employs 5 persons.
- Are looking for other contract work that fits their mandate.
- The whole organization has about 70 persons. Other parts are ECFD – emergency clothing furniture depot (this is where rags go). COVE – community training CES Camrose Employment Services.
- Their main office had a 2 million dollar renovation 2 years ago.
- The recycling building had a renovation 2 years ago (paid by City??Confirm).
- Recycling is the biggest part of the Centra Cam operation about 25%. This program is good public image for Centra Cam and City. A unique relationship.
- City owns all equipment building and lands. They own 2 vertical balers (for plastic and other), tools, forklift, and drop off bins. Large baler is owned by the city and is used for cardboard. Centra Cam uses it for commercial cardboard crushing as well.
- In the OCC picked up at MacDonald's there is always contamination (Suggested surcharge it). Get commercial OCC from WM and from OPT (local haulers) .
- City pays \$3.25/ household? To Centra Cam to process the recyclables.





- 85% of money from recyclable sales goes back to the City. This year that amount is significantly down due to markets. For example tipping for OCC is down to \$5/tonne to allied paper and shipping is not included.
- Newspaper is still profitable due to Cancell local insulation market which is steady.
- Fluorescent tubes are shipped into Edmonton.
- Glass goes to Harvey Enterprises. However bunker is currently really full. They collect only clear glass it has a better market. There is little room for a colored glass bunker. Safety of the glass bunkers is also a concern. There is some interest in colored glass recycling from residents. Glass could also go to Gray's in Edmonton.
- Computer and TV recycling is now part of a provincial program where they get paid to accept them at the depot and works well. Electronics will increase because Alberta legislation is increasing program to include 56 new items (VCR's microwaves, etc.)
- Bottles go to local bottle depot if they are not brought there directly by residents.
- Tin cans go to general recycling for \$15/tonne.
- Plastics need more options. Collect number 2's(confirm) They have collected 7 m tonnes of film grocery bags bale and ship to metro and no costs.
- Milk jugs also go to metro.
- Kirstin: One idea discussed is a plastic bag ban. (Ft Mac Murray is phasing it in over next two years, but passed their council – niel confirm how does it work?
- New provincial milk jug program beginning June 2009.
- Residents want more plastic programs. Is there anything else?
- Styrofoam needs an option (Niel check if there is anything new in North America?)
- Another good idea discussed is to have a monthly waste reduction recycling tip in the newspaper? Saying what not to bring (ie garbage such as diapers, needles, dog poop, don't bring it) and why. Give ideas explaining the plastics markets or Styrofoam.
- Paint and batteries are new items accepted at the depot.
- Batteries are shipped to EnviroSort and are a break even project.
- Paints also to EnviroSort in Red Deer. It is used a lot and EnviroSort need to send them more bins. Get \$50 /bin no transport included. (no paint exchange).
- Public works holds a toxic roundup. Mark Barrett noted that paint goes to same small contractors every year so can just call them directly.
- Could toxic roundup be held as a joint activity, maybe with an open house at Centra Cam? Is it time for a permanent Household Hazardous Depot? Concern re costs.
- Compost bunker was put in by City and is regularly emptied by City.



- Signage is good.
- No issues.
- Organics, yard waste only , goes to landfill for composting. City has numbers. There is phone book recycling.
- It would be interesting to find out how much Centra Cam is recovering of the total waste stream and the cost of that diversion compared to other communities. Both city and Centra Cam would like to know.
- George at Centra Cam does public education in schools on an on call basis and schools come out to the depot on a regular basis. V
- Vicky Cole Coordinates communication and school activities for the City.
- Their next contract negotiation is comes up this year. The contract has a 3 month cancellation notice. It is a 5 year contract. Proceeds from the recyclables are 85% to city and 15% to Centra Cam. Every year they sit down with City to renegotiate the fee. The agreement appears to be working and appears to be equitable to both parties.
- There is no forum with green action committee but committee is new.
- What is average cost of blue box or blue bag? George would like to know (I told him in Edmonton area Evergreen has been awarding contracts at about \$3/household).
- Centra cam would like to reduce hours and close on Sundays as there is this is the least traffic day. This allows more attention on other days. Right now Centra cam is open 7 days per week. They could open one day later per week. Survey question could address opening hours of Centra cam.
- A second depot location seems to be a low priority. Residents do not bring this up. This depot is centrally located.
- Consultant thought signage is good but could be more professional and perhaps linked to a waste reduction theme. The depot looked generally neat. (Please include photos in report).
- Kirstin: Manned depot works well and has saved costs due to less contamination and getting materials to highest value markets. This should be continued.
- Centra Cams goal is to collect more than last year.
- City has no specific goal beyond be environmentally friendly.
- Kirstin: Survey question could try to get at a goal. Perhaps simply collecting more than that last year is good. Then there is less stress about meeting overly ambitious goals which is the norm. Goal could be per capita or per household.
- Centra Cam used to do out of town pickups but stopped in March. It was not cost effective.
- Still get drop offs from area (County) residents.
- Centra Cam also operated a separate document shredding service.



- A small local company named TK picks up the material under contract to Centra Cam 2 days per week. TK is currently being bought by someone else. TK spends 2 further days per week picking up recyclables for shut ins and seniors.
- Centra Cam has no involvement with construction and demolition waste.

**June 2, 2009**

**4. Vicki Cole – Educational Promotions Co-ordinator.**

- Hired half time by the Battle River school division but primarily works on Camrose.
- Kirstin: May be good idea to get survey draft to Vicki for input as she has had an enormous amount of public contact on the waste issue and her input could be helpful.
- Mainly works with youth in Camrose to educate on waste, water, and traffic safety. Her work ties directly into curriculum. Gets good buy in from teachers by meeting curriculum. Grade 4 has the waste in our world unit which ties in the waste section. Typically will tour the kids at centra cam and landfill.
- Has got vermicomposting in each school.
- Does waste reduction week programs with the schools. For example has the students do a waste audit of school and has them bring wastes from home so they can decide what can best be done to divert it all. At the end of the week the kids do posters of their results. Recycling centers have been set up at some schools as a result of this program. Waste pizza is used as the equivalent to waste pie chart.
- Vicki often hears in the community - the kids have gotten me to recycle as a result of the education in school.
- Vicki is called the worm lady, the recycling lady, does not like the dump lady (for obvious reasons).
- Business supplies pizza at end of waste reduction week a real tie in to community and a treat.
- Vicki has worked on waste reduction campaign (much on her own time) with a logo of “paint you world Green”(see attachments) (Could fit with green spaces and sustainable goals in Camrose”
- Apparently signs for depot have been made by Mark and have incorporated theme, need to be put up. This could be continued to be developed.
- Vicki has started monthly challenges to residents for the newspaper. Started in January but was pulled away onto other tasks. Really she needs a monthly budget to do the tip/challenge consistently, not to mention a formal mandate.
- Kirstin; This could be a corner stone in a future waste communication program.
- Mark Barret has 10K budget for advertising.



- Would be willing to expand her function into full time.
- Likes composting and would like to do composting project at community garden as demonstration project (located by school)(proposal submitted to City Engineer? Proposal should be placed in appendix).
- The idea is to do compost seminars at the community garden. This could be combined with Centra Cam efforts as Centra Cam may not be getting the signups for their compost workshop but they could still build composters for such a program. (Home composter design should be discussed to use a design that is user friendly for the home owner. There are several designs that are very popular with residents) .
- Composting garden would be managed by community services. A demonstration garden would allow actual onsite composting and use of compost and demonstration of composter design. There are many gardens that work well like this for example at the John Janzen Nature center in Edmonton. Camrose also has the Four seasons environmental center in the stony creek valley (may be operated by the rotary club confirm) . They could use some of the compost material in the garden as well.
- Vicki noted that excellent communication mechanisms for Camrose are through local radio, newspaper, web site (she has had input) Face book, high school environmental group, student newsletter for both high school and Augustana. These could be linked so that information can be distributed easily at a fingers touch. Other vehicles are school newsletters, welcome wagon, etc.
- Kirstin: Vicki works in isolation needs to be integrated somewhere. One day seminar of council, communication, and green committee, and school reps (Augustana and high school) To set environmental direction in Camrose. (Idea)
- Wants waste data baseline in study. (She thought Camrose is about 1500kg/person includes commercial (this is more than Alberta average)
- Value for money. Vicki's overall impression is persons want to pay more , even like Airdrie (\$27/tonne ). Camrose is paying nothing - must go up.
- How to handle cost increase issue. Waiting and not tying into collection may be wise so reduction looks like cost saver.
- Vicki will drop samples of theme and communications program to Mark (for KC). Really did not have enough time to do justice to all of Vicki's work. Her work and attitude is an asset to Camrose's Community.

## **5. Ray McIsaac. First term Councillor.**

- Has lived in Camrose since 1971.
- Car sales background as well as pharmaceuticals sales for Veterinary industry.
- Question keeps arising how much is Centra Cam diverting.



- Ray went to landfill on weekend and thought a little more recycling data could be imparted to users.
- Thinks there is an appetite for recycling among residents.
- Kirstin: Costs of program will determine Camrose's environmental goals. Survey will help determine this and give direction.
- He noted that the depot works well. Centra cam is a good community organization. Depot looks much better after expansion. Signage is coming.
- In general Camrose seems happy with Status Quo.
- Would like data as to what is what with plastics. He learned from TV that each tin can does not need labels removed as burned anyway.
- Kirstin: Some more tips back on this sort of thing, what plastics to recycle, the waste management pie and why composting is often more cost effective than recycling, etc. Would be helpful. This could be done through expanded communication program.
- Education is a good thing.
- Focus for area business development is retirement, education, agribusiness, and some oil and gas.
- Grocery store downtown is closing likely due to opening of newer commercial centers such as Wal-Mart.
- Downtown business association did big improvements and good stores keep improving. Another example is the Bailey theatre project that will come on line next year. Frank McInnis (local successful business man) donated 1 M to theatre city kicked in \$500 000.
- Also new performing arts centre at Augustana.
- Jubilee lake is show piece of Camrose everyone notices this.
- Camrose is a clean City, is most people's first impression.
- IDEA commercial waste diversion fits in. Maybe mandate or ask commercial organizations to come up with a waste diversion plan that would enhance business, beautify community and come from them. In this case business and environment goals may align.
- Len Frankson (retired parks superintendant) moved green spaces and trail development in Camrose forward.
- Kirstin: Maybe include parks voice in waste strategic planning (i.e. have parks attend goal setting seminar after survey results and study has been communicated).
- Ray agrees a goal is needed or how do you track progress.

## 6. Jim Kupka – Director Public Works

- Born and bred in Camrose.
- Under a bag or container limit system who pays for extra bags?
- What about back alley pick up is it a problem. (Kirstin: No, 30% of Canada has carts and it is not a problem, generally its front yard pickup. Rules are needed and that is the way it is. This allows reduction of collection costs due to going automated and reducing amount of waste allowed. )
- Education is so important for new diversion systems to maximize potential. Mulching idea (no grass to landfill ) may be cost effective but there are large volumes of grass and persons may still want to drop off.
- Public works Empties bunker often at organics bunker located at Centra Cam. Centra Cam must keep eye on organic bags dropped in recycling center so they are removed. Bags get recycled.
- How could compost bunker be accommodated if opening and closing hours altered at Centra Cam. One idea is to enclose the bunker with the recycling depot.
- Ask on survey which day would you use the compost and recycling depot. For example at Christmas Centra Cam closes for holidays and public has learned hours.
- At landfill there are reduced hours and works , why recycling open 7 days a week. Seasonality of hours should also be considered. Ask about longer hours on certain days.
- Survey should tie in cost to activity to get good result.
- In past when gardens bigger persons used to pile organics behind house. Public works would pick it up with grapple hooks , put in truck and take to landfill. This was called spring and fall cleanup. Spring cleanup used to pick up and take big stuff to landfill.

Kirstin: Talk to Vicki about listing free stuff .com in recycling brochure. Need for several mechanisms, like take it or leave it days at central location or curbside. Allows persons to get rid of large item good stuff before automatically putting it all in the landfill.

- At home he has boxes for recyclables takes everything to Centra Cam because it is convenient. People want convenience.
- He doesn't really need to go to Landfill. Landfill does not really promote recycling or reuse aspects. Not that user friendly.
- Is it time for a permanent HHW depot? Currently do two a year. Send people away during the year from public works. Will accept HHW a few days before Household hazardous waste days.



- H HW depot could be a county depot so all pitch into cost and could be located at Camrose because that is central.
- Have an open house for HHW day and Centra Cam recycling jointly. At least use HHW day to hand out brochures. Currently record, county or city resident data at HHW day.
- Mark Barret knows who HHW contractor on site for roundups is.
- Commercial collection of OCC exists for commercial for a fee through private company, probably do not get money back for recyclable. Did not know what else could be done for commercial.

## **7. Barb Olsen –Green Action Committee**

- Was on city council for two terms, has worked in healthcare for 17 years.
- Interested in environment and community. Two areas in particular – recycling and sustainability of landfill, and green construction.
- New city hall is going leed, not sure what level. No mechanism for other projects to go leed that she knows of. May be important to bring up to planning group.
- Green action committee is new and needs a plan to meet terms of reference and goals for waste reduction in general are needed.
- Kirstin: What is the cost to municipality from doing nothing with respect to waste reduction and allowing landfill costs to go up over time due to stricter regulations and liability issues? May be time to negotiate a contract now due to constrained economic conditions. Costs may come in better today than two years ago. Waste collection contract can have all the components you want priced out now and can be turned on as you need them over the next five years. Does not all have to be started at same time (organics collection, curbside recyclable, take it or leave days, garbage collection by cart, etc) but can be priced out. Can be done as an RFP versus a tender. Also can allow renegotiation of price in the contract when an item does get turned on. You can even allow for getting competitive bids again at that future time from other contractors.
- She sees a lot of garbage at curbside. Need incentives to reduce or it needs to be convenient.
- Kirstin: Education of stakeholders is needed maybe half day seminar for the purpose learning waste management 101 (include Centra Cam and others haulers etc.), could be lead by Vicki or bring in consultant. The seminar is needed to educate the stakeholders on waste management realities and to give an opportunity for conversation between like minded persons on community issues. This will identify some of the waste management needs in the community. Basically an education and needs identification session. This is best done after the waste study is complete and everyone has the survey results.



Then the session will generate further information that the green action committee can turn into a to do list, including coming up with waste reduction goals for council to adopt. This process will allow for broad input from an educated group from a waste management point of view. This will also use councillor time most effectively.

- No major issues in Camrose except that taxes have increased significantly in the last two years.
- The root of our garbage is consumerism how can this idea be integrated with Camrose's (and all of Alberta's) growth philosophy?

#### **8. Daryl Shillington – Councillor and Sole City Shoes**

- Camrose cost of living is higher but Camrose is worth it due to the nice community.
- Daryl is in third term.
- He is on Landfill authority committee and he says it is run very smoothly and efficiently.
- What sticks out in mind is that public wants recycling and he talks to a fair amount of persons due to his shoe business.
- Now compared to 10 years ago everyone wants recycling and green and in all walks of life. It is dear to people's hearts.
- The landfill is more of an efficient dump than a resource recovery center. Improvement on image could be made.
- City Center has an BRZ (business revitalization zone). This is a non profit group that is taxed (mandatory) to improve the zone and was formed when competition from the big box stores hit. City Center group has joint bins OCC bins. It is possible that they could do more on green issues. They should be asked as well as chamber of commerce.
- Kirstin: If the group knew that waste bans at the landfill may happen in the future that might encourage them to come up with some doable idea. Benefits to business are better public image, staff wants it and helps with retention, it the right thing to do, will keep landfill costs down which will impact everyone overtime. Important to identify the benefits. OCC might be logical place to start as there are bins and system. Bottle next.
- The city center BRZ has bottle containers coming. Suggesting commercial come up with their own plan may be good place to start.
- Many businesses have different waste streams which is an issue. How much waste at landfill is commercial?





**June 3, 2009**

**8. Mayor Clarence Mastel , Phone Interview**

- In his second term.
- There are certainly improvements that are needed in the waste management plan. We need to do more communication and education.
- Cost has to be considered with improvement and then of course timing, when to implement options.
- Collection costs are likely going up.
- When the contract is negotiated it is an opportunity to consider improvements, this study will guide us.
- More and more people and especially Camrose residents want to be green.
- The survey will give us valuable information.
- We need to set goals for residential solid waste reduction and for commercial waste reduction.
- Challenges are what will Centra Cam role be in the future.
- We need to enforce bag limit and start to reduce what is acceptable to throw away.
- Hauler currently is picking up a lot of large items. Is there a better way?
- Current bag limits are regularly exceeded. This needs to stop.
- How can we better handle commercial waste?
- People are very proud in Camrose about their neat community.
- He often gets comments that residents want their neighbours to be cleaner and to waste less.
- Leduc is close in size to Camrose are they doing anything interesting that might help Camrose?
- Mulching is already done by parks and recreation of their own waste. Kirstin: Perhaps this can be combined with resident wood waste dropped at the landfill (currently burned) to make more mulch to further improve Camrose's paths and green spaces.
- He is looking forward to the survey results and hopes for good participation as the residents' advice will really guide the process.

**9. Adrian Maplethorpe – MCL Regional Landfill Operator 780 352 2625 with landfill tour**

- Also manage the Hinton, Roseridge, Camrose, Red Deer, Leduc and Aspen (Drayton Valley) landfills.

- They are contracted to operate this landfill under 3 to 5 year contracts and since about 1988.
- Mark Barrett Director of Engineering Services is ultimately in charge. T
- his is a Class II landfill and the operator stated that in his opinion if status quo continues there is a landfill life of 40 years plus. Of course this could change as Alberta landfill regulations increase.
- The landfill is a quarter section but has parts that are ravine that are not scheduled for use.
- The scale operator is employed by MCL as well as two equipment operators. (List of rates should be obtained from Mark Barrett no photocopies at landfill – document called Tipping Fee Schedule Camrose schedule A, Nov/98) .
- Also have a chart posted in scale office stating free items as – tires, batteries, oil/oil containers, propane tanks, pesticide containers, compost (organics), clean fill.
- Chargeable items are wood, metal, appliances, demolition , Old corrugated cardboard (sent to Centra Cam if possible), carpeting.
- County pays for county resident household waste drop off (they have no formal hauling), burn barrel ashes (barrels banned since January due to fire hazard) , furniture.
- The landfill is run by municipality of Camrose and the County. They meet twice per year MCL will usually attend the meetings. It is run simple and efficiently.
- The asphalt and concrete recycling sections have separate access and are run through Mark Barrett who should be contacted for more information.
- Kirstin: The impression of the landfill is that it is roomy with lots of space, looks neat, has sorting for items. Signs are easy to read and clear. There is an opportunity to tie the signage in with Centra Cam signage and use an overall theme and logo throughout. The opportunity is to visually give the image that the landfill and recycling centre are all waste diversion activities and are one program to achieve Camrose's diversion goals.
- Kirstin: Currently most persons asked see the landfill as a dump and not as a "Resource Recovery Center" which is its future. This could be a key part of an improved communication program.
- Compost area must be permitted through landfill permit, confirm with Mark Barrett, also confirm that this program could be expanded. Also consultant recommends testing and finishing some compost to use at landfill or better yet in parks and recreation to start building local project experience and markets.



- Started composting 4 years ago. Currently there are several neat windrows that MCL turns. Leachate collection is in its infancy and mirrors Alberta regulatory requirements. Mark Barrett is in charge of this.
- MCL is contracted for extra work to haul the leachate. Adrian did not know to where.
- The City sewage lagoons are located next to the landfill. There is a permitted burn pit for all wood that comes into the landfill, clean wood and tree trimmings. Kirstin: This is cheap but does not allow the wood to be reused. In the future wood could be chipped and mulched for landscape contractors or pathways development in Camrose or incorporated into composting. Mulching is likely the highest value option.
- There are areas such as the pesticide container collection area. When it is full MCL calls Mark to have it emptied about once per year. CFC, metal and other areas operate similarly.
- Leduc and Roseridge landfill just started household hazardous waste depots for year round drop off. Also Spruce Grove recycling centre has one they would know the operating and capital costs. It is time to look at this for Camrose the most convenient location would be at Centra Cam.
- If landfill to go into more diversion operator suggests that it is important that the customers have their items separated before they come. Currently if an organics load come in with several plastic bags in it, it is sent landfill. It is a nightmare to assess rates on mixed loads and have them sort out at landfill.
- Kirstin: This could be accommodated through good education initiatives prior to implementing new or expanding programs.
- Landfill got new large truck scale last year.
- Kirstin: Landfill fees are low when compared to other Alberta Landfills. It is important to manage this budget as diversion activities are increased in the future. This can be accommodated through timing implementation of proposed upgrades. This also has the benefit of increasing diversion activities as landfill costs go up due to future stricter regulation for landfills and will have the net effect of keeping cost in control.
- Operator does not feel bans, such as OCC bans is a good idea because of mixed load issue. With work could be overcome.
- Operator did suggest Camrose should evaluate curbside blue bag. For example Edmonton Material Recycling Facility (MRF) is 45 min down road also have Centra Cam. Kirstin: If Camrose asked for bid for blue bag bids likely would come in at good cost, especially in today's economy.
- Clean fill is used as landfill cover.

- For large item take it or leave it, landfill is too far from Camrose and safety if landfill does not have proper site set up may be an issue. Kirstin: Some landfills now have permanent sites, could be considered for the future.

#### **10. TK Environmental, Trish Banack**

- Pick up recycling for commercial and residential take it to centra cam.
- Charge \$5/week for a couple of hundred Camrose customers.
- They just purchased business on Monday June 1, 2009.
- If can get 1000 customers then could charge \$5/month.
- Use blue boxes.
- Document pickup in garbage can size containers and us a cube van. Do this for Centra Cam for two days per week.
- Would like to expand residential services into Vegreville, Tofield, etc.
- She thinks businesses in area are not aware of all the things that can be recycled.
- Partner is Larry Lievre 780 932-3828. Talked to Larry and he said would like to get all of Camrose residential for recycling.
- Larry did his own survey of about 100 residents by phone and residents said they would pay between \$5 to 10/month.
- They are supporters of Centra Cam.
- Would like to work on a sorting system with Centra Cam, he has an idea to improve this. Would be interested taking over recycling center if opportunity came up.
- They also service residents in Killam, Strome, and others.
- For commercial business offer recycling of tincans, milk containers, bottles, paper, glass, etc. (everything centra cam collects) at \$10/month.
- Other businesses offering OCC recycling are WSI and OPT, maybe WM.

**June 4, 2009**

#### **11. Ted Gillespie City Engineer 780 672 4428**

- There is no limit on garbage bags.
- Eight years ago did an in house study looking at all kinds of things like pay as you throw, banning waste streams, etc. But in the end the community could not decide and was not ready. At that time did not look at carts there was no data.
- Currently administration wants change and some of the councillors. Of course they want it at a reasonable cost.

- The green action committee is a manifestation of that. As yet the mandate needs to be defined. Ted though part of the mandate could be to educate themselves on the issues and provide advice.
- Commercial waste needs to be looked at but it is challenging. It is private sector and you do not want to be limiting business.
- Kirstin: One idea is to give the commercial sector the same goals that are eventually developed for residential. After all everyone uses the same landfill. If business is given a challenge with a deadline (for example that waste to landfill will be reduced across the board by 50% at a certain date, then there is a definitive challenge to work to. But business can pick their own route. The benefits to business are further attributes to shoppers and community users, which means more business, possible reduced waste costs, better staff retention.
- What other municipalities doing with commercial waste reduction?
- A non- prescriptive approach is good.
- Interestingly shopping trips go to Camrose as a center and even bring shoppers from Edmonton. In fact the opening of Walmart and box stores doubled business for all stores. Studies have confirmed that out of town traffic is significantly up.
- Other community influences include Augustana College changing to Uof A, this will double student population in next several year.
- Camrose is a retirement center and this will continue to grow. They are like a small Red Deer.
- Other business areas are agribusiness. They are on the intersection of CN and CP which means pipe maintenance centres are located here. As well as it drives pipe manufacturing (6 inch to 48 inch) and pipe coating businesses. This activity takes up a whole quarter section. Oilfield service is also of note.
- Ted is looking forward to results of the study and survey so the community will have a more structured solid waste plan to take them into their future.

## **12. Mark Barrett , Director, Engineering Services**

- Some discussion was had regarding providing a waste 101 or waste truths seminar to environmental stakeholders in Camrose to bring them all to the same playing field and to give them an opportunity to talk and meet each other. There are many excellent ideas and similar thoughts on waste diversion in the community and would move forward simply by having an ideas forum with stakeholders. These would simply be documented and could then help form the base for further action steps, goals, etc. This half day activity would be most useful after the study is complete and the survey results are also in.



- A survey question on the types of information gaps people perceive about recycling and environment. Would be helpful then a communications plan could be geared to this.
- A lot of questions have come up about plastic – why only Number two is recycled. Why not the rest.
- Mark constantly gets comments that people want more information and often for information that has been provided. The consultant added that this is actually a positive indicator of the level of interest by the community and should be supported through more education and communication.
- A further survey question could provide what does happen for communication, which do people use, and what else could work better in the future. There is an opportunity to survey a sample high school class or university/college class to see if this elicits other responses from a younger demographic.
- Try to determine what the percentage diversion that happens at the Camrose recycling depot.
- A discussion on commercial waste diversion generated some of the following. Cardboard recycling for business was arranged jointly by the City to get a better rate for recycling cardboard over putting it into the garbage. This was done through WSI who in turn takes the old corrugated cardboard to Centra Cam. The amount of OCC recycling is in the numbers provided to the consultant and is not separated from the residential numbers
- A potential exists to ban OCC .Another target could be construction and demolition waste, and or organics reduction for the commercial sector.
- Drivers for business are likely cost and then convenience and then being green.
- Kirstin: For business to do anything there needs to be a goal that has to be met. One opportunity is to give them a goal and ask them for ideas. Start with OCC because infrastructure exists and then move to other waste streams. Put it on a schedule. A ban is useful because it is easy to measure. Another idea is to expand bottle recycling in the busy shopping areas to give greener cleaner image which fits into Camrose's overall plan. This could be accomplished through simply tendering the opportunity out. Due to the return on bottles there may not be any costs to the City. Centra Cam or the local bottle depot or recycling company may welcome this opportunity.
- Tires are recycled through local companies such as Canadian Tire so the only tires received at landfill are old ones. Recycled tires are actually used in the landfill as part of the engineered leachate collection system. This system is used in many Alberta landfills and is a local tire recycling success story.
- Concrete and asphalt is collected from contractors at the landfill and is reused internally by the City for projects.



- Parks and recreation makes mulch from branches they collect but get too much and bring excess wood to the landfill where it is burned. Kirstin: In the future the wood could be mulched and used as bulking agent for an expanded compost system at the landfill. Right now the existing compost should be tested for completion, screened, and offered to landscapers, residents, parks and recreation, and farmers on a cost recovery basis as a test market for a larger future composting project. There is lots of room for more diversion projects at the landfill.
- Kirstin: Another opportunity is to increase fees for unsorted loads to the landfill and allow sorting at the landfill in a designated area. Or have higher landfill fees and lower recycling fees. Easy items to start with are wood and OCC. Tipping fees can be increased to encourage more recycling.
- Explore the idea of allowing residents to reuse large items before they are landfilled. Currently they go directly to the landfill. Kirstin: This can be done at curbside for a weekend, at a central location in town, or at the landfill or recycling depot on a permanent basis. This activity will generally increase business for garage sales, restore, and other reuse type business. There is also the opportunity to focus on very specific waste streams such as bicycles. Airdrie now operates a bicycle exchange at the recycling depot.
- Household hazardous waste probably needs to be year round. Currently hhw is rejected on non toxic round up days and it is unknown where it goes. A survey question can ask residents to rank what services they want next and include a permanent HHW drop off as an item. Or a separate question could simply ask if HHW drop off is now needed at a given cost range.
- Information on waste collection is needed. For a community of Camrose's size is a moving schedule that reduces collection periods per year and hence cost best or is it better to keep the collection day the same each week for each person as this is easier to remember. What about twice per month collection is this worth the 5% savings.
- Christmas tree drop off happens at organics bin at Cenra Cam
- What can be done in the collection RFP or tender to manage costs and increase diversion. Some items discussed were to ask for prices to collect major waste streams, for example recyclables at curbside, organics at curbside, returnable bottles for downtown, cardboard as a separate item for all residents, residual waste, etc. Price could be based per tonne and not per household as quantities per household will vary over the implementation of the program and this allow for price flexibility. Ask for price of specific program components if you know them. But allow the components to be turned on at anytime in the next five years.





### 13. Jeremy Enarson, Assistant City Engineer

- Commercial tonnage number may be higher for Camrose because Camrose has a well developed institutional based commercial sector or perhaps because Camrose does count more of the ICI waste, due to it coming into their own landfill, than the federal statistics numbers do (Camrose is 1640kg/yr/person versus national average of 1000 kg/yr/person). The federal numbers are likely grossly under reported.
- Kirstin: One idea to reduce tonnage to landfill is to apply differential fees at the landfill. For example if you come in with organics only, you should pay little to no fees compared to landfill fees. Landfill fees could be raised. If you come in with organics free would encourage more businesses to divert. This thinking could be applied to other waste streams that you want to divert.
- Could this work for cardboard? Differential fees could be a very large part of the diversion solution.
- Along with this sorting of mixed loads need to be addressed. If a mixed load comes in do you provide sorting at the landfill? If you want to maximize sorting you will need to provide this because even the best sorters do not get it right each time.
- The construction and demolition is not handled by the landfill operator. It is billed and handled by the City. There is even a separate entrance. Only concrete and asphalt is handled
- Kirstin: Household hazardous should be reviewed for permanent drop off location. More data about the importance of this for residents can be sought through survey. This has to be handled safely if it occurs. Some potential location at Centra Cam, Fire hall, public Works yard.
- Jeremy recognizes the resource they have in Vicki's position is tremendous and is needed and could be expanded. Especially Jeremy recognizes the importance of education and it having a continuing voice in developing both waste and water related plans.
- Jeremy is involved with water conservation. One program that has been developed is if builder uses approved low flush toilet can get a rebate. Could this model be used for diversion of waste streams?
- Jeremy and Vicki are working on a potential rebate program for users of home composters. Kirstin: This is an excellent way to promote organics education to get persons thinking about this large divertible waste stream. Even when a large scale diversion program comes on line education through developing home composting will always play an important role by educating persons on how composting works and how to get to zero waste and eliminating transportation.
- Vicky also tours school kids to waste water treatment plant.





- Biosolids are stored in lagoons and then the solid portion is periodically land applied, every several years. This has worked well and there have been minimal odour issues.
- Jeremy is on the board of the local watershed group. Issues are water shortages in the Battle River and water quality is an issue. Most of area draws water from reservoirs so water is fairly secure. By better managing solid waste we also improve water quality. All the issues are interrelated.

**July 7, 2009**

#### **14. Gary Gibson – Green Action Committee Member**

- He has been a backyard composter for 30 to 40 years. Now he has a smaller garden and newer compost containers.
- Kirstin: Backyard composting is an important part of a waste management system to show that the cheapest way is right on your lot for your garden. However this is not convenient for all persons.
- He has been worm composting for about 12 years.
- Came to Camrose in 1962 and taught at Augustana College in outdoor leadership.
- He is very concerned about Camrose's green space. For example Camrose has a beautiful park but will there be enough space set aside for the future, when the population is 30 000.
- Also more set backs are needed on the streams to ensure healthy viable riparian zones for the future as development encroaches.
- Waste management system would work better if bottle depot is next to recycling center. Is there a way to do this. Perhaps a discussion with the bottle depot could facilitate this.
- Kirstin: Centralizing all waste diversion operations at one location (rather than landfill and recycling depot) would be ideal.
- There may be another lot available next to Centra Cam. Kirstin: This may not be big enough for the long term if large amounts of waste are diverted.
- It would be a good idea to make all the businesses, especially landscapers, take lawn clippings to Centra Cam or landfill for composting. Some businesses (landscapers) are putting the business landscape waste for residential pick up and since there is no bag limit, it is picked up.
- He is opposed to higher fees and would like a sensible system that takes this into account.



**July 9, 2009**

**15. Dittmar Mundel , Green Action Committee, July 9, 2009 1 780 672 1581**

- Professor at Augustana University in Global and Development studies, religion, and rural development for the last 27 years.
- He brings exchange students from Mexico each year.
- He was also involved in setting up commercial recycling for business and other in Camrose at its inception.
- Augustana should be more involved in cities waste management program they have an excellent resource to help develop aspects of the program. Students could help survey business. Do waste audits, etc. Also organics diversion from Augustana could make a big difference. If bans on commercial organics are implemented significant diversion could happen. This could further be extended to seniors centers and other institutions and businesses.
- Environmental thinking fits in Camrose. Residents and business need to go to the next level and recognize waste as resource. (Kirstin: Rules and policy are needed in Camrose on solid waste diversion to create a level playing field for business and residents. This is possible with an organics cart program and also for various recyclables such as wood and cardboard.
- Kirstin: There is an excellent network in Camrose of educated persons that could be brought into the waste diversion process to help develop components of the integrated waste plan.
- Dittmar thinks backyard composting should be promoted as an educational activity and as a cost effective diversion activity in parallel with developing a cart organics program.
- Not everyone will participate in backyard composting but those that do should get composters subsidized or should get some benefit.
- Backyard composting is the least costly option.
- Why not have a ban on grass clippings from landfill this is a low cost option.

**City of Camrose**  
Solid Waste Collection and Diversion Study

## **Section 2: Other Municipal Systems Review**



**KC ENVIRONMENTAL  
GROUP LTD.**

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS.....</b>	<b>II</b>
<b>1.0 INTRODUCTION .....</b>	<b>1</b>
<b>1.1 SUMMARY .....</b>	<b>1</b>
<b>TABLE 1.1 SOLID WASTE MANAGEMENT SYSTEMS – SELECTED MUNICIPALITIES .....</b>	<b>2</b>
<b>2.0 AIRDRIE .....</b>	<b>3</b>
<b>TABLE 2.1 AIRDRIE SOLID WASTE MANAGEMENT PROGRAM SUMMARY .....</b>	<b>3</b>
<b>TABLE 2.2 AIRDRIE INTERVIEW SUMMARY .....</b>	<b>4</b>
<b>3.0 DRAYTON VALLEY .....</b>	<b>7</b>
<b>TABLE 3.1 DRAYTON VALLEY SOLID WASTE MANAGEMENT PROGRAM SUMMARY .....</b>	<b>7</b>
<b>TABLE 3.2 DRAYTON VALLEY INTERVIEW SUMMARY .....</b>	<b>8</b>
<b>4.0 LEDUC .....</b>	<b>10</b>
<b>TABLE 4.1 LEDUC SOLID WASTE MANAGEMENT PROGRAM SUMMARY .....</b>	<b>10</b>
<b>TABLE 4.2 LEDUC INTERVIEW SUMMARY .....</b>	<b>11</b>
<b>5.0 OKOTOKS .....</b>	<b>13</b>
<b>TABLE 5.1 OKOTOKS SOLID WASTE MANAGEMENT PROGRAM SUMMARY .....</b>	<b>13</b>
<b>TABLE 5.2 OKOTOKS INTERVIEW SUMMARY .....</b>	<b>14</b>
<b>6.0 SPRUCE GROVE .....</b>	<b>18</b>
<b>TABLE 6.1 SPRUCE GROVE SOLID WASTE MANAGEMENT PROGRAM SUMMARY .....</b>	<b>18</b>
<b>TABLE 6.2 SPRUCE GROVE INTERVIEW SUMMARY .....</b>	<b>19</b>
<b>7.0 ST. ALBERT .....</b>	<b>21</b>
<b>TABLE 7.1 ST. ALBERT SOLID WASTE MANAGEMENT PROGRAM SUMMARY .....</b>	<b>21</b>
<b>TABLE 7.2 ST. ALBERT INTERVIEW SUMMARY .....</b>	<b>22</b>
<b>8.0 STONY PLAIN .....</b>	<b>24</b>
<b>TABLE 8.1 STONY PLAIN SOLID WASTE MANAGEMENT PROGRAM SUMMARY .....</b>	<b>24</b>

<b>TABLE 8.2 STONY PLAIN INTERVIEW SUMMARY .....</b>	<b>25</b>
<b>9.0 STRATHCONA COUNTY .....</b>	<b>26</b>
<b>TABLE 9.1 DIVERSION RATES (2007, 2008) .....</b>	<b>27</b>
<b>10.0 WINDSOR, NOVA SCOTIA.....</b>	<b>27</b>
<b>11.0 LEAF RAPIDS, MANITOBA.....</b>	<b>27</b>
<b>12.0 APPENDIX .....</b>	<b>29</b>
<b>12.1 LEAF RAPIDS SINGLE USE PLASTIC BAG BYLAW .....</b>	<b>29</b>

## **1.0 INTRODUCTION**

Section 2: Other Municipal Systems Review summarizes the findings from interviews with other municipalities. The following municipalities were reviewed:

1. Airdrie
2. Drayton Valley
3. Leduc
4. Okotoks
5. Spruce Grove
6. St. Albert
7. Stony Plain
8. Strathcona County
9. Windsor, Nova Scotia
10. Leaf Rapids, Manitoba

### **1.1 Summary**

Table 1.1 on the following page summarizes the solid waste management programs currently provided by selected municipalities in Alberta. Details on these programs are provided in the subsequent sections.

**Table 1.1 Solid Waste Management Systems – Selected Municipalities**

Municipality	Waste Collection			Recycling		Organics		Rates (/month/hh)
	Automated	Manual	Bag Limit	Curbside	Depot	Curbside	Depot	
Airdrie		√	<b>2 Bag</b>		<b>Extensive Manned</b>		√	\$17.13 \$10.24 – garbage \$6.89 – diversion
Beaumont	√		<b>1 Cart</b>	<b>Blue Bag</b>		<b>Yard Waste</b>		\$23.25
Devon	√		<b>1 Cart</b>	<b>Blue Bag</b>	<b>Manned</b>	<b>Brown Bag</b>	√	\$18.00
Drayton Valley	√		<b>1 Cart</b>	<b>Bi-weekly Blue Bag</b>	√		<b>Grass Bin</b>	<b>From tax base</b>
Fort Saskatchewan		√		<b>Blue Bag</b>	√		<b>Yard Waste</b>	\$14.66
Leduc		√	<b>4 Bag</b>	<b>Blue Bag</b>	√	<b>Yard Waste</b> 6 Weeks Spring, 6 Weeks Fall	<b>Yard Waste</b>	<b>\$20.50</b>
Okotoks		√	<b>2 Bag</b>	<b>Voluntary Subscription</b>	<b>Manned</b>	<b>Cut-n-Call</b>	√	\$12.77 \$9.09 – garbage \$3.70 paid by residents and businesses - diversion (Recycling depot – from tax base)
Spruce Grove	√		<b>1 Cart</b>	<b>Blue Bag</b>	√	<b>Yard &amp; Food Waste</b> (Spring through Fall - Carts)	√	\$21.95
St. Albert	<b>Goal to implement in 2011</b>	√	<b>PAYT Subscription</b>		√		√	\$3.75 + PAYT subscription (\$4.30 to \$25.35)
Stony Plain		√		<b>Biweekly Blue Bag</b>	√	<b>Food &amp; Yard Waste</b> (Spring through Fall – Carts)	√	\$20.26
Strathcona County	√		<b>1 Cart</b>	√	√	<b>Food &amp; Yard Waste</b> (Carts)	√	\$20.95

## 2.0 AIRDRIE

**Table 2.1 Airdrie Solid Waste Management Program Summary**

<b>Community</b>	Airdrie
<b>Contact</b>	Angella Brightwell , Recycling Coordinator, Ph: (403) 948-0246, (403) 948 8800 x 6291 Email : <a href="mailto:angela.brightwell@airdrie.ca">angela.brightwell@airdrie.ca</a>
<b>Demographics</b>	Population: 38 091 # of Households: 14 487
<b>Waste Tonnages</b>	Waste Tonnages (2008): <ul style="list-style-type: none"> <li>7000 tonnes (including waste from transfer station located at rodeo grounds)</li> </ul>
<b>Waste Collection</b>	User Pay System: cost for waste collection is taken out of the general tax base and charged on residential utility bill
<b>Recycling</b>	Manned, municipally managed
<b>Organics</b>	Yard waste collection at Recycling Depot
<b>Waste Bans</b>	None
<b>Commercial</b>	Some commercial waste accepted for fee at recycling depot Commercial waste managed by private service provider





**Table 2.2 Airdrie Interview Summary**

<b>Program</b>		<b>Comments (Interviewee)</b>
<b>User Pay System</b>		<ul style="list-style-type: none"> <li>• First community in Alberta to implement user-pay system</li> <li>• The User-Pay System allows Airdrie residents to see the direct cost associated with waste management</li> <li>• Garbage Service Fee: \$16.83 every two months in 2008, 2009 increased to \$19.96, covers residential garbage collection (does not cover transfer station)</li> <li>• Environmental Service Fee: \$10.20 every two months, covers recycling, composting and HHW collection</li> </ul>
<b>Waste Collection</b>	<b>Carts</b>	<ul style="list-style-type: none"> <li>• Manual (no cart system)</li> </ul>
	<b>Waste Limits</b>	<ul style="list-style-type: none"> <li>• Implemented a phased in bag limit: 1992 – 5 bags, 1993 – 4 bags, 1994 to 1997 – 3 bags, 1998 – 3/2 bag limit; 1999 to 2003 – 2 bag limit</li> <li>• Over limit, must purchase tags at \$2/tag</li> <li>• To assist residents to reduce wastes other waste management programs were established and/or enhanced (see recycling depot and composting program)</li> </ul>
	<b>Large Item Collection</b>	<ul style="list-style-type: none"> <li>• No large item pick up – residents bring to depot or transfer station and user-pay applies</li> <li>• Spring Clean-up dropped in 2007</li> <li>• Christmas Trees accepted at depot for about 6 weeks after Christmas</li> </ul>
	<b>HHW</b>	<ul style="list-style-type: none"> <li>• Household hazardous waste (batteries, propane, oil jugs, oil filters, glycol, aerosol, fluorescent, toxic waste) accepted at depot from May 1 to Sept 30</li> <li>• For paint, depot has an ARMA bin they got at no cost, an oil waste building built in 1999, chemical shed built in 2006 for about \$15 000, batteries go on a pallet</li> <li>• System for hazardous waste is not winterized and chemicals may not be as recyclable if frozen so HHW not accepted in winter</li> <li>• Operate HHW on a handle once system and have had 3 hours of training from hazardous waste experts. This is a real service to the municipality and is handled inexpensively and simply</li> </ul>



Program		Comments (Interviewee)
Recycling	Curbside	None
	Depot	<ul style="list-style-type: none"> <li>• Extensive recycling depot established in 1992 and expanded in 1993</li> <li>• Manned depot</li> <li>• Summer Hours: <ul style="list-style-type: none"> <li>○ Tuesday 9 -5 PM</li> <li>○ Wednesday to Friday 9 – 8 PM</li> <li>○ Saturday, Sunday 9 – 5 PM</li> </ul> </li> <li>• Winter Hours: <ul style="list-style-type: none"> <li>○ Wednesday 9 – 8 PM</li> <li>○ Thursday to Sunday 9 – 5 PM</li> </ul> </li> <li>• Community wide garage sale</li> <li>• 2008 Recyclables Tonnages: <ul style="list-style-type: none"> <li>○ Fibre (OCC, colored, white, newspaper, milk cartons) 1350 t goes to either Allied, Metro, or Capital</li> <li>○ Metal 50 t goes to Rainbow or Nevajo or Calgary Metal</li> <li>○ Glass 90 t (clear and coloured) goes to Vitreous</li> <li>○ Plastic 600 t (#1,2,5, plastic bags, milk jugs, lids and caps)</li> <li>○ Organics 250 t (grass clippings and leaves)</li> <li>○ E Waste 85 t goes to E cycle</li> </ul> </li> <li>• Used to include a “Take It or Leave It” Shelter but closed it in 2008 as it was too messy</li> <li>• Have clothing bins that work very well</li> <li>• Operate a bicycle exchange and book exchange</li> <li>• Want to have a second unmanned depot in the west end by end of 2009. Residents are now so well trained with drop off depot that this may be possible.</li> <li>• Alberta Recycle (AR) runs construction material at depot for City – in return Alberta Recycle has right to collect commercial recyclables. AR gets paid a fee to run program which is paid out of customer fees. AR is open Monday through Saturday. This is a two year program but will run another two years.</li> <li>• Materials accepted at the site include white goods, tires, garbage, wood, scrap metal, concrete, asphalt, propane, car batteries, drywall, OCC, and asphalt shingles. The charge to residents is \$20/load. The charge to commercial is whatever Alberta Recycle sets.</li> </ul>
Organics		<ul style="list-style-type: none"> <li>• Community Compost Drop-off at Recycling Depot</li> </ul>



Program	Comments (Interviewee)
	<ul style="list-style-type: none"> <li>• Accept grass clippings, leaves and garden waste</li> <li>• Since 1997 have composted ~ 200 tonnes/year</li> <li>• Backyard composters available for purchase at Recycling Depot (sell several hundred per year) – have also sold rain barrels</li> <li>• In 2008 began offering compost courses once per year with a \$10 credit towards a composter</li> <li>• Organics is next big stream to focus on but need a compost site</li> </ul>
<b>Public Communication</b>	<ul style="list-style-type: none"> <li>• Focus education on reduce and recycle and promote backyard composting in anticipation of a city wide program. Have to focus education because too many messages are not effective.</li> <li>• Website</li> <li>• Spring and fall community guide (4 times per year)</li> <li>• Waste Management Guide and Recycling Guide brochures</li> <li>• Onsite education</li> <li>• Schools</li> <li>• Airdrie Home and Garden Show, Community Showcase</li> <li>• Wine and Cheese networking and environment event which is extremely popular</li> <li>• Involved in Calgary area waste exchange for commercial waste</li> </ul>
<b>Additional Comments</b>	<ul style="list-style-type: none"> <li>• Benefits of user-pay system: has really increased diversion, cost savings, decrease in residential waste going to landfill, allows residents to see direct cost associated with waste management</li> <li>• Difficulty with user-pay: requires someone to monitor program, educate residents and problem solve</li> <li>• Did a waste audit in 2008, results are not available yet</li> <li>• Aiming for 1 bag limit for garbage at high cost, so persons that have no garbage set out don't get charged</li> <li>• There will be big changes for Airdrie in the next 5 years</li> </ul>



### 3.0 DRAYTON VALLEY

**Table 3.1 Drayton Valley Solid Waste Management Program Summary**

<b>Community</b>	Drayton Valley
<b>Contact</b>	Skip Kerr, Consultant for MCL Ph: (780) 420-1507 Cell: (780) 920-4193
<b>Demographics</b>	Population: 6893 # of Households: 2205
<b>Waste Collection</b>	Cart System (Automation) Cart Limit (248 L) Large Item Collection: 1 Week in September Hazardous Waste Collection: Year Round at Landfill
<b>Recycling</b>	Biweekly Blue Bag Collection Blue Bag Collection for Multi-Family Dwellings Unmanned Recycling Depot, Privately Managed
<b>Organics</b>	Grass Bin at Depot Grass Area at Landfill Curbside Collection in 2010
<b>Waste Bans</b>	None
<b>Commercial</b>	Commercial Cardboard Collection



**Table 3.2 Drayton Valley Interview Summary**

<b>Program</b>		<b>Comments (Interviewee)</b>
<b>Waste Collection</b>	<b>Carts</b>	<ul style="list-style-type: none"> <li>• Carts program implemented April 28, 2009 with first collection May 4, 2009.</li> <li>• Used RFP to implement cart system. Service provider provides carts, manages delivery and all other rollout activities.</li> <li>• Collection time was reduced from 4 day collection to 2 day collection on 2205 homes. Had 2 complaints and 1 stolen cart.</li> <li>• Cost savings of approximately \$0.30/cart/month by having cart supplied by contractor.</li> <li>• Tips for improving collection : everything should be front street collection</li> <li>• Tips for reducing collection costs: Go to automation, they couldn't get anybody to bid on manual collection.</li> </ul>
	<b>Waste Limits</b>	<ul style="list-style-type: none"> <li>• 248 L cart.</li> <li>• DO NOT PUT A TAG A BAG program in place. If they need extra service they should buy an extra cart.</li> <li>• Subscription service through the contractor.</li> </ul>
	<b>Large Item Collection</b>	<ul style="list-style-type: none"> <li>• Cost to run large item pick up (1 week in September) is approximately \$12,000</li> <li>• Minimum charge of \$5 at landfill reduced traffic by 43% and reduced requisition by \$88,000 in 2008</li> </ul>
<b>Recycling</b>	<b>Curbside</b>	<ul style="list-style-type: none"> <li>• Biweekly collection of blue bags cost is \$3/household (based on RFP in Nov 2008)</li> <li>• Service is provided by Evergreen Ecological</li> <li>• Collected just over 350 metric tonnes in 2008 vs. 1600 of MSW off the curb. Also collected 500 metric tonnes of cardboard.</li> <li>• Approximately 168kg/resident is collected. Have now gone to automated system</li> </ul>
	<b>Depot</b>	<ul style="list-style-type: none"> <li>• Run by Aspen Client Services (division of MCL). They do all the management, planning waste collection for Drayton Valley.</li> <li>• Depot is unmanned and capital and operation costs are included in contract rate</li> </ul>
<b>Landfill</b>		<ul style="list-style-type: none"> <li>• Class II landfill owned by Drayton Valley.</li> </ul>

Program	Comments (Interviewee)
	<ul style="list-style-type: none"> <li>• Demolition material accepted includes: renovation material, decks, fences, shingles, mixed concrete, trees, stumps, large branches, etc.</li> <li>• Tip fees range from \$52/tonne for C&amp;D to \$62/tonne for MSW and ICI.</li> <li>• Provide “Clean Shoe Service” – residents drop off recyclables (designed materials: paint/tires/metal) in designated areas. They drive through a loop, all concrete and kept very clean.</li> <li>• Every Family Day they have an open house where people tobogganing at the landfill. Had 500 people first year, 350 last year. Set up program in 2007.</li> <li>• Also have a section they’ve fenced off and made into an amphitheater.</li> </ul>
Public Communication	<ul style="list-style-type: none"> <li>• Family Day tobogganing event/ info in Drayton valley website</li> <li>• Designated client services line where people can call to get info, they do everything in client services and manage residential collection contract</li> <li>• As part of RFP asked contractor to provide budget as to what contractor would spend on public communication initiatives</li> </ul>



## 4.0 LEDUC

**Table 4.1 Leduc Solid Waste Management Program Summary**

<b>Community</b>	Leduc
<b>Contact</b>	<p>Ron Hanson, Director of Engineering Services  Ph: (780) 980.7142  E-mail: <a href="mailto:rhanson@leduc.ca">rhanson@leduc.ca</a></p> <p>Ryan Graham, Municipal Engineering Technologist  Ph: (780) 980.7164  E-mail: <a href="mailto:rgrahamt@leduc.ca">rgrahamt@leduc.ca</a></p>
<b>Demographics</b>	<p>Population: 21200  # of Households: ~ 6000</p>
<b>Waste Tonnages</b>	<p>Waste Tonnages:</p> <ul style="list-style-type: none"> <li>• Residential: 4927 t</li> <li>• Commercial: 8880 t</li> </ul>
<b>Diversion Rate</b>	23% (MSW diversion)
<b>Waste Collection</b>	Manual garbage collection
<b>Recycling</b>	<p>Unmanned, municipally run depot  Bi-weekly Blue bag  Curbside collection of newspapers</p>
<b>Organics</b>	<p>Compost transfer station for yard waste  Curbside yard waste collection (bags) 6 weeks in spring, 6 weeks in fall</p>
<b>Waste Bans</b>	None
<b>Commercial</b>	Use private services for collection



**Table 4.2 Leduc Interview Summary**

<b>Program</b>		<b>Comments (Interviewee)</b>
<b>Waste Collection</b>	<b>Carts</b>	None
	<b>Waste Limits</b>	<ul style="list-style-type: none"> <li>• 4 bag limit</li> <li>• \$1 for extra bags</li> </ul>
	<b>Large Item Collection</b>	<ul style="list-style-type: none"> <li>• Large item collection in Spring</li> <li>• Cost included in contract, advertising cost \$245</li> </ul>
	<b>HHW</b>	<ul style="list-style-type: none"> <li>• One-day HHW roundup in September</li> <li>• Accepted year round at landfill</li> </ul>
<b>Recycling</b>	<b>Curbside</b>	<ul style="list-style-type: none"> <li>• Bi-weekly blue bag collection provided by Evergreen Ecological Services</li> <li>• Started program May of 2008</li> <li>• Diverts ~ 63t/month</li> </ul>
	<b>Depot</b>	<ul style="list-style-type: none"> <li>• Unmanned, municipally managed</li> <li>• Collects corrugated cardboard, glass, glossy paper, milk cartons, mixed paper, newsprint, plastic containers, tin cans</li> <li>• Businesses can use depot</li> <li>• Diverts ~65 t/month</li> <li>• Costs: \$97,500/year</li> <li>• Pros: access 24/7, 365 days a year</li> <li>• Challenges: labour intensive for public services and only one location</li> </ul>
<b>Organics</b>		<ul style="list-style-type: none"> <li>• Compost transfer station for yard waste</li> <li>• Diverts ~750 tonnes/year</li> <li>• Costs: \$53,400/year</li> <li>• Pros: ease of operation for residents and cost-effective</li> <li>• Challenges: no other options for location</li> <li>• Curbside collection of yard waste (bags) 6 weeks in spring, 6 weeks in fall</li> <li>• Christmas trees collected in January (must be cut to 5' lengths) and can be dropped off at compost transfer station</li> <li>• Trees are chipped and used by Parks or at landfill for compost process or landfill cover</li> </ul>
<b>Landfill</b>		<ul style="list-style-type: none"> <li>• Regional landfill with management shared by five member municipalities under a contract with MCL</li> </ul>



Program	Comments (Interviewee)
	<ul style="list-style-type: none"> <li>• Landfill tipping fee is included in monthly household fee</li> <li>• City pays landfill Authority</li> <li>• ~\$1.3 million in operating costs, 0.6 million capital costs (vary according to capital work being undertaken)</li> <li>• Waste diversion programs: <ul style="list-style-type: none"> <li>○ Electronics diversion</li> <li>○ Freon removal</li> <li>○ Cardboard and paper diversion</li> <li>○ Battery removal program</li> <li>○ Tire recycling</li> <li>○ Used oil collection</li> <li>○ Take It or Leave It program</li> <li>○ Composting – with free compost to member municipalities</li> <li>○ Methane gas reduction program</li> <li>○ Metal removal</li> <li>○ Contaminated soils treatment</li> </ul> </li> </ul>
<b>Public Communication</b>	<ul style="list-style-type: none"> <li>• Brochures</li> <li>• Newspaper advertisements</li> <li>• Public compost give-aways</li> <li>• Costs: \$1900</li> </ul>
<b>Waste Goals</b>	<ul style="list-style-type: none"> <li>• Increase amount of waste diverted on an annual basis</li> </ul>
<b>Additional Comments</b>	<ul style="list-style-type: none"> <li>• Pay an Environmental Service Fee of \$20.50/month/hh for waste management services (waste collection, blue bag, yard waste collection, large item collection, landfill tip fee, Christmas tree collection and program administration)</li> <li>• Recycling depot comes out of tax-based general fund as both residential and commercial sector use depot</li> </ul>

## 5.0 OKOTOKS

**Table 5.1 Okotoks Solid Waste Management Program Summary**

<b>Community</b>	Okotoks
<b>Contact</b>	Darryl McDonald Ph: (403) 938-8054 Email: <a href="mailto:dmcdonald@okotoks.ca">dmcdonald@okotoks.ca</a>
<b>Demographics</b>	Population: 22, 000 (capped at 30,000) # of Households: 6200
<b>Waste Tonnages</b>	Waste Tonnages: <ul style="list-style-type: none"> <li>Residential 3773 tonnes</li> </ul>
<b>Diversion Rate</b>	25% to 30%
<b>Waste Collection</b>	2 Unit Limit, Additional Bags \$4/Tag Manual (no cart system)
<b>Recycling</b>	Subscription service for weekly curbside collection Manned, municipally managed depot
<b>Organics</b>	Optional curbside collection for lawn waste
<b>Waste Bans</b>	None
<b>Commercial</b>	Mandatory recycling service fee charged to commercial sector whether they use service or not



**Table 5.2 Okotoks Interview Summary**

<b>Program</b>		<b>Comments (Interviewee)</b>
<b>Fees</b>		<ul style="list-style-type: none"> <li>Households are charged \$18.17 every two months for garbage</li> <li>Recycling service fee is \$7.37 every two months</li> <li>Recycling fee is charged to multi-residential and commercial sector whether they use the service or not</li> </ul>
<b>Waste Collection</b>	<b>Carts</b>	<ul style="list-style-type: none"> <li>Manual (no cart system)</li> <li>Had been looking at carts for recycling but now favouring square tots</li> <li>Blue boxes have advantage with material separated rather than comingled at curb</li> </ul>
	<b>Waste Limits</b>	<ul style="list-style-type: none"> <li>Since 1993, have had a 3 unit limit</li> <li>As of September 1, 2009 a 2 unit limit is in place and cost for additional unit tag increased from \$2 to \$4</li> </ul>
	<b>Large Item Collection</b>	<ul style="list-style-type: none"> <li>Christmas Tree Collection once/year; Fortis collects and Asplundh grinds it as promo</li> <li>Large item pick up was cancelled. Residents must bring large items to the Foothills Regional Landfill located 6 km away</li> </ul>
	<b>HHW</b>	<ul style="list-style-type: none"> <li>Accepted year round at Fire Hall</li> <li>Paint accepted at Recycling Depot</li> </ul>
<b>Recycling</b>	<b>Curbside</b>	<ul style="list-style-type: none"> <li>Subscription Recycling Program - optional subscription service for weekly curbside recycling collection - \$9.00/month</li> <li>Traffic so busy at depot that starting to lose customers – this will help</li> <li>Intent is to start easy and then make it mandatory for all after time</li> </ul>
	<b>Depot</b>	<ul style="list-style-type: none"> <li>Manned recycling depot open Monday to Saturday from 9 AM to 5 PM; Thursdays from noon to 8 PM. (Sunday noon to five)</li> <li>Manned depot essential otherwise depot becomes a garbage drop-off site, which increases costs making it difficult to achieve revenue neutral goal</li> <li>On average 1846 vehicles use depot per week or approximately 35/hour.</li> <li>24 hour drop off bins in Wal-Mart parking lot</li> <li>Material is shopped around to maximize revenue</li> </ul>

Program	Comments (Interviewee)
	<ul style="list-style-type: none"> <li>• Use \$75/tonne for budgeting purposes</li> <li>• 2008 figures               <ul style="list-style-type: none"> <li>○ Corrugated cardboard - 917 tonnes (t), High River (HR) 337 t</li> <li>○ Newspapers –268 t HR 58 t</li> <li>○ Mixed paper –838 t, HR 152 t)</li> <li>○ White paper – 17 t</li> <li>○ Colored paper –6 t - has gone down as a result of residents shredding and some goes to mixed)</li> <li>○ Glass – 58 t, looking for markets for grinding)</li> <li>○ Metal –73 t, HR 9 t</li> <li>○ Plastics – 17 t milk, #1 7 t, #2 16 t, #3 2 t, #4 film 35 t, #5 35 t, #6 and #7 24 t, HR brings milk - 6 t</li> <li>○ Milk gables 9 t - HR .25 t</li> </ul> </li> <li>• Waste brokers:               <ul style="list-style-type: none"> <li>○ Paper recyclables: Allied and Capital</li> <li>○ Colored and clear glass: Town does its own, can't move glass to Vitreous and have more than need from bottle depots. Town is grinding to aggregate and marketing their own (grinder cost \$45 000)</li> <li>○ Number 1-6 plastics: Merlin in Delta, B.C. (only pays for 1, 2 and 4 but takes others) – contact Kevin Andrews, (604) 522-6799</li> <li>○ Metals go to Navajo in Calgary</li> </ul> </li> <li>• Started taking paint through deposit programs</li> <li>• No garbage is accepted at depot</li> <li>• High River's recycling depot bins are brought to Okotoks once/week (approximately 55 trips/month). High River paid for part of recycling depot renovations in Okotoks but has not paid anything since (4 years ago)</li> <li>• Traffic is so busy at depot that starting to lose customers. This was one of the incentives to implement the "Curb It" program.</li> <li>• 18% of users are from surrounding MD. MD will be asked to cover this usage</li> <li>• 8 to 9 % of users are from Calgary area because depot accepts all plastics</li> <li>• Depot currently loses approximately \$30,000/year on recycling</li> <li>• Equipment: bought horizontal with in-floor hopper - really like it and would recommend it</li> </ul>
<b>Organics</b>	<ul style="list-style-type: none"> <li>• Cut-n-Call, curbside collection of grass clippings when called in</li> </ul>



Program	Comments (Interviewee)
	<p>and stored in purchased bags</p> <ul style="list-style-type: none"> <li>• Official Town of Okotoks Cut-n-Call Bags (kraft paper) can be purchased from specified locations for \$3/bag</li> <li>• Residents call in and bags are picked up weekly on either Monday or Thursday</li> <li>• Okotoks has a leaf and grass drop-off site and Okotoks trucks take it to Foothills Regional Landfill for composting (windrow). In 2008 collected 799 tonnes</li> <li>• Okotoks started composting biosolids in a high end, in-vessel composter. . Okotoks redid system several times for \$millions and now operation is contracted to EPCOR. Biosolids compost is taken away, could not cure at landfill because of odour. Compost might be going to farm but is not being sold</li> </ul>
<b>Landfill</b>	<ul style="list-style-type: none"> <li>• Foothills Regional Waste Authority charges \$47.00/tonne for garbage disposal for commission members</li> <li>• The RWA is currently looking at developing larger compost project</li> <li>• Current operator thinks take all, therefore, landfill takes a lot of materials - soil for cover, tires, fridges, appliances, electronics, pesticides</li> <li>• There is a salvage center in building at landfill where items are sold for charity or periodically landfilled. These large item materials need to be in a controlled site</li> </ul>
<b>Public Communication</b>	<ul style="list-style-type: none"> <li>• 20 to 30 tours/year – works so well - will tour anyone, for ex a bicycle group from all over Canada</li> <li>• Brochures</li> <li>• Advertise programs regularly in newspaper</li> <li>• Messages at bottom of utility bill</li> <li>• Hired 5 educators for water usage and recycling , temporary program this year, got some funding and through communications department</li> </ul>
<b>Goals</b>	<ul style="list-style-type: none"> <li>• Change in perception - used to be known as solid waste department, now known as resource recovery group</li> <li>• Want to go to zero waste and have a goal of 80% diversion in four years</li> </ul>
<b>Additional Comments</b>	<ul style="list-style-type: none"> <li>• Bylaws require all programs to be revenue neutral however they</li> </ul>



Program	Comments (Interviewee)
	<p>do build a reserve in good years to cover for not so good years</p> <ul style="list-style-type: none"> <li>• By charging business for recycling they are more likely to participate then if they can just drop off, helps defray overall program costs)</li> <li>• Need to include and understand commercial waste as part of your system</li> <li>• Municipality should not give up control of waste streams as private haulers will give low price to win contract then once municipality has sold the trucks will increase the cost. (U hauler is themselves – 90% customer approval , costs come in middle)</li> <li>• If considering baling then focus on old corrugated cardboard which gets a 15:1 reduction. A conveyor to move the cardboard into the baler will also be required</li> <li>• Composting is seen as a success and a key component of their waste management system (site is a challenge)</li> <li>• Education is key to successful programs</li> </ul>



## 6.0 SPRUCE GROVE

**Table 6.1 Spruce Grove Solid Waste Management Program Summary**

<b>Community</b>	Spruce Grove
<b>Contact</b>	Darcy Bryant, Supervisor of Utilities Ph: (780) 962.7594 e-mail: <a href="mailto:dbryant@sprucegrove.org">dbryant@sprucegrove.org</a>
<b>Demographics</b>	Population: ~ 19,500 # of Households: 6,920
<b>Waste Tonnages</b>	Waste Tonnages: (2008) <ul style="list-style-type: none"> <li>• Garbage - 5174.18 tonnes</li> <li>• Organics - 1546.49 tonnes</li> <li>• Recyclables - 1499.51 tonnes</li> </ul> Waste Generation Rate: 910/kg/person
<b>Diversion Rate</b>	37% (residential)
<b>Waste Collection</b>	Automated 2 cart system (organics/waste) 1 Waste Cart Limit – extra bags are tagged HHW accepted year round at depot
<b>Recycling</b>	Blue bag Manned, municipally run depot
<b>Organics</b>	Weekly curbside cart collection April to November
<b>Waste Bans</b>	None
<b>Commercial</b>	Private hauler for collection Commercial sector can use Eco-Centre



**Table 6.2 Spruce Grove Interview Summary**

<b>Program</b>		<b>Comments (Interviewee)</b>
<b>Waste Collection</b>	<b>Carts</b>	<ul style="list-style-type: none"> <li>• <u>Organicart</u> (240 litre green cart) - collect food and yard waste; picked up weekly from April to November. Organic carts program implemented in 2001</li> <li>• <u>Black Bin</u> (240 litre black cart) - collect garbage; picked up weekly throughout the year. Implemented in 2007</li> <li>• City owns carts</li> <li>• Less manpower required with automation</li> <li>• Challenges with carts – residents have to maintain them</li> <li>• Advantages of carts: neater, reduces pest issues, reduces manpower, reduces worker injuries</li> <li>• Recommends front pick up only</li> </ul>
	<b>Waste Limits</b>	<ul style="list-style-type: none"> <li>• Residential garbage limit implemented April 30, 2007</li> <li>• Only black bin and tagged garbage bags are picked up on collection day.</li> <li>• One tag is required for each extra bag of garbage; additional tags can be purchased at City Hall for \$1/tag</li> </ul>
	<b>Large Item Collection</b>	<ul style="list-style-type: none"> <li>• Once/year in spring</li> <li>• Eco-centre used to have “re-use” area set up informally but have taken it away until they can set it up properly</li> <li>• Thinks large item collection should be cancelled - people need to take responsibility for their actions and take care of their own waste. Eco-Centre takes it all, residents should deliver themselves. People complain very loudly about items not picked up (i.e. a lawnmower which is something they don’t pick up).</li> </ul>
	<b>HHW</b>	<ul style="list-style-type: none"> <li>• Accepted year round at Eco-centre</li> </ul>
<b>Recycling</b>	<b>Curbside</b>	<ul style="list-style-type: none"> <li>• Biweekly blue bag collection implemented in 2007</li> <li>• Accepts mixed paper, clean mixed containers, boxboard and flattened cardboard</li> <li>• Service provided by Evergreen Ecological</li> <li>• Fairly high participation rate (estimated at 50%)</li> <li>• Residents like that it is provided at the door</li> <li>• Challenge: need to pay someone to separate, after pick up</li> </ul>



Program		Comments (Interviewee)
		<p>goes to MRF</p> <ul style="list-style-type: none"> <li>1200 tonnes diverted (2007)</li> </ul>
	<b>Depot</b>	<ul style="list-style-type: none"> <li>Manned and run by municipality</li> <li>Eco-centre provides access to household hazardous waste disposal as well as household recyclables, electronics and appliances, organic food and yard waste and excess household waste (at a charge)</li> <li>Charges for waste: <ul style="list-style-type: none"> <li>\$1/bag</li> <li>\$5/small item</li> <li>\$10/large item</li> <li>\$35/truckload</li> <li>\$60/cube van load</li> </ul> </li> <li>Challenges: facility is not large enough, people don't like to pay</li> <li>Pros: provides residents with more options, establishes partial separation, provides some revenue streams</li> </ul>
<b>Organics</b>		<ul style="list-style-type: none"> <li>Started in 2001 Spruce Grove was the first community in Alberta to implement a curbside organics collection program. From April to November weekly food and yard trimmings collection is provided for 6,920 households. Spruce Grove experienced a 35% reduction in waste going to landfill after one year.</li> <li>Waste program prior to organics collection \$8/hh, with organics collection \$11.25/hh</li> <li>Organicarts were amortized over 10 years</li> <li>Organics are processed at Cleanit Greenit Composting System Inc. (CG) into Grade a compost; City receives material back for use in parks, etc.</li> <li>Challenges: need education to reduce contamination, need to develop program to make use of finished compost</li> <li>Pros: significantly increases diversion rate (1430 tonnes April 15 to November 30, 2008)</li> </ul>
<b>Landfill</b>		<ul style="list-style-type: none"> <li>Waste collection contractor (Evergreen) is responsible for disposal</li> <li>West Edmonton Landfill \$80/t at gate</li> </ul>
<b>Public Communication</b>		<ul style="list-style-type: none"> <li>Want to put out Organicarts at high school to collect organics on Canada Day</li> </ul>



Program	Comments (Interviewee)
	<ul style="list-style-type: none"> <li>Calendars go out annually</li> <li>Calendar and information sheets go out with each new bin</li> <li>Web site</li> </ul>
<b>Waste Goals</b>	<ul style="list-style-type: none"> <li>Nothing specific – highest diversion rate that they can achieve</li> </ul>
<b>Additional Comments</b>	<ul style="list-style-type: none"> <li>Monthly utility charge of \$21.95/hh/month</li> </ul>

## 7.0 ST. ALBERT

**Table 7.1 St. Albert Solid Waste Management Program Summary**

<b>Community</b>	St. Albert
<b>Contact</b>	<p>Megan Myers, Environmental Coordinator  Ph: (780) 495-1735  E-mail: <a href="mailto:mmyers@st-albert.net">mmyers@st-albert.net</a></p> <p>Christian Benson, Utilities Department  Ph: (780) 416-6600</p>
<b>Demographics</b>	<p>Population: ~ 60,000  # of Households: 18,037</p>
<b>Waste Tonnages</b>	Residential: 192 kg/person
<b>Diversion Rate</b>	~ 37% (residential waste diversion)
<b>Waste Collection</b>	<p>Manual (no cart system)  PAYT (Pay as You Throw)  Take It or Leave It Event once/year</p>
<b>Recycling</b>	<p>Blue Bag (July 1, 2009)  Unmanned, municipally run depot</p>
<b>Organics</b>	<p>Yard Waste Drop-off  Encourage Grass Cycling</p>
<b>Waste Bans</b>	None
<b>Commercial</b>	Private hauler for collection



**Table 7.2 St. Albert Interview Summary**

<b>Program</b>		<b>Comments (Interviewee)</b>
<b>Waste Collection</b>	<b>Carts</b>	<ul style="list-style-type: none"> <li>• Ran an organic cart system as a pilot 10 years ago. Those with carts can arrange pick up of carts through Waste Management directly, WM takes it to City Compost Yard. This will become obsolete in a few years</li> <li>• Proposal to Council is to launch full automation/cart system for waste and organics in 2011</li> <li>•</li> </ul>
	<b>Waste Limits</b>	<ul style="list-style-type: none"> <li>• PAYT: all garbage bags must be tagged. Have 8 different subscription levels. Cost increases exponentially for extra tags which is a good deterrent</li> <li>• Current PAYT program is too convoluted – the many subscription levels and tags make it too complex for people</li> <li>• Effective July 1, 2009 program will be simplified to three volume levels: <ul style="list-style-type: none"> <li>○ 1 bag per two weeks</li> <li>○ 1 bag per week</li> <li>○ 2 bags or 1 can or 1 small toter per week</li> </ul> </li> </ul>
	<b>Large Item Collection</b>	<ul style="list-style-type: none"> <li>• 'Take-it-or-leave-it' Event once/year, every June people drop off items at Leisure Centre Parking lot from 8am to 1pm</li> <li>• Cost is probably similar to hazardous waste roundup ~ \$15,000 to \$30,000</li> </ul>
	<b>HHW</b>	<ul style="list-style-type: none"> <li>• Use Edmonton Eco-station (which St. Albert contributed to cost)</li> <li>• Used to do Hazardous Roundup twice a year up to 10 years ago, but have stopped, not sure why. Probably cost/budget. Did it again for the first time in 2008, but not sure if they will continue</li> </ul>
<b>Recycling</b>	<b>Curbside</b>	<ul style="list-style-type: none"> <li>• Implemented July 1, 2009</li> <li>• Blue bag collection provided by Evergreen Ecological Services</li> <li>• Cost is \$5.50/household</li> <li>• Yearly residents review – always indicated they wanted curbside recycling; but some have a hard time seeing that they are saving in waste disposal in the long run</li> </ul>

Program		Comments (Interviewee)
	Depot	<ul style="list-style-type: none"> <li>• Municipally run, unmanned but connected to Public Works Yard</li> <li>• Process of changing, will be manned and gated</li> <li>• Expect to save approximately \$30,000/year in the long run by doing this – less manpower (for site cleanup), more opportunities to educate so less contamination</li> <li>• Will also save money by adding a cardboard compressor</li> <li>• Currently depot accepts newsprint, mixed paper, magazines, cardboard, milk jugs, tin cans, and some electronics. Allied paper supplies bins and pick up materials</li> </ul>
Organics		<ul style="list-style-type: none"> <li>• Administrative recommendation to Council is to implement full curbside organics collection program (cart system) by 2011. This is expected to increase capture rate for yard waste by 50% and to capture 50% of available food waste.</li> <li>• Promote grass cycling</li> <li>• Compost yard for people to bring their yard waste. Every resident pays a flat fee on their utility bill for this service \$3.65/m (going up to \$4/m as of July).</li> <li>• Contractor picks up material</li> <li>• Compost Give Away twice a year; spring and fall – people bring their utility bill to Public Works yard to prove they are a resident then they get 2 free bags of compost (burlap sacks)</li> <li>• In 2008, received 14, 394 kg</li> <li>• Cost to operate compost depot: \$ 179,500</li> </ul>
Landfill		<ul style="list-style-type: none"> <li>• Waste is taken to Waste Management Landfill in Edmonton. Capped at 2011 so will have to find a new landfill at that time</li> <li>•</li> </ul>
Public Communication		<ul style="list-style-type: none"> <li>• Website</li> <li>• Editorials in Newspaper</li> <li>• Utility Bills</li> </ul>
Waste Goals		<ul style="list-style-type: none"> <li>• 65% diversion by 2020</li> <li>• Reduce solid waste to 125 kg/person/year by 2020</li> </ul>
Additional Comments		<ul style="list-style-type: none"> <li>• Don't have capital and operating costs broken down per area, but for whole system (waste/recyclables/organics) budget for 2008 was \$2, 338, 500</li> </ul>



## 8.0 STONY PLAIN

**Table 8.1 Stony Plain Solid Waste Management Program Summary**

<b>Community</b>	Stony Plain
<b>Contact</b>	<p>Tony Lew, Manager of Operations  Ph: (780) 963.2469  E-mail: <a href="mailto:t.lew@stonyplain.com">t.lew@stonyplain.com</a></p> <p>Dana Schmidt, Sustainable Development Coordinator  Ph: (780) 963 -8606  E-mail: <a href="mailto:D.Schmidt@stonyplain.com">D.Schmidt@stonyplain.com</a></p>
<b>Demographics</b>	<p>Population: 12,363  # of Households: 4151 (receiving waste collection services)</p>
<b>Waste Tonnages</b>	<p>Waste Tonnages:</p> <ul style="list-style-type: none"> <li>Residential: 1,824.80 in 2007 / 2834.67 in 2008</li> <li>MSW: 2,807 in 2007 / 3,004.30 in 2008</li> </ul>
<b>Diversion Rate</b>	43% (2008)
<b>Waste Collection</b>	<p>Automated 1 cart system (organics)  Manual garbage collection  All collection services (organics, waste, blue bag) contracted to Evergreen Ecological Services</p>
<b>Recycling</b>	<p>Bi-weekly blue bag collection  Manned, municipally run depot</p>
<b>Organics</b>	Weekly Curbside Cart Collection Mid-April to Mid-October
<b>Waste Bans</b>	None
<b>Commercial</b>	Some businesses pay a monthly fee to receive same services as residents

**Table 8.2 Stony Plain Interview Summary**

<b>Program</b>		<b>Comments (Interviewee)</b>
<b>Waste Collection</b>	<b>Carts</b>	<ul style="list-style-type: none"> <li>• Organicarts (food and yard waste) implemented in 2001</li> <li>• Implemented through RFP</li> <li>• Ensure RFP goes to several competitors</li> </ul>
	<b>Waste Limits</b>	<ul style="list-style-type: none"> <li>• None</li> </ul>
	<b>Large Item Collection</b>	<ul style="list-style-type: none"> <li>• Treasure Hunt Day once per year – large items can be left out for others, then will be collected</li> <li>• No `reuse area` at recycling centre, but transfer station has a ``Take It or Leave It`` bin`</li> <li>• Cost \$12,000</li> </ul>
	<b>HHW</b>	<ul style="list-style-type: none"> <li>• Paint accepted year round at depot</li> </ul>
	<b>Additional Comments</b>	<ul style="list-style-type: none"> <li>• Challenge: missed collection due to high employee turnover</li> <li>• At a function with other municipalities this was a common concern</li> </ul>
<b>Recycling</b>	<b>Curbside</b>	<ul style="list-style-type: none"> <li>• Blue bag collection implemented in 2006</li> <li>• Diversion from recyclables estimated at 21%</li> <li>• Challenges: estimates that about one quarter of residents don't participate but this is increasing</li> <li>• Have to do a lot of education before implementing program otherwise a lot of contamination</li> </ul>
	<b>Depot</b>	<ul style="list-style-type: none"> <li>• Municipally managed, manned depot</li> </ul>
<b>Organics</b>		<ul style="list-style-type: none"> <li>• Curbside cart collection weekly from mid-April to mid-October</li> <li>• Not all residents have bought in – some put organics into garbage</li> <li>• Challenges: some residents feel they don't have storage space for carts, some don't use</li> <li>• Three 30 yard bins for yard waste at recycling centre (emptied twice per week)</li> <li>• Divert approximately 1200 tonnes per year from organic carts and organics bins at recycling depot</li> <li>• Need education to reduce contamination – people try to put construction material – once found 1/2 a moose in organics bin!</li> </ul>

Program	Comments (Interviewee)
<b>Landfill</b>	<ul style="list-style-type: none"> <li>• Parkland Waste Transfer Station</li> <li>• Tip fees: \$55/tonne + fuel surcharge</li> </ul>
<b>Public Communication</b>	<ul style="list-style-type: none"> <li>• Web site</li> <li>• Reminders sent out with utility bill</li> <li>• Waste Reduction Events:-Earth Day, Pitch in Canada, Waste Reduction Week, etc</li> </ul>
<b>Waste Goals</b>	<ul style="list-style-type: none"> <li>• Environmental Stewardship priorities: all town events attempt to be Zero Waste, and we assist and encourage other groups to be zero waste</li> <li>• Core Strategy 7 of the 2005-2007 Strategic Plan aims to deliver municipal services and programs in an environmentally responsible manner which clearly demonstrates that our physical environment is a priority within our community</li> </ul>
<b>Additional Comments</b>	<ul style="list-style-type: none"> <li>• Don't have separate line items for each program, have waste program with a budget of over \$1 million.</li> <li>• Fee structure for garbage, Organicart and recycling collection and disposal services: <ul style="list-style-type: none"> <li>• Residential - Single Family Dwellings - \$20.26/month</li> <li>• Residential - Apartment House - \$12.00/month</li> <li>• Residential - Senior Citizens Apartment House - \$8.00/month</li> </ul> </li> </ul>

## 9.0 STRATHCONA COUNTY

In 2008, Strathcona County implemented the Green Routine Program with a two-stream cart system (green – organics (food and yard waste), black – garbage.) At the same time they implemented a one cart limit for garbage. After a year of the Green Routine program, the county is achieving 65% diversion for the residential sector.

In comparison, the year prior to this program during the same time frame Strathcona County achieved 27% diversion through recycling at the depots, newspapers at the curb and grass collection at the curb during summer season with no waste limit.



**Table 9.1 Diversion Rates (2007, 2008)**

Stream	2008 Diversion Rate	2007 Diversion Rate
Organics	34%	13%
Paper	21%	12%
Container Recycling	9%	1.5%
Total Residential Diversion	65%	27%

The impact of the waste limit can be seen in the increase in both paper and container recycling – programs previously offered but not fully utilized as there was no perceived need. Also interesting to note is a 4% decrease in total waste generated despite an increase in population.

**Contact Information:**

Leah Seabrook, Coordinator

Waste Management & Community Energy Services Utilities, Strathcona County

Ph. (780) 416-6797 Fax. (780) 464-0557

Email: [seabrook@strathcona.ab.ca](mailto:seabrook@strathcona.ab.ca)

## **10.0 WINDSOR, NOVA SCOTIA**

### *Organics Ban at Landfill*

In 1999 Nova Scotia's Environment Department implemented a ban on organics from landfills and required that 50 per cent of waste to landfills by diverted by 2000. In order to comply with this ban, Windsor, Nova Scotia, a town of 3, 725 implemented an Organics program. Windsor has achieved waste diversion results of approximately 60% and has experienced success with both commercial and residential waste.

A key to the success of the Organics Program has been an extremely effective public communications program.

## **11.0 LEAF RAPIDS, MANITOBA**

### *Plastic Bags Ban*

In April of 2007 Leaf Rapids, Manitoba became the first community in North America to legislate a ban on single-use plastic shopping bags. With the support of various community members, business leaders and municipal councillors over 2 years a bylaw banning single use plastic bags was created. Under the bylaw (attached in the appendix): “ ***the Town of Leaf Rapids will be Single Use Plastic Shopping Bag free effective April 2, 2007 and retailers in the Town***”





***of Leaf Rapids will not be permitted to give away or sell plastic shopping bags that are intended for single use.*** Enforcement of the bylaw is based largely on complaints.

Before implementing the ban, the City distributed 5 free reusable bags to each household. Retailers were then required to charge \$0.03/bag. After approximately one year, the ban was put in place. Education and public communication was key to the success of the program.



## **12.0 APPENDIX**

### **12.1 Leaf Rapids Single Use Plastic Bag Bylaw**

#### **TOWN OF LEAF RAPIDS**

##### **By-Law No. 462**

***Being a By-Law of the Town of Leaf Rapids for the establishment of Single Use Plastic Shopping Bags.***

***WHEREAS Single Use Plastic Shopping Bags are a very visible component of litter throughout the Town of Leaf Rapids, lake side, trails, roadside and the nuisance grounds;***

***AND WHEREAS Single Use Plastic Shopping Bags have a negative impact on our wildlife habitat and are not environmentally friendly;***

***AND WHEREAS the Town of Leaf Rapids incurs a significant cost to clean up the Single Use Plastic Shopping Bags each year;***

***AND WHEREAS local businesses can reduce merchandise cost by not having to purchase Single Use Plastic Shopping Bags;***

***AND WHEREAS the Town of Leaf Rapids has provided education to shoppers and school children about the environmental advantages and reduced cost of using reusable shopping bags;***

***AND WHEREAS by using a multi-use shopping bag, residents are reminded of the positive impact of recycling;***

***NOW THEREFORE upon passing this By-Law, the Council of the Town of Leaf Rapids, enacts as follows:***

- 1. THAT the Town of Leaf Rapids will be Single Use Plastic Shopping Bag free effective April 2, 2007.***
- 2. THAT retailers in the Town of Leaf Rapids will not be permitted to give away or sell plastic shopping bags that are intended for single use.***
- 3. THAT a person who contravenes this By-Law of the Town of Leaf Rapids is guilty of an offence and is liable on summary conviction of a fine of not more than***



**\$1000.00.**

- 4. THAT where a contravention continues for more than one day, the person is guilty of a separate offence for each day it continues.**
- 5. THAT on passing of this By-Law, By-Law No. 457 is hereby rescinded.**
- 6. DONE AND PASSED as a By-Law of the Town of Leaf Rapids at the Town site of Leaf Rapids, in the Province of Manitoba, this 22nd day of March, 2007, A.D.**

**EXEMPTIONS TO THE BY-LAW**

**Small plastic bags that are used to store non-packaged goods such as: a) Dairy products  
b) Fruit, vegetables or nuts c) Confectionery d) Cooked foods, hot or cold e) Ice f)  
Smaller bags for fresh meat, fish, candy and poultry g) Bags that cost more than \$1.50**



**City of Camrose**  
Solid Waste Collection and Diversion Study

## **Section 3: Survey Report**



**KC ENVIRONMENTAL  
GROUP LTD.**

## TABLE OF CONTENTS

TABLE OF CONTENTS.....	II
FIGURES AND TABLES .....	III
1.0 INTRODUCTION .....	1
2.0 SURVEY FORMAT .....	1
3.0 SURVEY RESULTS .....	1
3.1 GOAL SETTING .....	2
4.0 APPENDIX .....	81

## FIGURES AND TABLES

Figure 1. Comparison of Response Rates to Population % .....	2
Figure 2a. Goal Setting .....	3
Figure 2b. Goal Setting by Percentage of Waste Reduction .....	4
Figure 3a. Frequency of Recycling Organics and Paper Waste.....	9
Figure 3b. Frequency of Recycling Plastic, Tin and Glass .....	9
Figure 3c. Frequency of Recycling Other Materials .....	10
Figure 3d. Percent of Respondents Who Always Recycle Specified Material .....	10
Figure 4a. Preference 1 for Recycling Depot Open Time Period .....	21
Figure 4b. Preference 2 for Recycling Depot Open Time Period .....	21
Figure 4c. Preference 3 for Recycling Depot Open Time Period .....	22
Figure 4d. Total % of Responses for Each Recycling Depot Open Time Period .....	22
Figure 5. Household Hazardous Waste Services .....	23
Figure 6. Percentage of Respondents Who Would be Satisfied With Rotating Collection Schedule.....	24
Figure 7. Best Communication Methods.....	26
Figure 8. Should the City Consider Implementing a Cart System .....	28
Figure 9a. Responses Ranked #1 .....	43
Figure 9b. Responses Ranked #2 .....	44
Figure 9c. Responses Ranked #3 .....	44
Figure 9d. Total Responses for Each Waste Management Option .....	45
Figure 10. Bag or Cart Limit .....	51
Figure 11a. Willingness to Pay .....	63
Figure 11b. Willingness to Pay (At least) .....	63
Table 1. Other Options for Goals.....	4
Table 2. How Can We Improve these Services? .....	6
Table 3. Recycling Frequency .....	8
Table 4a. What Would Help You to Recycle More? .....	11
Table 4b. What Would Help You to Recycle More? .....	12
Table 5. Other Methods for Communication .....	26
Table 6a. Cart System – Why Yes or No .....	28
Table 6b. Cart System – Why?.....	29
Table 7. Other Waste Management Ideas .....	46
Table 8. Should the City Implement a Bag or Cart Limit – Why? .....	51
Table 9. Other Comments .....	65
Table 10. Improvement of Services.....	81

## **1.0 INTRODUCTION**

Section 3: Survey presents the results and findings of the solid waste management survey conducted for this project.

## **2.0 SURVEY FORMAT**

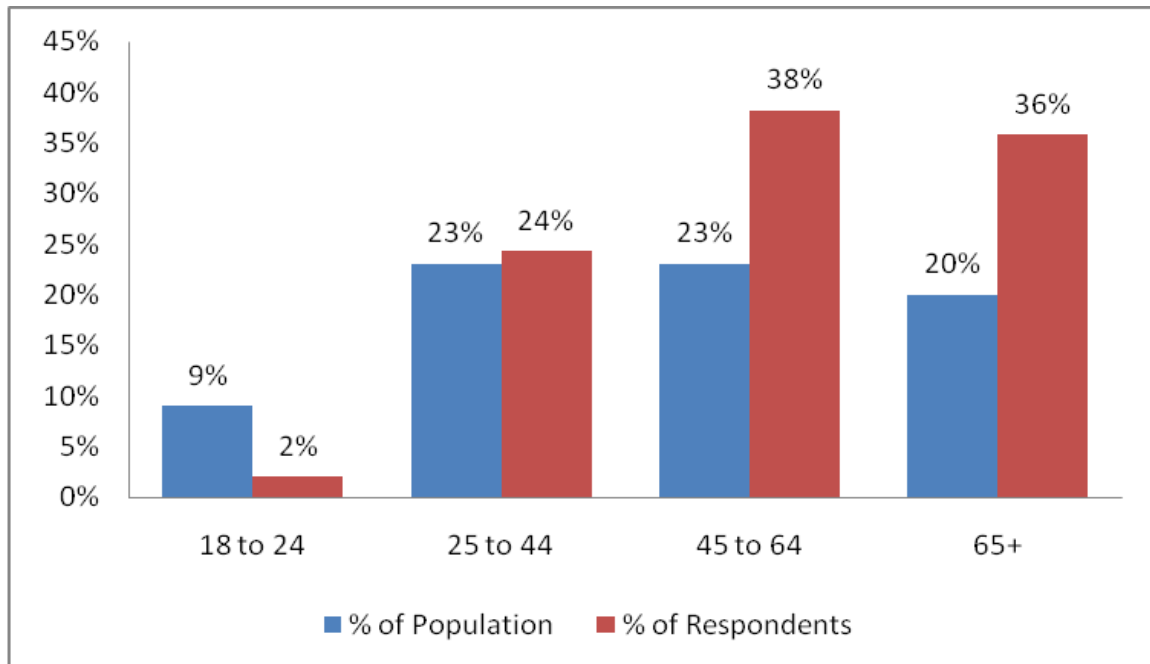
The survey was designed in a brochure format to provide the public with introductory information regarding their current waste management system and some waste reduction alternatives. Information on current waste quantities and typical municipal waste streams was provided.

Questions were based on issues arising from interviews, onsite inspection and from the consultants' experience regarding potential waste management alternatives. Valuable input was also provided by City staff.

The survey was distributed by the City of Camrose to 5000 households through the Utility Bill mail out. Four hundred and eighty seven (487) surveys were completed and analyzed.

## **3.0 SURVEY RESULTS**

The survey was distributed to each household to ensure all households had the opportunity to participate. Therefore no sampling was done. To test whether there is a non-response bias; the responses by population category were compared to the actual population percentages. For example, the percentage of responses from respondents between the ages of 25-44 was compared to the percentage of Camrose's population between these same ages. As illustrated in Figure 1, the response rate of residents between 18 and 24 is lower than the actual percentage of population; those aged 25 to 44 are well-represented by the respondents, and there is a higher response rate from the 45-64 and 65+ age categories. This may indicate a sampling bias towards the older range of the population. This is a consistent finding with waste surveys conducted in other communities.



**Figure 1. Comparison of Response Rates to Population %**

Based on a population of 5000 and assuming random sampling, 487 responses provide a confidence interval of 4.2 with a confidence level of 95%. For example if 85% of the respondents answer yes to a particular question then the City can be 95% sure that the true percentage of the population that would respond yes is between 81% and 89%.

### 3.1 Goal Setting

**Question 1: Please indicate which of the following goals you would like the City to adopt for the next five years:**

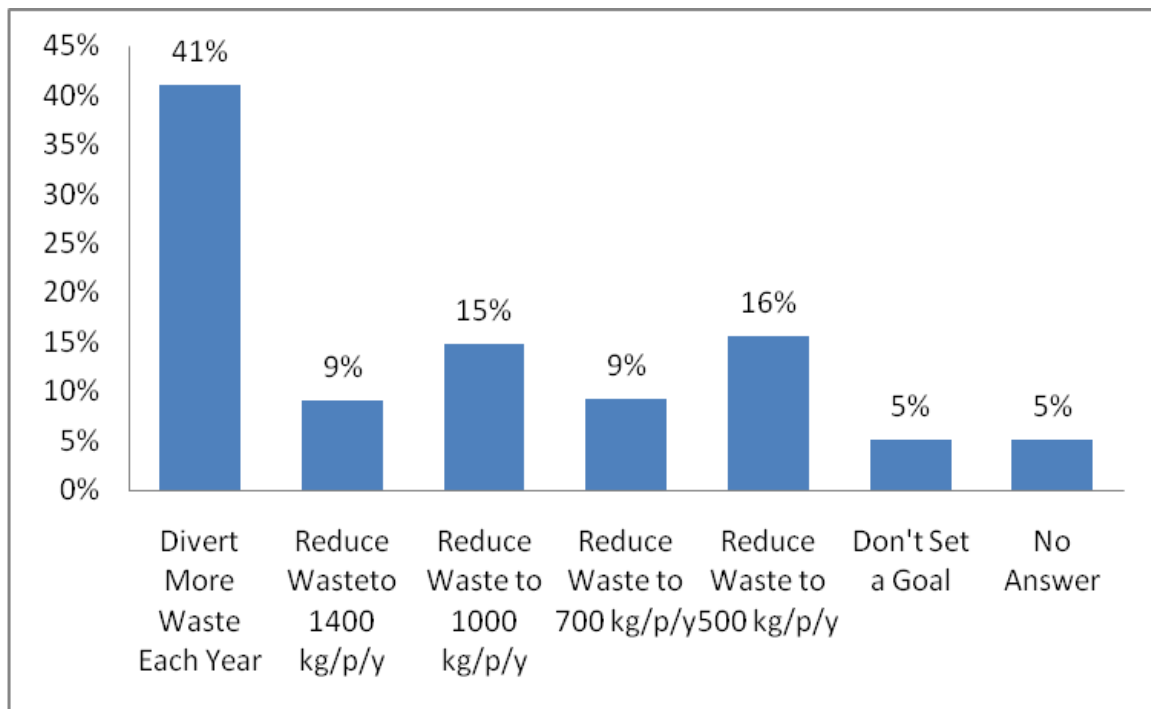
- ☐ Divert more waste from landfill each year than the previous year
- ☐ Reduce the amount of waste sent to landfill to 1400 kg/person/year (12%)
- ☐ Reduce the amount of waste sent to landfill to 1000 kg/person/year (38%)
- ☐ Reduce the amount of waste sent to landfill to 700 kg/person/year (57%)
- ☐ Reduce the amount of waste sent to landfill to 500 kg/person/year (69%)
- ☐ Don't set a goal



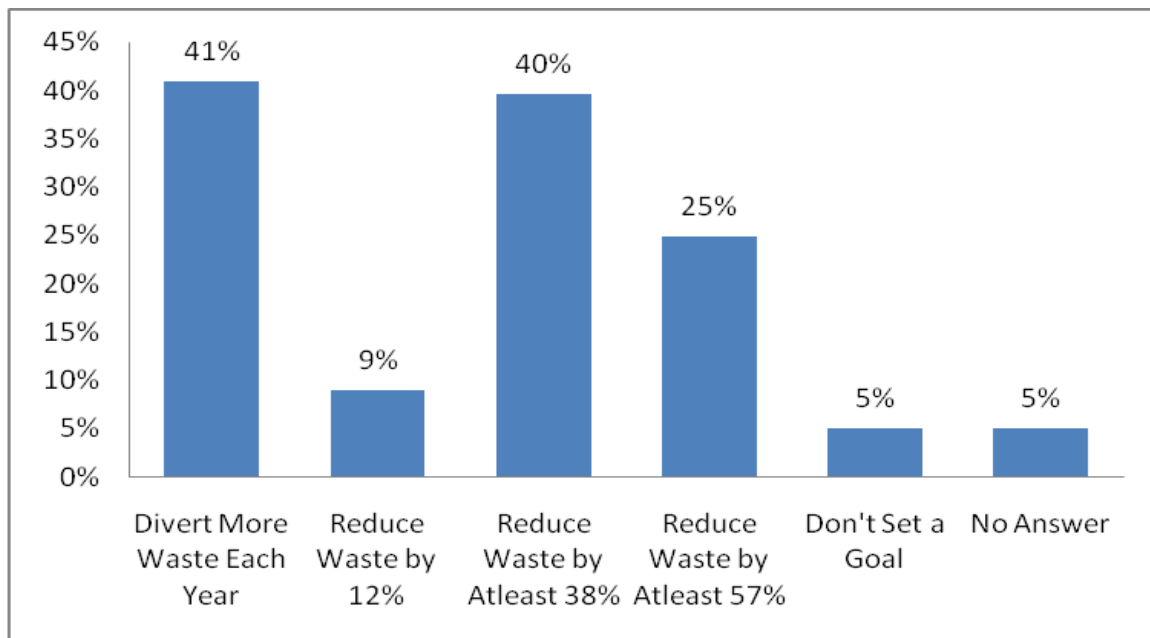
The purpose of this question is to assist the City in identifying a goal. Goals provide a means to measure improvement and are therefore an integral part of any long term plan to reduce waste sent to landfill.

Only 5% of respondents indicated that the City should not set a goal. The option selected most by respondents was “Divert More Waste Each Year” at 41%. 40% of respondents selected a goal to reduce waste by at least 38% (1000 kg/person/year).

Responses to this question are presented graphically in Figure 2a. Figure 2b illustrates responses according to a specified reduction percentage goal.



**Figure 2a. Goal Setting**



**Figure 2b. Goal Setting by Percentage of Waste Reduction**

Other goals suggested by respondents are provided in Table 1. below. (Comments are included as provided and have not been edited).

**Table 1. Other Options for Goals**

*Until sustainability is reached*  
*Do not send grass clippings to the landfill*  
*Program yr 1-5 (12 - 69%)*  
*Will industry reduce if each person does too? Who will pay?*  
*I feel we all are reducing waste by education. I do not like being forced.*  
*Educate city residents to reduce/recycle waste to extent possible at present*  
*This could be done by implementing a bag limit*  
*Refuse pick up of recycling cardboard*  
*?*  
*Do this best you can.*  
*Implement much stronger restrictions on commercial waste!! Remember 74%*  
*Since industry contribution 74% of waste, address that issue and get industry to*  
*reduce waste. Don't include industrial waste when estimating kg/pounds year.*  
*Except tp reduce from present volume. Measure results and report annually.*  
*See 1 Under 10 (curbside collection of food and yard waste)*  
*Provide more options at curb side pickups*  
*I doubt if I send more then 500kg to the dump yearly*  
*Get after industrial waste producers*

*Do whatever necessary to reduce solid waste.*  
*You never follow it anyway*  
*I feel more comfortable answering this if I knew what it is today.*  
*Reducing commercial waste to less than 50% of total waste stream*  
*Yes, reduce amount by what % I don't know*  
*Charge commercial more would help.*  
*Bi-weekly recycling pick up program*  
*Reduce/eliminate chemical pesticide herbicide use!*  
*A lot of landfill items could be burn't*  
*Toilet rebate program is excellent!*  
*Save on electricity - Don't leave lights on at the ball diamonds/pool area when not in use!!! (Flood Lights) This is a huge waste sometimes they are on for a weekend and no one is out there. Also, firehall not all those lights in the bays need to be on all night.*  
*If this is feasible then let's do it*  
*Reduce commercial industries waste*  
*Try some of the suggested ideas ie another recycling depot for collection and see if stats change as well as other suggestions then slowly implement reduction limits.*  
*I don't know which is feasible*  
*What would happen to the diverted waste?*  
*Let's be realistic - but is it feasible?*  
*Revisit goals after 1st year and 2nd year*  
*Were household should learn to reduce waste*  
*Set the goal high. This is the way the world is going. Don't drag our feet.*  
*Encourage individual homes & businesses to be more conscientious*  
*Reduce waste as much as possible be strict with regulations.*

## **Question 2: The City currently provides the following waste services:**

- Weekly residential waste collection
- Recycling Depot (Centra-Cam Depot))
- Hazardous Waste Round Ups (2/year)
- Compost bunker for yard waste, pumpkins and Christmas
- Trees at Centra-Cam depot
- Landfill Services (pesticides, appliances, wood, etc.)
- Concrete and Asphalt Recycling Facility
- Recycling Ads in Newspaper
- 

**How can these services be improved?**

The purpose of Question 2 is to inform and remind residents of the waste services currently provided by the City, to gather information on how respondents feel the services can be improved and to identify challenges or issues presented by respondents.

Responses are summarized into general categories in Table 2. All responses received are provided in the Appendix. The majority of responses related to curbside collection of recyclables followed by enhancements to the depot.

**Table 2. How Can We Improve these Services?**

Category	Notes Regarding Comments	~ Number of Comments
Curbside Collection of Recyclables (Blue Bag/Blue Box)	Includes 8 comments that stated curbside collection but did not specify material	51
Enhance Depot	Majority of the comments related to accepting more plastics, other comments included - accept Styrofoam, more bins, etc.	36
Services are Good/Sufficient		26
More HHW Roundups or Permanent HHW Facility		25
Other	Change bylaws, biweekly collection and other comments	23
Curbside Collection of Organics	Includes 8 comments that stated curbside collection but did not specify material	16
More Advertising/Awareness		9
Bag Limit		6

**Question 3. Which Items do you recycle and how often?**

**1 = Never      2= Sometimes      3 = Always**

(Listed in order of % of waste stream)

- ☐ Compostable Food Waste
- ☐ Yard Waste
- ☐ Newspaper
- ☐ Office Paper
- ☐ Cardboard
- ☐ Milk Jugs - #2 Plastic
- ☐ Tin Cans
- ☐ Glass Jars
- ☐ Electronics
- ☐ Batteries
- ☐ Paint
- ☐ Fluorescent Tubes
- ☐ Wood
- ☐ Asphalt
- ☐ Concrete
- ☐ Pesticides
- ☐ Tires

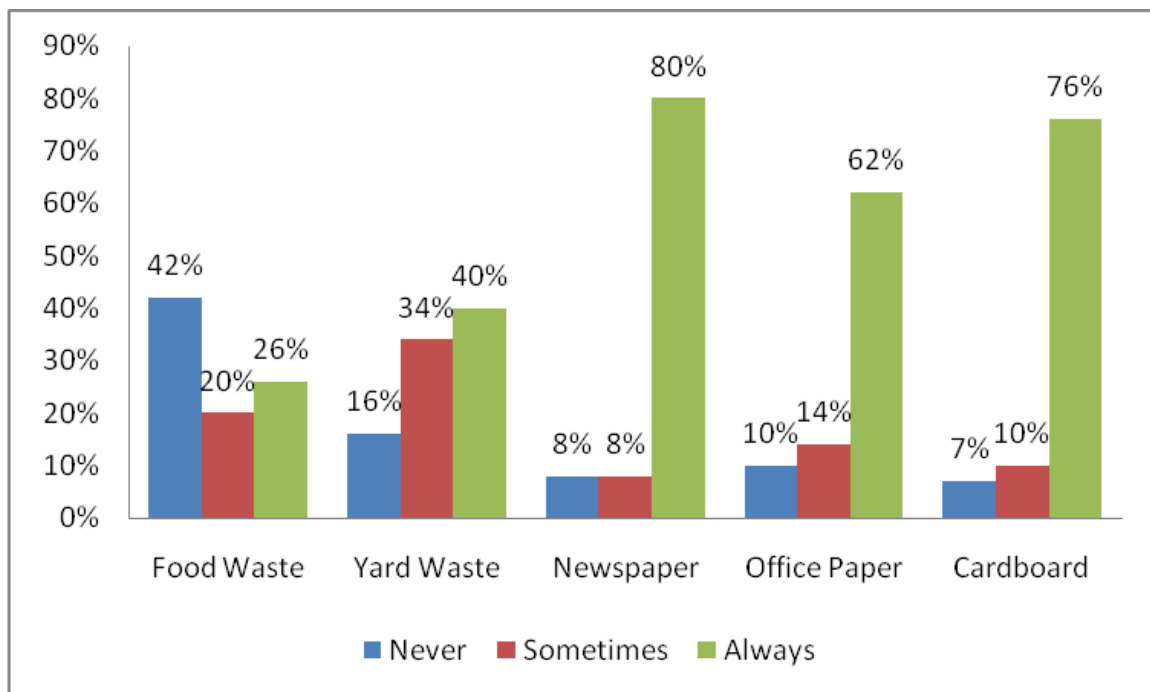
The purpose of Question 3 is to both inform the public of the current recycling options, to measure current usage and to identify areas that are underutilized.

Table 3 shows the percentage of respondents and the frequency for which the respondents participate in the specified recycling activities.

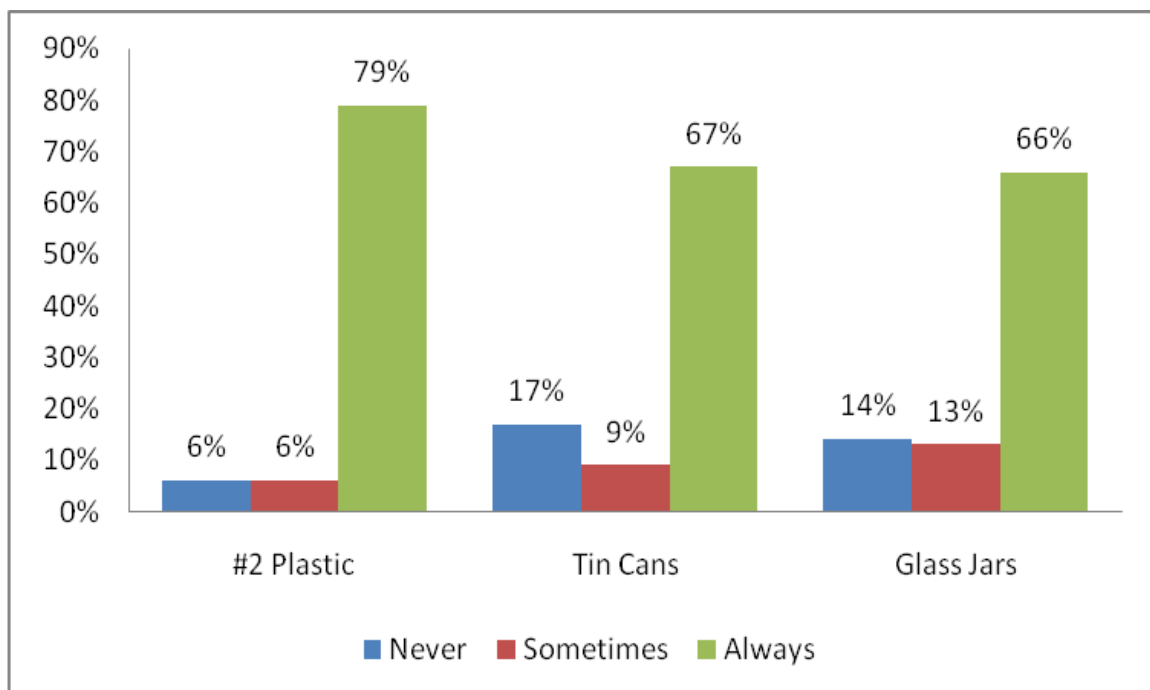
**Table 3. Recycling Frequency**

<b>ACTIVITY</b>	<b>RESPONSES (%)</b>			
<i>How often do you recycle the following items?</i>	<b>Never</b>	<b>Sometimes</b>	<b>Always</b>	<b>N/A</b>
<b>Compostable Food Waste</b>	42%	20%	26%	12%
<b>Yard Waste</b>	16%	34%	40%	9%
<b>Newspaper</b>	8%	8%	80%	5%
<b>Office Paper</b>	10%	14%	62%	14%
<b>Cardboard</b>	7%	10%	76%	7%
<b>Milk Jugs #2 Plastic</b>	6%	6%	79%	9%
<b>Tin Cans</b>	17%	9%	67%	7%
<b>Glass Jars</b>	14%	13%	66%	8%
<b>Electronics</b>	11%	19%	58%	12%
<b>Batteries</b>	23%	26%	37%	14%
<b>Paint</b>	14%	19%	54%	14%
<b>Fluorescent Tubes</b>	29%	13%	30%	28%
<b>Wood</b>	28%	22%	24%	25%
<b>Asphalt</b>	45%	4%	7%	43%
<b>Concrete</b>	42%	6%	8%	44%
<b>Pesticides</b>	27%	11%	33%	29%
<b>Tires</b>	21%	9%	44%	26%

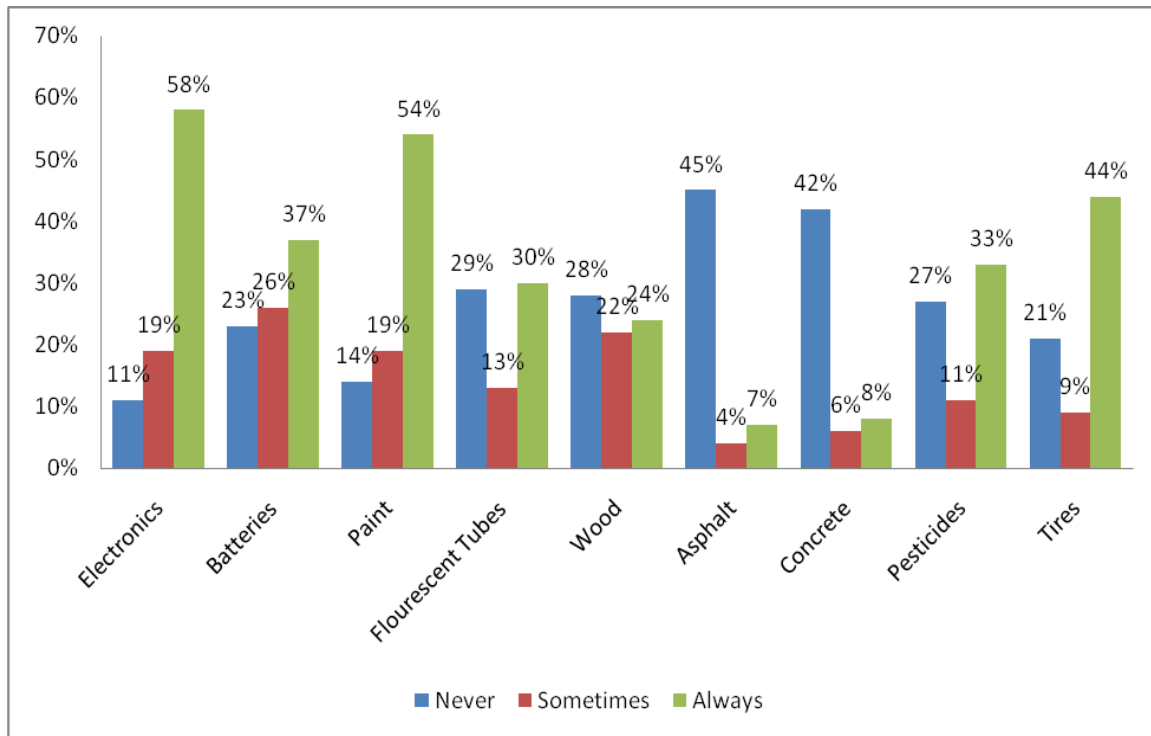
These results are shown graphically in Figures 3a to 3b. Recycling activities have been divided into the following three categories: Organics and Paper; Plastic, Glass and Tin; and Other.



**Figure 3a. Frequency of Recycling Organics and Paper Waste**

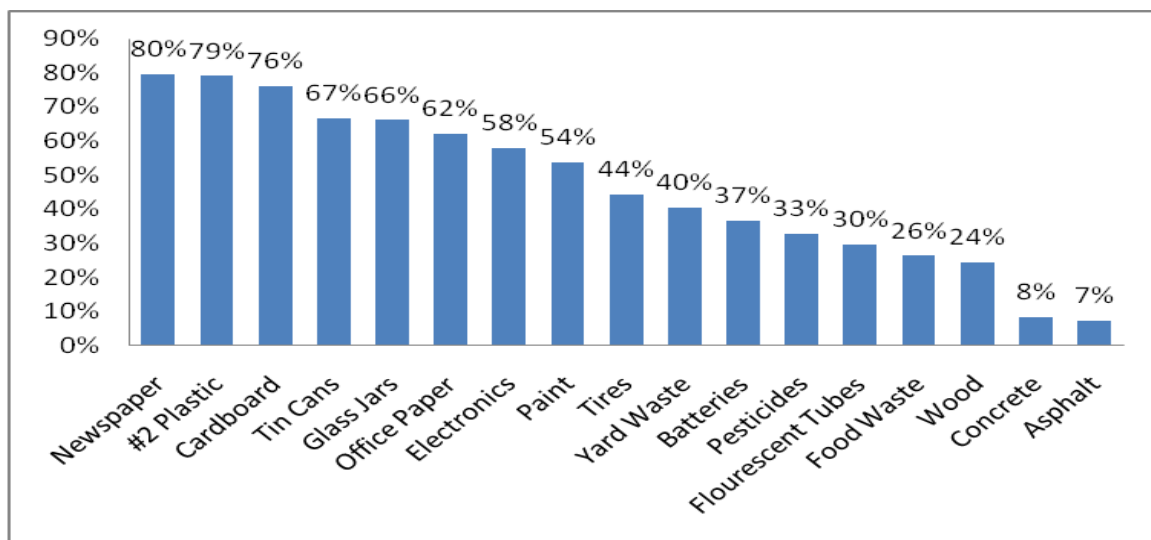


**Figure 3b. Frequency of Recycling Plastic, Tin and Glass**



**Figure 3c. Frequency of Recycling Other Materials**

Figure 3d shows the percentage of respondents who selected “Always” for each of the recycling materials.



**Figure 3d. Percent of Respondents Who Always Recycle Specified Material**



The large percentages of respondents who indicated “Always” for almost half of the recycling categories suggest that most survey respondents see themselves as active supporters of the current waste management programs. The large percentage of respondents who indicate they always recycle newspaper and cardboard suggests that the City would have a relatively high capture rate for this component of the waste stream (approximately 20% of residential waste). Yard and food waste which comprise 60% of the waste stream would have a relatively low capture rate as only 26% “Always” recycle food waste, and 40% “Always” recycle yard waste.

Respondents were also asked to comment on what would help them to recycle more. Responses are summarized into general categories in Table 4a. Increased options for plastics (i.e. accept more plastics), and curbside collection options formed the majority of responses. In general, respondents tended not to consider organics options as recycling.

**Table 4a. What Would Help You to Recycle More?**

Category	Notes Regarding Comments	~ Number of Comments
Enhance Depot	Includes 38 comments regarding increased options for plastics	60
Curbside Pickup	Material not specified	40
Curbside Collection of Recyclables (Blue Bag/Blue Box)		33
Services are Good/Sufficient		26
More Options for Organics		25
Increased Awareness/Education		23
Convenience		13
Incentives		6

Actual responses are provided in Table 4b.

**Table 4b. What Would Help You to Recycle More?**

<b>What Would Help You to Recycle More?</b>
Collection of compostable food waste
A place for hair dryers, curling irons, etc.
Coloured glass recycling facility
More bins at centra cam (for batteries etc)
Battery Depot
More effort
Free Pick up
Bylaw making it the law
Info on what is recyclable and where - eg batteries
ban plastic bags and packaging
more space at my home
Like Calgary I _____ to put everything in (don't know word)
Blue box program
If recycle was picked up. I have no room for storage and cant constantly run to centra cam
All in 1 place or only 2 places
City pick up at residential for no added cost
Include more recyclable plastics #1 and 2-5
Recycle branches and other food waste
Centra Cam staff to stop nagging at you don't sort your paper recycable
I feel services are good - we have greatly reduced our waste
More ability to recycle all waste
make it easy educate and assist
Weekly pick up service. No storage at my place
Pick Up
Pick up system - more locations to dump items not accepted at centra cam
Curbside Pickup
Expanded plastic types at Centra Cam and weekly curbside pickup
By having depots readily accesible and available
Nothing, we recycle all we can now
Pick up with garbage using blue bags
more plastic other then/ including #2
A place to recycle wood etc.
recycle pick up
Where do fluorescent Tubes go? Please let everyone know.
More options at Centra Cam or evening hours at landfill

<b>What Would Help You to Recycle More?</b>
Not much more
Awareness program recycle promoting where/how to
Curbside pick up of grass clippings and branches
curbside recycling
pick up at house
Nothing
Not much. We do a great job ourselves. We have a 1/2 bag a week
Convenience
Pick Up
Addition of hazardous containers
Free residential collection of recycling
If I had a compost bin.
Incentives
Nothing.
Weekly curbside collection of blue/clear bags.
Household pickup.
Curbside if Camrose recycled more things (plastics).
To recycle all plastics
Reduce the # of flyers that come each week.
Weekly blue bag pick up
We recycle
Included with garbage pickup
More bins for Recycling
We're always recycled sometimes have no trash for collection for 3 - 4 weeks at a time. Plastics are an issue in Camrose need to find a use for number other than # 2.
Year round drop off for everything. (at least monthly)
Ease
Pick up service for yard waste
We already to as much as we can.
As a senior on crutches curb side pickup.
Curbside pickup service.
Have more options like more plastics that can be recycled. Home landfill pickups weekly.
Collection of #1 plastics at Centra Cam.
More regular toxic paint roundup days (HHW Days)
I do.
Take in more items at the recycle depot.

<b>What Would Help You to Recycle More?</b>
Sidewalk pick up
appropriate containers
Recycle at the door pick up
I don't have some of these things to recycle.
Aluminum Scrap
Provide a place to leave branches & small wood items.
I recycle enough
Pickup service for recyclables atdr
curbside collection of food waste
A way to get rid of organic waste
Organic pickup of waste
pay me
Recycle more than just #2 plastics
Composting for food waste either weekly collection likein big cities or yard composter available with seminar on how to do right.
Pick up with garbage
having a composter
Charging per bag of garbage
We do our best
Home collection / space to store
Seniors & Handicaped need to be able to get to depot
We recycle everything you take
Take all plastics 1, 3, 4, 5, 6, 7, 8, 9 & 10
?
I am paying for a pick up service Curbside service is necessary
Rules!
Accept all plastics
Why cant we recycle other plastics like shampoo or liquid soap (other then #2)
A truck
Reycling plastics containers not just #2
curb side recycling service
Used oil not listed (or oil containers)
Curb side blue box program included in monthly fee
Door Pickup
Where do you recycle electronics & batteries
Curb side pick up of recycleables
Much of my more complex recycling (All plastics, all metals, etc) has to be taken to Edmonton - Please increase Plastics.

<b>What Would Help You to Recycle More?</b>
Curbside Collection
I already recycle 80% of my waste. I put out 1 bag of garbage (or less) every two weeks.
More accessible ease of use pretty much need to be easy simple mandatory.
Nothing
Curbside Collection
Blue Boxes that are picked up.
Special bags for pick up of grass clippings
A curbside recycling system
Nothing
Education, cost effectiveness
if it was cost effective
Cost/effective
A feed waste bin & pick up service
City Councillors Mayor
curbside pickup
An easier way to recycle leaves then using garbage bags (use big boxes right now)
Plastics other than #2
Many products come plastic but can only recycle #2 products.
Recycle pick up!
Information
curb side pickup!
Curbside if \$ no option
Curbside pick ups
Free curb pick up
household pickup
If centra cam took all plastic
More recycle sites (one on west end)
Containers to use at home & pickup from home.
n/a
Have City bins available (carts) to purchase
be open more often
Compost if possible
Expand product drop off at recycling depo (Centra Cam Recycling)
Have Curbside for yard waste
A place for hair dryers, curling irons, etc.
More information on date of collection.

<b>What Would Help You to Recycle More?</b>
Pickup of recyclables.
again blue and green bin pickup.
Blue box at my house
Take more plastics
Curbside (monthly) Recycle
Bins at grocery store parking lot
As I said, we drive our stuff over but I see other's garbage overflowing, city pickup?
Better convenience
Collection of Recyclable goods
What I marked I recycle
Offering more #'s for plastic recycling ex. #1, 5,7
Facility to recycle other plastics #'s 1,3,4,5,6,7
More accessible places/areas
Less particular with paper, choices - office/mixed-confusing
See previous (Take compost. Accept wider range of recycling (more plastic/only take #2 bottles at Centra Cam)
To know which batteries ie AAA re-chargeable etc.
Community Program (ex. Stony plain) More information motion were & when to take different products.
Curbside & all plastics
Curbside pickup
Batteries - Where?
Curbside recycling for every Camrose resident. Costs in included in taxes every person days.
Other types of plastics - yoguart!
Info on what is recycled in Camrose and where
Information about how/where to recycle things like batteries, paint etc
I have not been aware of the other recyclables.
Bigger no of plastic types
Hours of operation extended
We need bins for:
Stryofoam
All Plastics (all have #'s)
Coloured Glass
Being more informed what can be recycled and where to take it.

<b>What Would Help You to Recycle More?</b>
Recycling along with garbage bin
door to door pick up
Cart System
If you took more then #2's ie #3, #4, #5 etc
Nothing
Pickup
All plastics
Weekly pickup of recycle items.
More plastics to be recycled.
Residential pickup of recycling.
Place to drop off hazardous waste year round.
Money incentives.
Compost collection for residents.
There is just not enough house / garbge space for boxes for everything.
Composting pickup fall sping cleanup.
Reduction in taxes or financial kick back.
I have to be more responsible. Blue Box Program would help.
Pickup at home.
Composter bunker for compostable food waste. Recycling of all plastics.
Pickup by City.
More utility bill discount.
More convenient services.
Residential pickup system.
Picku up at home.
Weekly curbside pickup.
Pickups
We recycle everything recycleable.
Have a recycle program throught the City.
Recycle food waste more easily.
Includced in basic required fee Blue Box provided.
More information easier access to recycling.
We need to be informed on food waste. We have not been diligent.
Be able to recycle more plastics not just #2.
If someone picked it up.
Place for organics.
Space to keep each item stored at home and pickup at home.

<b>What Would Help You to Recycle More?</b>
To know what I can and can't recycle at our facilities.
My onwer composter.
Pickup from home.
Try to recycle all that I can.
I asked where to put batteries, told to put in garbage person didn't know.
Curbside blue bag recycling.
Regular hazardous waste depot.
Make ut easy.
We recycle everything we use.
Do not have more.
Weekly pickup, no extra fee/signing up as is garbage for residential.
A pickup service.
We do most all now.
More drop off spts for reluctant users.
Better awareness if what can be recycled in Camrose.
Pickup to include recyclables (separate container)
More info re locations.
Increase plastic types at depot.
Good as is.
Recycling at one facility at any time of the year.
Doing all I can now - would like more plastics recycled #1 and #5, etc.
Less flyers and junk mail. Less packaged food.
Pickup
Can't no vehicle.
More advice / information.
Convenience.
Blue bin pickup.
Blue boxes free.
I do as much as I can add the all plastics.
Not just #2 plastics.
Awareness of what can be recycled.
Personnel discipline.
Weekly pickup at my home just like Edmonton.
Plastics, more than just category #2.
Recycle other plastics not just #2.
Shingles for to dump pay for disposal.



<b>What Would Help You to Recycle More?</b>
More availability for recycling depot.
Recycling pickup.
Green box pickup.
More frequent service. Knowledge that my recycled materials are actually re-used or converted into other uses. Support for recycling
Curbs side pickup of household recycling. I don't believe we can recycle wood unless you are including the Christmas tree in the survey. Wood is diverted to the burn pit. This system, of course, falls apart when there is a fire ban and all wood ends up in the landfill.
Some plastics we still have to take to Edmonton.
More pickups if heavy items.
provide front door pickup.
We now pay a private company for curbside recycling. Would like to see the City do this.
City having a waste program that goes much further than at present.
A drop off spot available 24 hours with a much larger range of bins to drop off items, such as any household plastic.
Just continue the advertising and the recycling effects on the community.
We already recycle as much as we can.
A deeper knowledge of what can be recycled and where. It would be great to have a reference - a magnet mailed out for the fridge? A chart to hang up by the recycling bins? The sorting is also a pain and I feel like I need ten separate bins for each type of recyclable....a roadside pickup option who will sort for me would help A LOT.
Having residential pickup at our house.
Toxic waste roundup offered may be couple of times in spring / summer.
Convenience.
Incentives / availability
I think we recycle good now.
More options at Centra-Cam.
Recycling pick-up.
Keep the prices free to recycle.
I would like to see more plastics recycled not only #2 and bags.
Everything.
All plastics not taken now.
Blue box at curb every two week. Free concrete dumping. Even Stettler has curbside

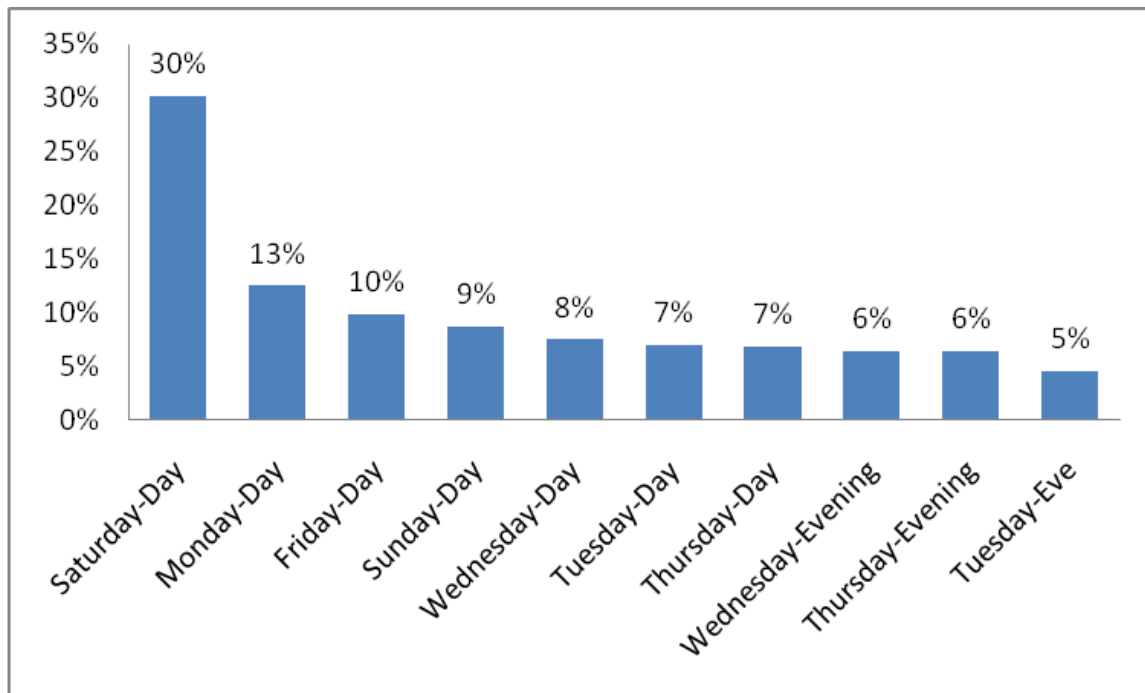
**What Would Help You to Recycle More?**

recycling program now.

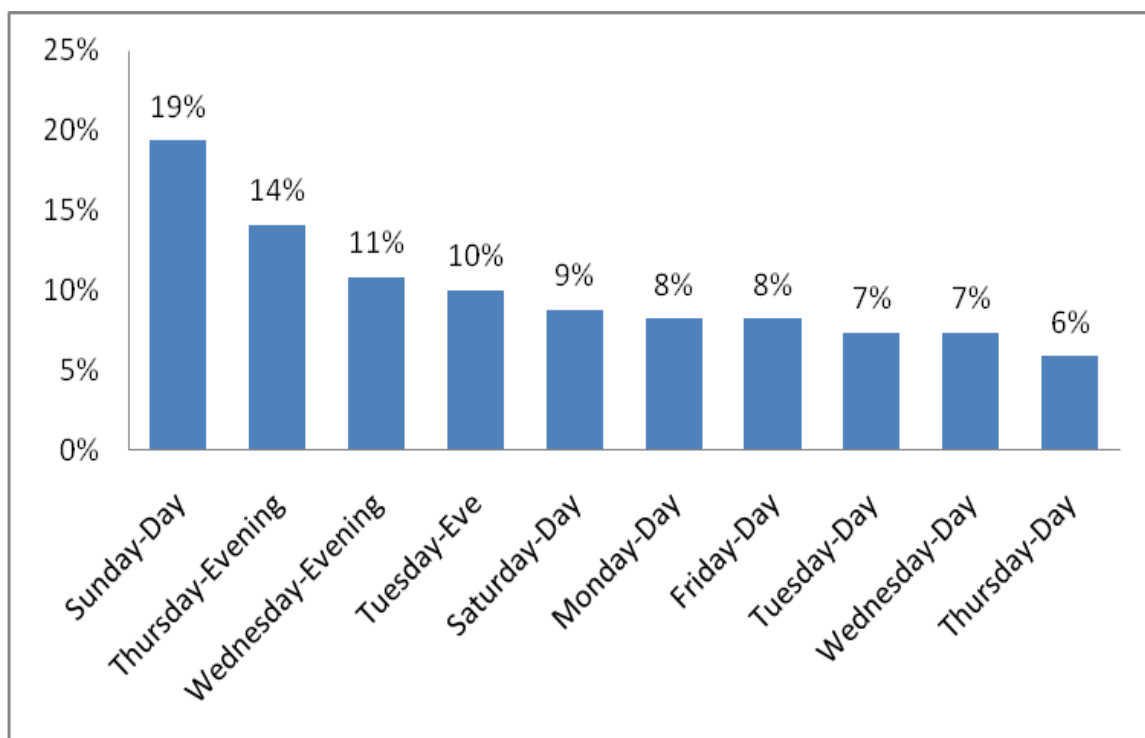
**Question 5. Please rank the top 3 days and time periods the Recycling Depot should be open where 1 is the most important day. Indicate 1 to 3.**

Monday (Day)	1	2	3
Tuesday (Day)	1	2	3
Tuesday (Evening)	1	2	3
Wednesday (Day)	1	2	3
Wednesday (Evening)	1	2	3
Thursday (Day)	1	2	3
Thursday (Evening)	1	2	3
Friday (Day)	1	2	3
Saturday (Day)	1	2	3
Sunday (Day)	1	2	3

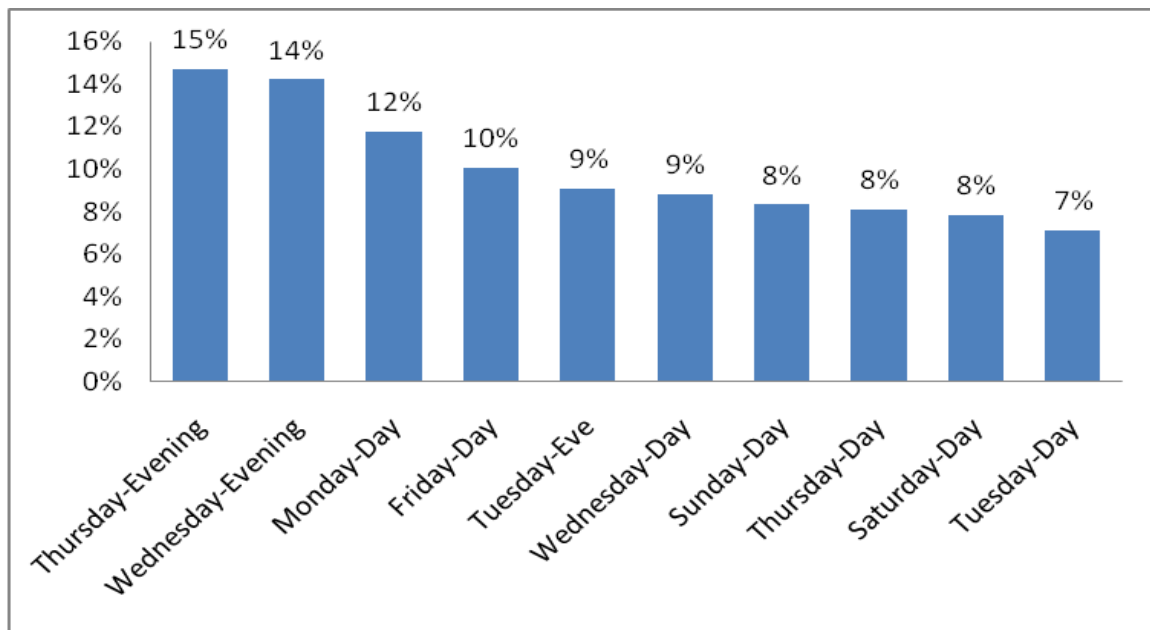
Respondents were asked to rank the days of the week they would prefer the Recycling Depot to be open. The majority of respondents selected Saturday-Day as their 1<sup>st</sup> preference, Sunday-Day as 2<sup>nd</sup> preference and Thursday- Evening as 3<sup>rd</sup> preference. These results are shown graphically in Figure 4a, 4b and 4c.



**Figure 4a. Preference 1 for Recycling Depot Open Time Period**

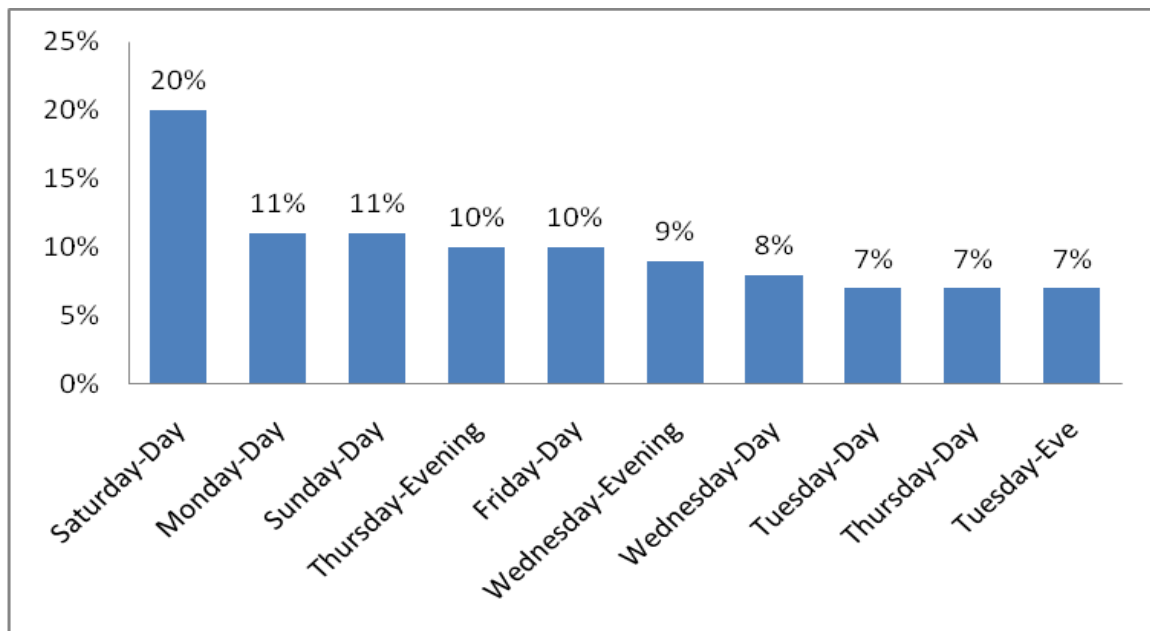


**Figure 4b. Preference 2 for Recycling Depot Open Time Period**



**Figure 4c. Preference 3 for Recycling Depot Open Time Period**

Figure 4d shows the total percentage of responses for each day (whether selected as preference 1, 2 or 3).



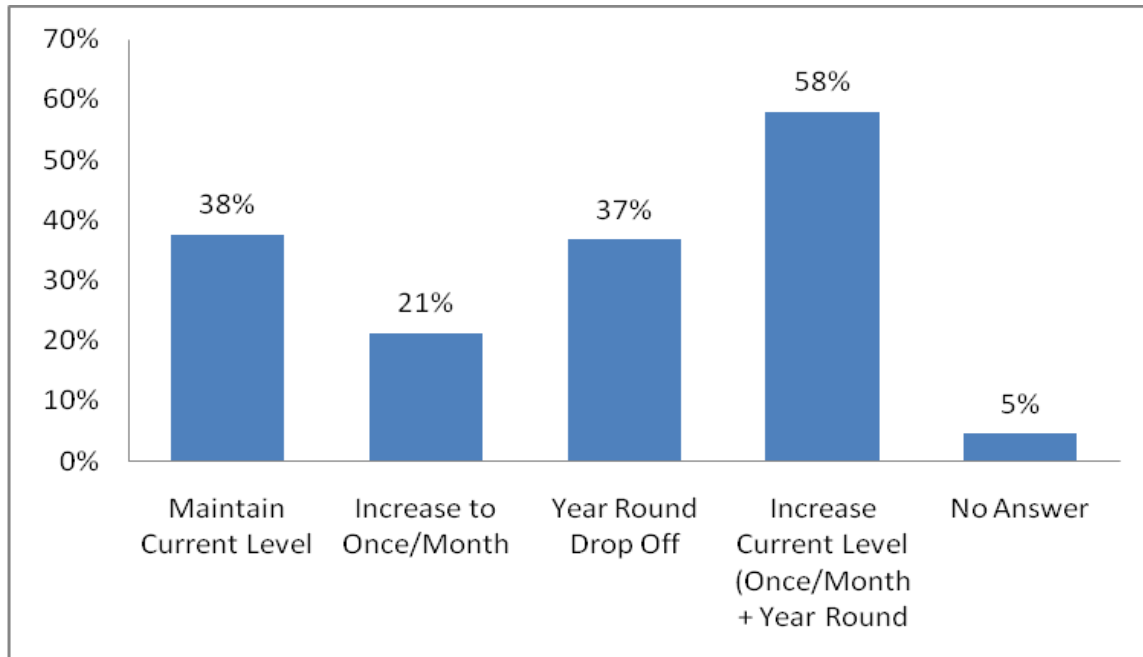
**Figure 4d. Total % of Responses for Each Recycling Depot Open Time Period**

Other than Saturday during the day, responses for all other time periods are generally evenly distributed with no obvious closing time period. Based on these results, Tuesday may be the best day to close the depot if hours are to be reduced.

**Question 6. The City currently conducts Household Hazardous Waste (HHW) roundups two (2) times a year. For HHW, should the City:**

- ☐ Maintain the current service level
- ☐ Increase HHW Roundups to once/month
- ☐ Have HHW drop off service year round

The percentage of respondents who selected “maintain current service level” and the percentage who selected “year round” drop off service, is essentially the same at approximately 38%. The percentage of respondents who wanted an increase in current service level (either increase to once/month or have permanent HHW depot) is 58%. Results are shown in Figure 5.

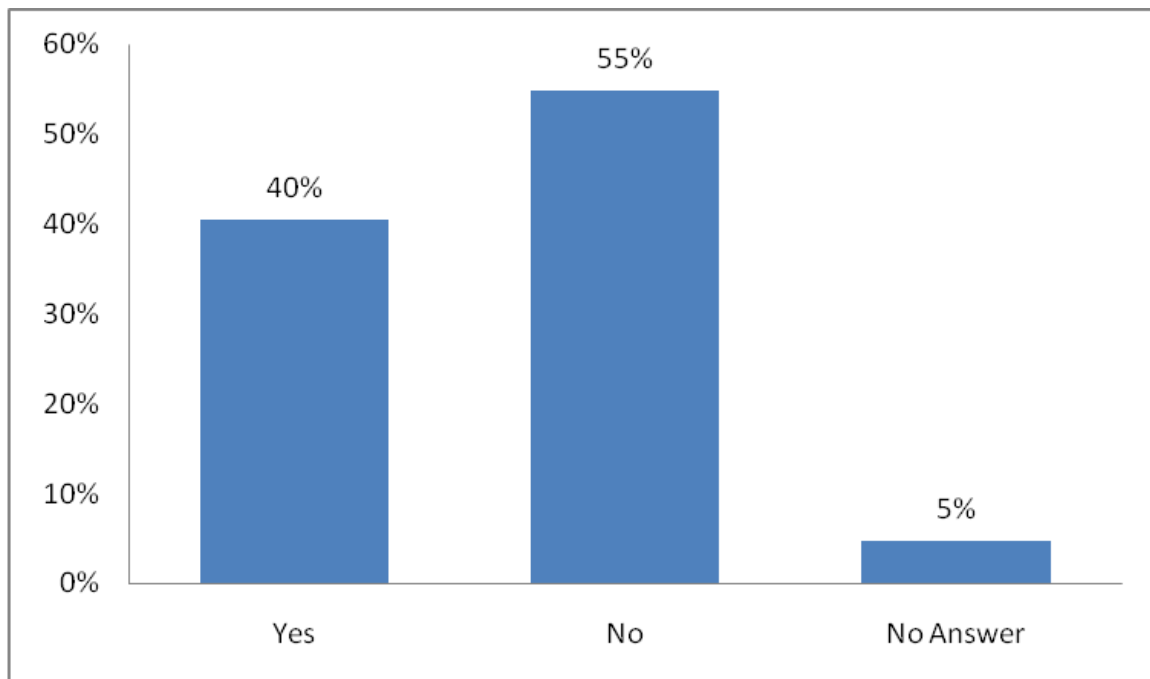


**Figure 5. Household Hazardous Waste Services**

**Question 7. Currently waste is picked up weekly and on the same day. If there were cost savings in the range of 5% to 10% or other benefits, would you be satisfied with a rotating schedule (different day each week?)**

- ☐ Yes
- ☐ No

The majority of respondents (55%) selected “No” – they would not be satisfied with a rotating collection schedule and 40% indicated they would be satisfied. Results are shown graphically in Figure 6.



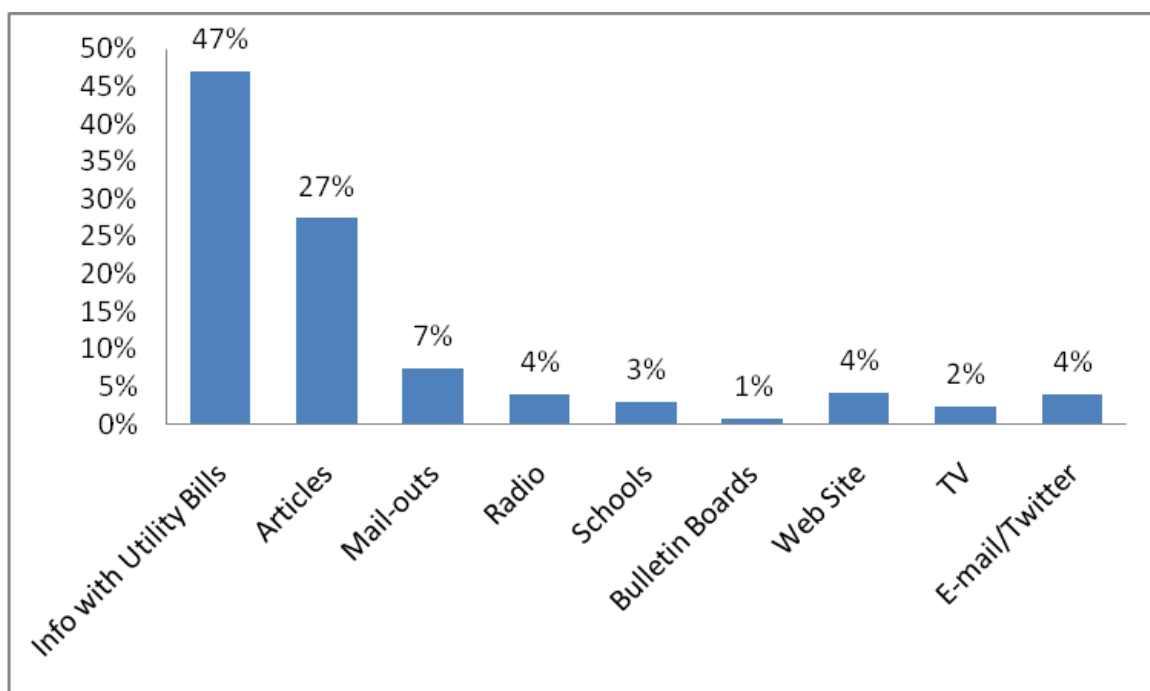
**Figure 6. Percentage of Respondents Who Would be Satisfied With Rotating Collection Schedule**

**Question 8. What is the best way to communicate to you about waste reduction programs?**

- ☐ Information sent with utility bills
- ☐ Articles in local newspaper
- ☐ Information mailed once or twice/year
- ☐ Radio announcements
- ☐ Information brought home by school children
- ☐ Community bulletin boards
- ☐ Information on City website
- ☐ Local TV
- ☐ Twitter/Direct E-mail

Since public communications and education is integral to the success of any implemented waste management strategy, residents were asked to indicate the best communication methods. It should be noted that those who completed the survey obviously look through information passed on through Utility Bills. 47% of respondents selected “Information Sent with Utility Bills” while “Articles in local newspaper” was the next highest at 27%. Responses for the remaining options were generally evenly distributed and fairly low.

Responses are shown graphically in Figure 7.



**Figure 7. Best Communication Methods**

“Other” communication methods that were suggested by the respondents are provided in Table 5.

**Table 5. Other Methods for Communication**

Other methods?
All of the above on rotating boxes.
When people get fined they listen and change their ways Make it a bylaw
save paper
With a bag limit
Household drop off
Advertise in local papers.
Multiple approaches work best.
Single page flyers.
I teach recycling at school and I am regularly informed about recycling services through Vicki Cole.
Keep costs down/use the same envelope with utility bills.
Flyer in mail box
Educate young children to educate the parents
use your common sense



Businesses & Commercial Industries need to be targeted.
CFCW Radio
Business Groups/Associates
City Sign at 53 St & 48 Ave
Articles in Newspaper Camrose Canadian. Local TV Global TV have no other. Do not use Cable TV.
Maybe a picture poster of what can and can't be recycled in Camrose and other options as is Edmonton, etc., where other plastics could be recycled.
Personnel visits to offenders.
I always read what comes home with the kids as well-this would be a great too as it would help involve them in the recycling.

The survey provided an introduction to the Cart System as a uniform and automated method to collect household waste and as a possible tool to sort waste streams.

**Question 9. Should the City of Camrose consider implementing a Cart System (approximate cost \$10 to \$30/month) for household waste collection?**

- ☐ Yes
- ☐ No

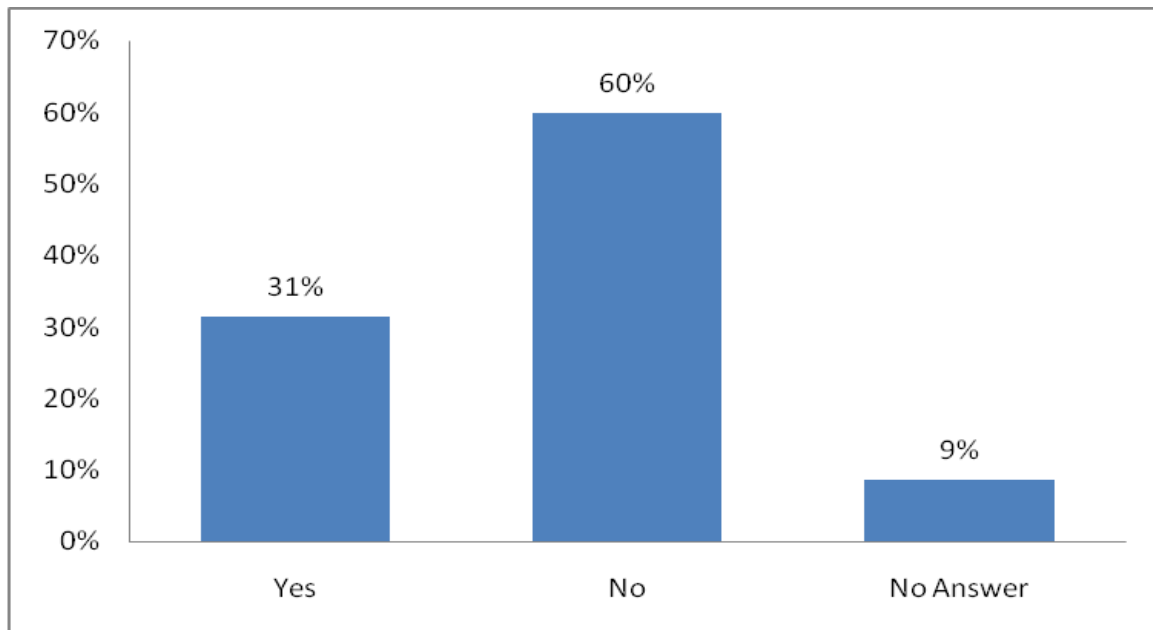
Of the respondents, 60% indicated that the City should not consider implementing a Cart System and 31% indicated that they should. The consultant does not recommend specifying a cost for the implementation of one component of an integrated waste stream as the cost does not reflect any overall program savings that are generated by an integrated system that provides a range of waste collection and diversion options. As well, the cost range is so wide that residents are generally responding to the highest cost of \$30/month whereas many might be in favour of an additional \$10/month. Given this, it is interesting that as many as 31% indicated the City should consider a cart system.

Rather than a per option cost, the consultant recommends asking a “willingness to pay” question to identify how much residents are willing to pay to achieve increased diversion.

Responses to this question are therefore strongly impacted by the addition of this cost. This is also reflected in the comments provided by respondents. The consultant does

not recommend that the Council base any decisions regarding carts on the responses for this question.

Results are shown graphically in Figure 8.



**Figure 8. Should the City Consider Implementing a Cart System**

Respondents were asked to indicate why they selected the option they did. Table 6a categorizes the responses under positive, negative due to cost, negative due to other reasons, and other comments (need more info, etc.)

**Table 6a. Cart System – Why Yes or No**

Category	~ Number of Comments
Positive Comments	97
Negative Comments – Due to Cost	125
Negative Comments – Other (Wind, Too Big, etc)	62
Other (Need More Info, etc.)	20

Specific responses are provided in Table 6b below.

**Table 6b. Cart System – Why?**

Why?
We are doing very well with the system we have.
Such measures will become the norm, so start now
Cost too high and carts too big for many garbage bins
Too expensive
Taxes are already ridiculously high
Does not encourage recycling
Cost
Possible organic waste collection
No advantage for us - we only have a bag a week
Not unless the house holder bought the bins and monthly bills increased minimal
I put my garbage all in one bag, put that bag out to the curb and the bin doesn't blow all over the neighbourhood
Nine times out of ten you find your cart down the street from the wind
It would be harder for trucks but better for us
Would be no advantage
Too expensive
Taxes are high enough
No job No extra money
We cannot keep destroying our environment and live safely We have to change our ways
Many can't afford this
it is tidy and way to keep it in yes!!
everyone has different already. Cannot make people use these
easier collection/cleaner/less waste as we all have one size "only" to fill
need to monitor downsize was
effective usage
only if recycling is the purpose not just landfill waste
on the fence
discourage waste, encourage reusing and recycling
Had it at previous resident and was a cleaner less visually "dirty". No bags being scattered
we separate waste at the source and recycle
Separate waste streams used to be implemented

<b>Why?</b>
too expensive and takes to much space
too expensive
Too much money - if implement then lower residential taxes (property)
Most households already generate too much waste Carts are too large
Cost for waste, taxes etc are already high enough
People can separate
I feel our system is good
We need to do our part to help keep the environment and ourselves healthy
Will encourage more recycling composting
Have a good, recognisable lidded container for apts
It'll clean up the home who do not recycle
If recycling is included
Cannot afford increases
Increase Recycling
Too expensive
If recycle pick up as well
Because we don't need extra cost! We can do something for ourselves
Whats wrong with present system
Fix Income
We have containers
Try other ways first
too much waste
We recycle now, don't hire more people to do it for us.
Present garbage collection cost is high enough and works satisfactorily.
Too costly
Consider it and check with other communities using this to see if they're satisfied
Expensive and would require mature renovations to existing garbage stands

<b>Why?</b>
Too Costly
They are to big and clumsy and take far to much room in our garage
Convenience
Only if it reduces the cost of collection
not necessary
I already separate and manage my waste. I cant justify the monthly expense
Current system works okay. However not everyone has transportation.
Expensive
Not necessary and costly.
Use blue and clear bags for recyclable and composting materials.
Expensive
No work no money.
Reduces landfill waste.
If recycling is convience perhaps more people will do it. It is important.
Someone going to steal them, what about wind.
Someone going to steal them what about the wind.
Some people wont use it anyway!!
Increase convenienced of recycling (include a "blue" cart)
Easier to get rid o
Because of the considerable in cost
If you had a cart, people would use it.
We don't have enough garbage for a cart.
Storage & Hygiene
too costly!
Easier than getting to the depot. Mandatory Recycling.
to separate waste streams
We do cardboard, cans and plastic bags, milk paper cartons, etc. We do that already.

<b>Why?</b>
Our monthly charges are high enough already.
Would like more information on this.
Too expensive. We have very little collected waste.
More awareness of need to reduce landfill waste.
Only should be used for recycling.
Too costly and unsightly.
Too costly.
I do this myself and do not need to pay extra for this.
Too expensive.
Costs will sky rocket.
Extra Cost
Limit amount to dispose
Too Costly
Would make people want to participate
Promotes recycle and make you see your waste used
Some people are on fixed incomes and with everything else going up it is hard to keep up.
Only if can help with recycling & cost saving.
So people will not put out bags the mess. The crows.
Limit bag number
too expensive
We don't have enough garbage.
I have a long drive way front st pickup impossible in winter.
We pay enough. My garbage cans are just fine
We are doing fine with garbage cans
Helps limit waste
can't justify the extra cost, should be cheaper not more.
Don't know

<b>Why?</b>
Anything over \$10 is too much
It is great in Strathcona County. I believe more people would recycle/reduce landfill costs.
Paying for pick up now
Don't know
Reduce organic waste to landfill
?
not worth the benefit
More people would recycle
Too expensive
Too heavy & cumbersome
Our wastes are small
More people would recycle
Cost on fixed income
I like the idea but the montly cost maybe prohibitive for those on fixed incomes.
Hard on fixed income residents
too costly for pensioners
It works well in Europe.
Costly
Many people would not use
Added cost/waste separate may not be done
Recycling is crucial to reducing a pollution
Maybe if optional. Not needed for those of us who already recycle to the proper facilities
Reduction & easier to recycle
Inadequate & cost
We personally do not need. We have seen it used well in Sechelt BC
Only if cost is reasonable

<b>Why?</b>
I am ok with the way it is.
To get people to recycle more
Carts blow away when empty
To separate waste streams! (But please recycle old cans)
Enough bills already
Will this reduce waste? I don't think so.
I feel its more vital to improve recycling efforts/collection
Help our future lower waste
don't need any more extra costs.
I don't know
expensive
Better infliction of "user pay"
It might encourage more people to recycle.
Will reduce waste in landfill if used efficiently
As long as it provides for all recyclables (glass, tin, cardboard, plastic, etc)
Already expensive enough taxes city fees water/sewer/garbage/recycling
Increased Costs
Its already expensive to live here
COST
Your taxes are too high now
save the landfill, create compost
Encourages people to reduce waste
Cost no work no more money
use of garbage bags there is to much damage to carts
seems to work at other cities
too costly
Cats cant get into them



<b>Why?</b>
I am not sure of the benefit
We are willing to deliver to waste site - centra cam recyle
Live in condo where else would you put food waste
suspect too expensive, usually not labour efficient
we take H.W. to recycle
People who are willing to do this
Maybe
Depends on cost 10-30 is a pretty huge range!
City charging enough right now where is our tax money going?
We don't have enough garbage we recycle everything that is recyclable
important & may save money in other areas.
Cleaner
If only we can we do compost or yard waste pick up
Should reduce p/y contract
To help with recycling
To expensive for most families
If the City promises to collect & separate all recyclables with reg garbage
good idea
Some people have landscaped/fenced built in an area to deposit garbage bags. These bins may not fit.
cost
Currently acceptable
Encourage better recycling easier with carts.
Saves using plastic bags
more organized looks better easy to manage.
Easier to handle no broke bags, plastics bags going to dump should be eliminated. City should consider composting yard waste and selling it to public as "black gold", trees etc could be sold to public for mulch.

<b>Why?</b>
More cost to senior's Questionable?
People wont pay the extra therefore increase rubbish dumping.
Present system works fine
I'm a single senior and can't afford more increases.
Don't need it.
You do not mention if there would be a savings cost benefit to the present system.
Cost is too high and bins are ugly and big. \$30
cardboard, paper, cans, glass-cleaned - separate organic- separate unable to recycle More people would recycle.
Less animal interference as long as recycling included! Blue and green bins.
It is convenient so people are more likely to recycle
too expensive
Too Restrictive
It makes people rethink how much they throw out.
Increase Cost
Unsure
Providing fees do not increase. This method separates organics from solid waste therefore reducing landfill use.
Knowing residents in camrose they will not do right
But have households buy carts so cost doesn't go up much
?
These work well, I have seen the Seashelt BC one work.
Useless garbage bags (plastic) more durable & reusable
Buy, buy, buy is wrong! You make was be from other stuff being used. Wasteful.
Focus on waste reduction
Its an effective way to make more people recycle with little effect on their part.
Too expensive, we already recycle to compost & have very little garbage
The amount of garbage my nieghbors through out is embaressing.

<b>Why?</b>
Benefits persons who have to lift waste on to vehicles.
Reduce double bagging & control amount. Disposed of.
Why the extra monthly fee?
We need to manage our waste without cost increase to us!
What would happen in apartments? Too high a cost for poor people could it be voluntary?
I don't want the added expense
Present system is fine.
Better recycling rates because of ease
In addition to present services? Or an adjunct?
Personally I don't need a cart of that size apart from the cost.
Other cities have done this for years
Only if savings to household occurs excess and not to be used (wasted) by City Hall.
Cost too high ok if cost kept to minimum
This does nothing for recycling! Its only easier for garbage pickup. Less Manual labor but we pay more?? For less labor makes no sense to me!
Not every house hold needs this added expense
its more money why spend more on fancy garbage removal when recycling is the issue.
Force residents to cut down on garbage
Don't Need It!
More people would reduce their waste
If you are going to curbside recycling keep animals out helps separate for recycling keep animals out helps separate for recycling.
Need more info please.
Cost too much - cost of water exceedingly high in Camrose - reduce the rates of that this could be implemented bill should stay the same amount.
Cost
Too cumbersome for older people in the snow.
Especially for recycling.

<b>Why?</b>
Hard to handle for the elderly.
Will cut down on waste to landfill
I pay enough already for total utilities.
We pay enough bill's and taxes now to the City.
Utilities alerady too pricey.
Waste of money, people will not use them enough to justify cost.
Ugly
Not needed by many of us.
Better than garbage bugs.
I'm assuming this is the same as what the City of Calgary does.
Would want option to buy.
Not practical.
It gets too expensive.
Paying too much now. Double to triple costs, no way!
Not at a cost of \$30.00 per month.
Convenience
Responsibility to individual
Divert more waste.
But not at this cost! Reduce garbage to landfill.
Per month per household
Only if recycled items could be picked up.
I don't want to see the world turned into a garbage dump.
Other people use owners as we don't have some every Wednesday.
Will encourage waste management.
Odor in hot weather.
Cost
Reduce garbage in landfill.

<b>Why?</b>
As senior citizens we cannot afford this increase.
No room
Hard to say it is better or changes to the system are more effective.
Costs for everything are going up and I don't need more costs.
Is this an extra cost.
YES!!! Incentive to have residents reduce waste.
Too costly.
Is much more neat - no bird / dogs getting into bags. People can only put out so much garbage.
If it would help people who don't recycle to recycle more.
I put out two or three garbage bags per week, about 12lbs each. Easy and fast for garbage man. Carts end up gone with the wind. They are also hard to dump.
Reduce waste and prolong life of landfill.
TOO COSTLY!!
Too expensive.
Need a new style of truck.
We have Centra-Cam.
Only if it encouraged people to recycle more.
I do not waste cardboard. Mostly have only newspaper.
Keep the City cleaner.
Present cost is high enough.
Only if it is \$10, too expensive.
If it increases efficiency and decreases environmental impact it would be positive.
In addition to the \$11.60 if not - then yes.
Too expensive.
More garbage would be recycled.
We like bags.
Unnecessary

<b>Why?</b>
Unsure. Don't know if this would be convenient or a hassel.
My neighbour would still send recyclables to the landfill - just have better containers to do it in!
We already pay enough taxes.
Costs!!
Too expensive.
It's easy to make people have to spend more money isn't it.
It would cut down on waste.
Too many winds and vandalism.
Pay already on water bill.
As a single person I have very little weekly garbage. During the fall I have a great deal of garbage because of the city trees and leaves plus seed pods.
Hardship for young couples.
Sounds expensive.
More efficient and effective.
Cheaper in the long run.
We pay enough already can't afford more charges.
No too costly! Cost in Sherwood Park us \$5/month.
Does this apply to commerical.
Convenience.
Now paying for recycling and garbage. If up to \$30/month that is 3 times present cost.
More can be recycled.
I like our current system better, but I wouldn't stgrongly oppose it.
Where would they reside? My garbage area could not accommodate big bin.
Too expensive
To reduce labour costs and better separate waste at source.
If it will help to reduce the amount of waste in the landfill.
Are you willing to pay for carts.

<b>Why?</b>
It cost is already high enough.
We already have to pay to recycle.
Recycling pickup!
Higher participation rates.
One more monthly cost!
Would separate compostables.
Great idean!
Unsightly and smelly.
Current garbage pickup takes care of this. We transport our own recyclables.
Separate waste streams needed.
Costs
Different color carys or boxes would help organize pick ups.
It only feeds into recycling and composting problems.
Would increase reycling of food and yard waste. Will be beneficial for this wo can't make it to the recycling depot.
I hate garbage outside where animals can get into it.
So less goes to landfill.
Storage of a large container is difficult.
Don't want extra cost.
Undecided my daughter in Sherwood park has it. Effective but carts are always in the way on the driveway - doesn't look nice.
Taxes are high enough.
To reduce landfill costs
Too expensive.
Cost vandalism theft
We already pay for garbage.
Costs to high.
Problems in strong winds and also in winter.

<b>Why?</b>
Cost factor at present we recycle most of the household waste.
Only if things are recycled.
Another \$10 - \$30 ???
Cost
Cost
Unless costs are minimal and recycling initiated.

**Question 10. Please rank the top three (3) waste options you think the City should consider implementing where 1 is most important.**

- ☐ Curbside collection of food and yard waste
- ☐ Spring and fall curbside collection of organic yard waste
- ☐ Curbside collection of separated newspapers
- ☐ Curbside collection of separated cardboard
- ☐ Curbside collection of recyclables (paper, newspaper, cardboard, #2 plastics, glass and returnable bottles)
- ☐ Permanent household hazardous waste depot (for year round drop offs) .
- ☐ Backyard composting program
- ☐ Lawn mulch program (leave cut grass on lawn)
- ☐ Cardboard ban at landfill
- ☐ Organics ban at landfill
- ☐ More education on how to reduce waste

The purpose of Question 10 is to determine what residents see as the top three priorities for program enhancements based on limited knowledge. I.e. Respondents may not know the associated diversion rates, costs, etc and often choose those options they may be more familiar with.



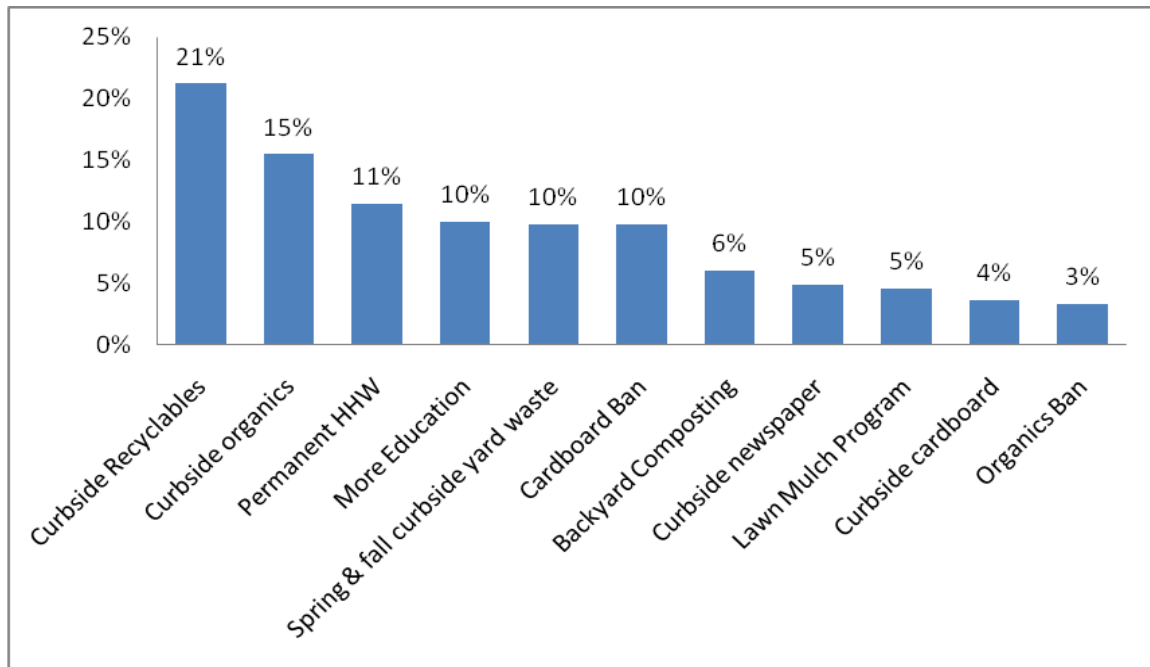
Those options with the highest percentage for each of Preference 1, 2 and 3 are:

Preference 1: Curbside Collection of Recyclables (21%)

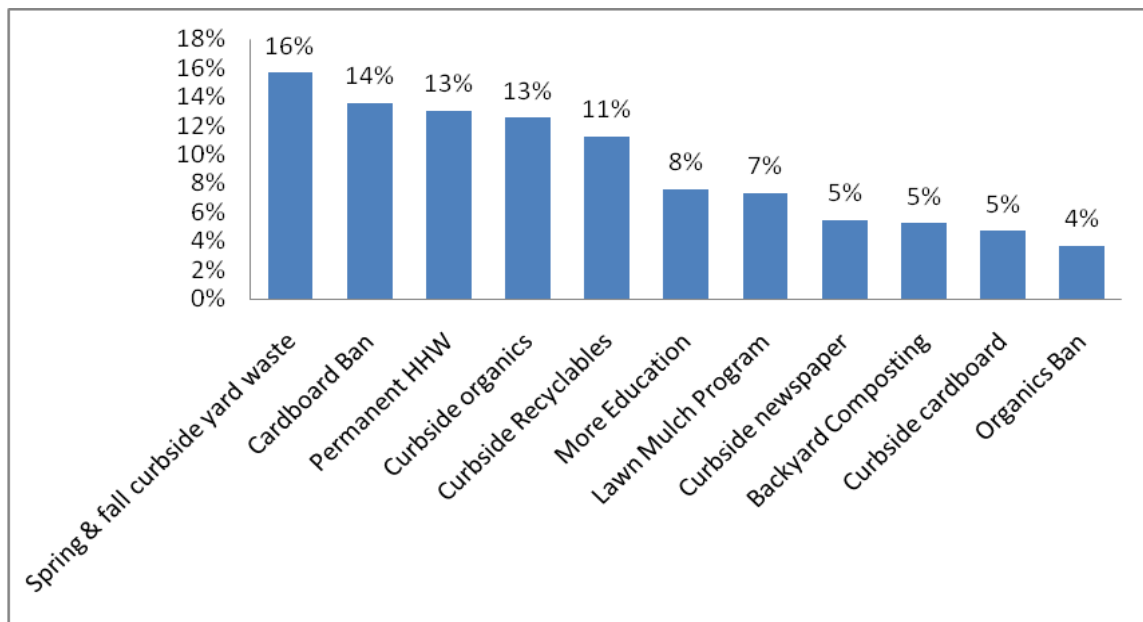
Preference 2: Spring and Fall Curbside Collection of Yard Waste (16%)

Preference 3: More Education (18%)

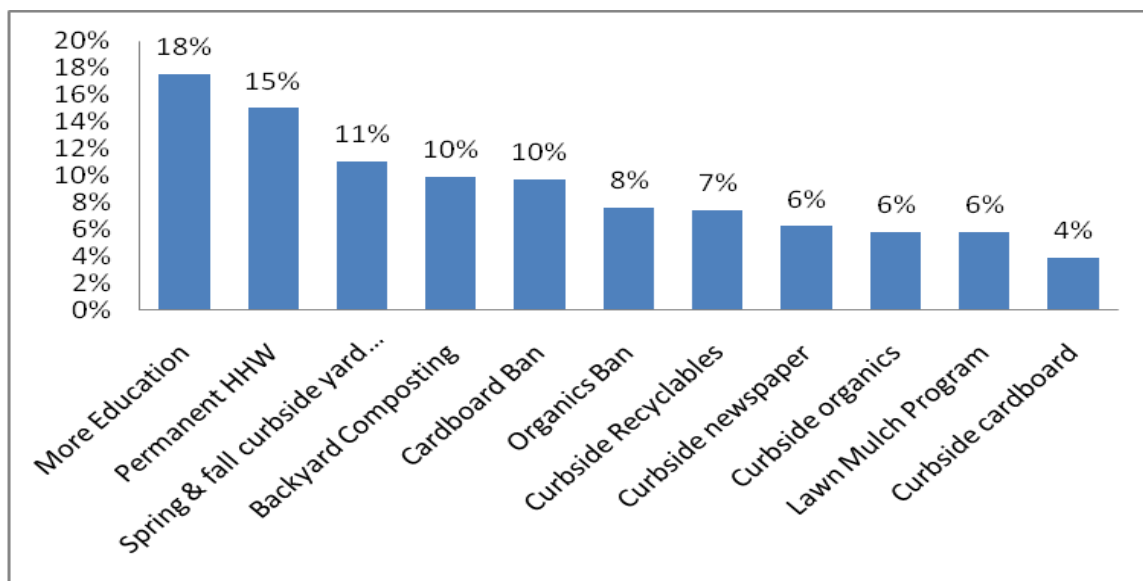
Results for Preference 1, 2 and 3 are shown in Figures 9a, 9b and 9c.



**Figure 9a. Responses Ranked #1**



**Figure 9b. Responses Ranked #2**



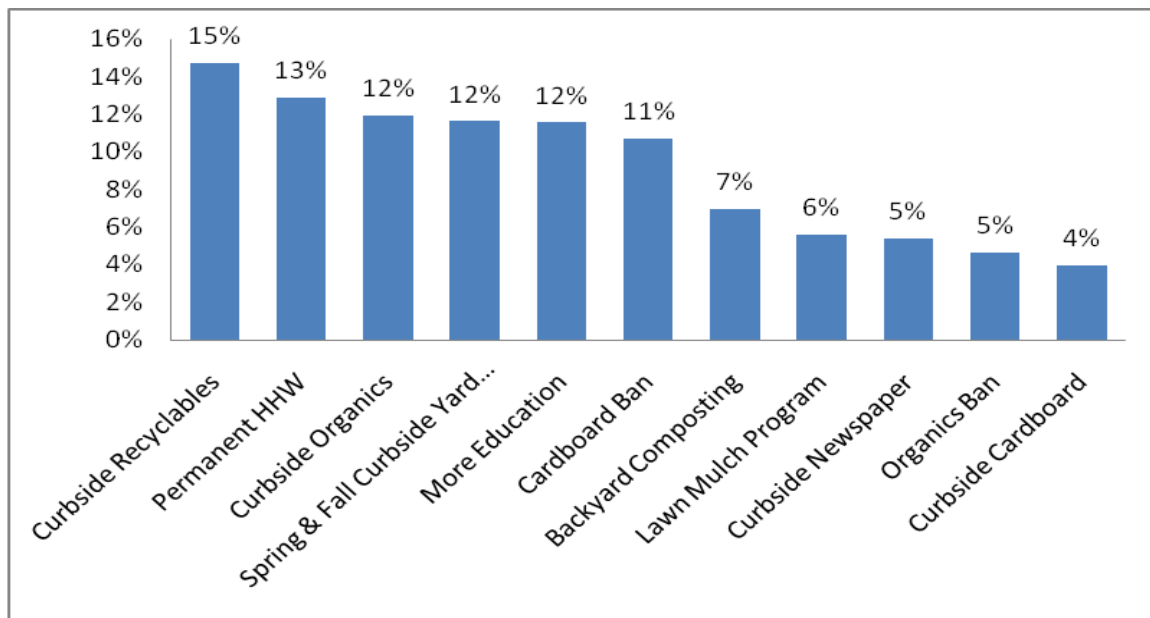
**Figure 9c. Responses Ranked #3**

Figure 9d shows a total of all responses for each option. That is it sums all responses (whether 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup>) for each option.

Those options that were chosen most (either 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>) in order of percentages were:

- Curbside Collection of Recyclables (15%)
- Permanent HHW Depot (13%)
- Curbside Organics, Spring & Fall Curbside Collection of Yard Waste, More Education (12%)

There is not any one option that respondents clearly and strongly indicate they want the City to pursue. Results generally indicate interest in curbside collection of recyclables and a permanent HHW depot as well as some understanding of the significance of organics in the waste stream coupled with a need for more education.



**Figure 9d. Total Responses for Each Waste Management Option**

Comments associated with this question are presented in Table 7.

**Table 7. Other Waste Management Ideas**

<b>Other Ideas</b>
Composting at the recycle depot in the most cost effective way.
Arrange for pick up or drop off of other than #2 plastic even if they must be shipped for recycling
1. Residents waste collection for november to april bi-weekly 2. Paper bans at landfill
Gradual Bans and added support from city. Designated organics place at landfill
Maybe more emphasis could be placed on the 74% of commercial waste. Re education collection incentives
Newspaper ban at landfill also office paper
More kinds of plastics should be recycled plastic never rots
Add plastics #5 to be recycled
used appliance depot
get rid of crows and maybe curbside collection of food and yard wastes would work
Push composting
Industry has more issues than households
Every item on this list should be implemented, I cant believe people send grass clippings to the landfill
Increases recycling bins at public places, businesses
Sherwood Park has a good system!
We are responsible home owners. Why charge us for lazy home owner!!
Make people more responsible. Everyone should do his/her part. If they cant do it themselves, pay someone to do it.
Collect garbage only every second week over the winter months
Garbage should be limited or not picked up if it is mixed and recycled stuff
Once a year have a curb side pickup of all waste material, concrete, yard waste, etc
Again, a bag limit would work wonders
Hazardous waste depot 2 or 3 times a year
Ban pesticides (easily done) and limit water use on grass (not sure how to implement)
For my personal use current system is fine however not everyone drives.
Community compost site. Create compost for citizen use - city use.
Wood ban in landfill

<b>Other Ideas</b>
People should start recycling on their own instead of expecting the City to do it for them.
What would be the cost for curbside collection?
We separate our own newspapers, cardboard, paper, plastics, glass and returnable bottles, juice and milk cartons.
Collection of food waste should go without saying considering the public health risks by not collection. Only a minority will compost and not all food waste can be composted.
Need some simpler way to dispose of food wastes. City compost site would be great.
Education on why's and how's of bans on cardboard/organics. Where to take as alternative to dump - fines for not recycling.
Make it clear and simple as to what is accepted at recycle depot and how it is to be separated.
Organics Ban at landfill - Should be only item accepted at dump.
Composting system for all household garbage like Edmonton
Don't pick
Leave it like it is
Check the way Calgary does theirs seems very simple.
You can drop off paper, cardboard etc.
Take more than no 2 plastic at recycle
Some of these are good for landfill as it goes back to compost.
We compost & recycle, but know that most people can't be bothered, need to make it easier.
Request a reduction of ads and flyers from merchants, stores.
Eliminate the useless flyers that clog our mail boxes. Grrrr! Communicate to businesses how we hate them!
Start recycling all plastics instead of just #2.
Garbage prices for pick up determined by amount of garbage ie: reward recyclers
Make advertisers pay for paper recycling!
Counter Cam need to take coloured glass and clear plastic, styra foam
I also like the ban on organics/cardboard!
A city compost (compost is sellable)
The easier it is to recycle, the more people will do it.
I believe that a lot of waste could be eliminated by incineration

<b>Other Ideas</b>
Should provide specific bins for newspapers etc
Collection of all plastics #1-7 & styrofoam - what Camrose wont take I drive to Edmonton & that is a lot of plastic stuff.
Possibly a set/or 2 days per month open and always the same.
Use recycle depot where applicable
Curbside collection is ok, if it is optional
A place for plastic packaging materials
Have picked up of major appliances, hot water tanks etc once a year.
We are all educated we need to apply what we know.
The use of garburetors
Paper Shredder Incentives for Business
If we had large recycling bins with wheels, perhaps 3 times a month or less would be often enough.
If the service is free people will do it - to many people just making bills now
Open up another recycling station for the southend. Edmonton has a number of community stations not so far to travel to encourage people to recycle more often.
Implement # 11 ASAP
Buy a blue box takes car of all - almost
Curbside collection is a no-no keep our streets clean!
Ban distribution of advertising flyers. They should only be available at stores.
cardboard, paper, cans, glass-cleaned - separate organic- separate unable to recycle More people would recycle. Organic food waste pickup or drop off system.
Not sre if we still accept garbage from other places. If so STOP. We need space for this city.
In town drop off for tree branches for chipping
Contact town of Olds for excellent program & facilities
More advertising in local paper
Credit people who are conscientious not \$ but publicly.
Find out havent recycle like plastics yoguart & sour cream containers & plastic pkging & plastics arranged beer cans & pop cans & bottles
Like sherwood park impose regulations and how much waste you can have alterante garbage weeks
4 amount of plastics which can be recycled
With the lawn program we would also cut back on chemical fertilizers

<b>Other Ideas</b>
Please tell me why the "City" need to implement. How about private companies?
Some of these ideas are fine if you can do them without increasing costs
Unsorted recyclables - easier - more participants
Blue Box Program implemented from Centra Cam Lloydminister has one through Bea Fisher Centre.
Make people aware through utility bills as to how and what to recycle and where.
The curbside collection or recyclables like popcans. The City can recycle use the funds.
Make sure they pick garbage up once a week especially in the summer.
The best is the curbside as dropp-off is inconvenient.
Recycle stations at landfill for separation from waste.
At cheap cost so people will but into it.
Many places burn waste collect heat and metals.
Could curbside collection of recyclables alternate weeks with curbside garbage pickp up.
Most can haul newspapers and cardboard bottles plastics etc. If there not to large - there out and about.
Packageing methods have to change too much hard plastic used.
Make it financially profitable for people to recycle.
A bag limit would greatly reduce other waste going into our landfills.
No compulsory blue box deal.
To encourage others and help who do. Does City do these on parklands etc.
We take everything eligible to the recycle depot - so should everyone else.
Do not peel raw potatoes or other fruit. Do not give money to City for July 1.
Limit number of bags.
I think backyard composting program and more education on how to reduce waste are equally important.
Information on what to do with unrecyclable items (such as #5 plastics)
No price increases during tough economic times are acceptable only reductions!X
No tolerance on garbage bags.
Ban all waste headed for landfill that could currently be delivered to recycle.
Don't know.

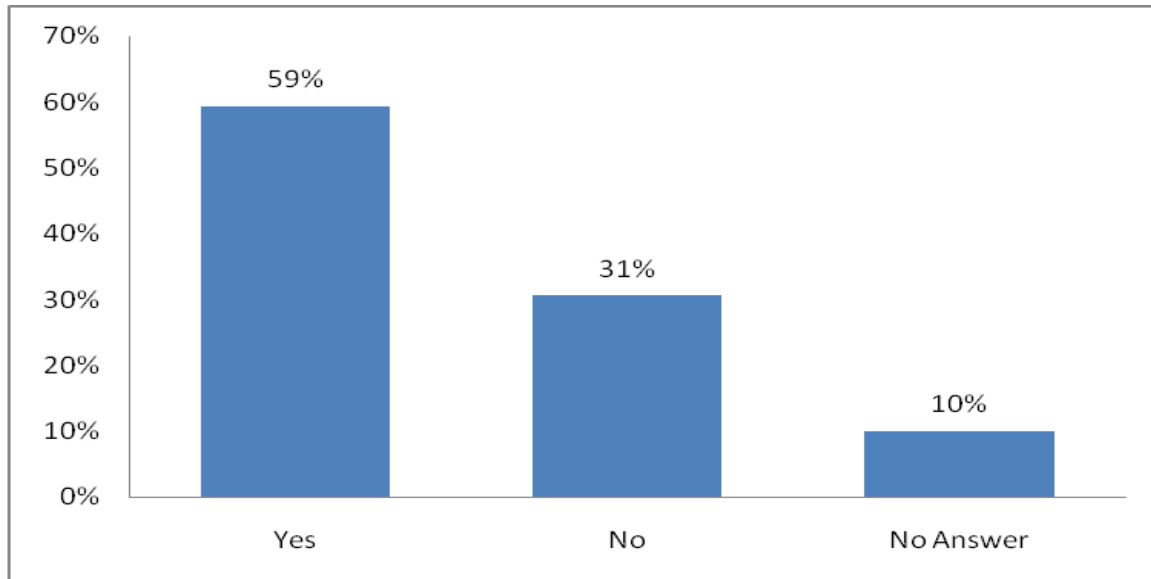
<b>Other Ideas</b>
If you can't afford gas to take to recycle it won't matter what you do.
Leave as is.
This question does not work either online, since the rest can't be reset to 0. So curbside food and yard was is 1, spring and fall curbside yard waste is 2 and curbside recyclables is 3.
These answers apply as long as I am able to drive my car.
Push composting.
I like the idea of banning recyclable material at the landfill - I just don't see how logistically it would work - all bags would be gone through at time of drop off? I think curbside pickup would be great - would help out less mobile people, busy people and people who are unsure of how to sort their items. I think curbside service would increase recycling by a large margin.
All other items listed above are highered out to an independent company.
How the business in town recycle the cardboard.
Whatever doesn't cost!!
Problem is the set up of recyclable areas - need to explore how it's done in Edmonton - rows where everything is placed easily. Also types of plastic not going into landfills because we can't recycle such as packaging. This is a major problem.
We collect about 2000 gallons of water from roof every year. If everyone would do same.
Contractor discounts for separated loads. Look into recycling gypsum, asphalt shingles.

**Question 11. Should the City consider implementing a bag (or cart) limit to reduce residential waste to landfill by an additional 30%?**

- ☐ Yes
- ☐ No



The purpose of Question 11 was to measure public support for a bag or cart limit option. 59% of respondents indicated the City should consider implementing a bag or cart limit and 31% indicated they should not.



**Figure 10. Bag or Cart Limit**

Comments associated with this question are presented in Table 8.

**Table 8. Should the City Implement a Bag or Cart Limit – Why?**

11. Why?
One bag only as part if recycling fees - those that require extra bags pay an extra user fee per bag.
Charge for over bag/cart limit to support further options
Only if curbside collections of recyclables is instituted
Would encourage people to recycle more
To encourage recycling
It would force more people to recycle
Innovation through necessity
To reduce waste but consider size of household. Larger number of people a higher limit and less people a lower amount
It's unfair to larger families
But be reasonable a family makes more garbage than a couple

<b>11. Why?</b>
There are two _____ people unable to to get rid of there trash any other way (unable to make out word)
Larger families have more waste then those with smaller families or single people
Too confusing Household waste varies. If sone week you have 5 bags and the next 5 weeks you 1 bag you can claim credit? If you have more bags than allocated do you save them?
It would force people to recycle more especially cardboard and newspaper
All this will do Is create messy yards etc. with garbage you are unable to take to the dump yourself - some of us do not have the means or money for a vehicle
its too easy to put it in a garbage bag and dump it. Fines should be applied to dumping garbage, not recycling
But maybe people will dump outside landfill
Educate people instead
Reduce waste allow people to use their brain on how to reduce waste
so many other centres do! Why cant we?
bag limit would "encourage" households to change how they manage their waste
It will just be dumped elsewhere
to recycle is more responsible
But also initiate Blue Box Program. Everyone would be responsible for doing their part
Excess will end up in the landfill anyway. People will take it themselves or dump in inappropriate places
\$ and lead the social change and more sustainable lifestyles
Lives are unpredictable. We should have to hang on to extra garbage for another week
my result in illegal dumping and littering
Have (2) children in diapers
When I saw the # of bags of garbage at some residences I cannot believe people can generate that much waste
I don't support this because larger families get the same number of bags as a single person living in a single family dwelling
less in landfill
Some weeks have more then others
I feel our present system is good - along with education
Make people more concsious of their wastes. If they go over limit like in _____ per bag. (Couldn't read word)
Will help to reinforce recycling/composting
it is our personal responsibility to reduce
every household has different needs

<b>11. Why?</b>
What could be done with excess garbage on clean up times
Recycle more
As long as city provides curbside collection otherwise no
People then start using other newfields or dumping along roadways
Does not work, people dump garbage @ nite
I am by myself
Some months there are more garbage needs then others
People would make more effort to recycle if there is a limit invovled
As long as help is provided a lot of people wont do something until it becomes inconvenient to do otherwise
too much waste!
Much fairer. Why should some individuals pay for others who produce unreasonable amounts of garbage
we presently average one garbage can (or bag) per week. Flexibility should exist for unusual circumstances that occur.
Would encourage taking things to recyle
Be more fair to those who recycle and have 1-2 bags instead of 4-5
Would force some people to recycle more or pay a penalty
Hard to implement and monitor to ensure people arent dropping excess bags in green bins or other yards
Encourages recycling and composting
Definitely. Even Beaverlodge, AB has a 3 bag limit, and so does Cold Lake, AB
People that don't care what they discard also wont care where they dump their garbage in other places such a private dumpsters or even private back yard homes. I have seen this in other places.
it should low taxes and cost to landfill and it is good for the environment
To educate the lazy and uncaring public
Don't want to store extra garbage
Too many households put all waste in bags resulting in 6 or 7 bags (we have 1) weekly
Great Idea
Those who won't comply will dump bags somewhere
How would this work. I like to clear out waste as it accumulates.
Satisfied as is!
Not fair in general for some households.

<b>11. Why?</b>
Effective education technique!
Some people don't recycle at all.
If curbside collection in effect bags should be less.
I have lived in a city that did this and it was very effective forces people to recycle.
More insentive to recycle
Bag
Yes because it will increase recycling, but recycling must be picked up.
We have neighbors who have ½ ton trucks bag all their lawngrass for our garbage truck which I feel we have a good place to dump it ourselves.
Force people to recycle!
So items that can be recycled don't end up in the landfill.
Cost and environment
Some people have piles of bags. They need to recycle. They should be made to use the Blue Box program if they don't want to sort and carry. Could an honour system bag limit be tried? Those with more then 4 bags should pay more.
These who are too large to take recyclables to the depot might do so if they couldn't throw everything in the garbage.
Help force people to recycle whatever can be recycled to reduce landfill waste.
Mandatory recycling
We have one small bag.
Inmproving recycling with curb pickup should reduce residential waste by at least 30%.
People should be recycling wherever possible.
If you did they'd likely dump their extra garbge any place.
Obvious!
Why not?
Certain times of the year there is more waste.
Forces people to really look at their waste and what can be recycled.
Because waste is completely out of control and Camrose is horrible for advocating on this behalf.
Maximum 2 per week. To force those who do not now recycle to use the presently available facilities. A great many households recycle nothing. Sell tags so those who put out more (extra) bags pay the extrea costs through a tag for any over 2.
Most People Recycle Very Little
Trash will pile up
Would make people think about what they are throwing away.
Save on Landfill, but as said you charge high costs already include in taxes & utilities now.
Some people might not have as much garbage as others have.

<b>11. Why?</b>
Force recycling
illegal dumping increases
Why aren't we doing this? People expect this to happen. This is normal.
two bag limit is workable if educated about waste.
most weeks lean but on occasion lots.
They have the land & can always dig another cell.
Encourage people to recycle and reduce through education not by forcing them to
Encourage more recycling
environment should be a priority
I am already down to 2 bags per week, others can do it too.
Ok for small family but improved curbside collection of recyclables option cart system would be better- my opinion
pick up now is ok
To get amount of stuff sent to landfill reduced.
Only if they improve ease of reducing what goes to landfill. ie collecting food & yard waste.
hardship for many instead implement curbside collection of recyclables at a reasonable rate.
We recycle everything we can & rarely have more than 1 small bag of garbage. We are appalled at some others!!!
Most households on our street put out 4-5 bags a week and we only do one bag.
To reduce landfill waste & encourage more recycling
People should recycle
Make people aware
We feel the waste is terrible in a lot of households
Because people will throw their garbage on roadways then
Larger families are punished not family friends.
Too many people have up to 10 bags - including grass clippings, cardboard boxes etc.
undecided
So people would reconsider before throwing things out.
Only if there is a provision for curbside recycling
increase cost
No unless they provide comprehensive education on how to reduce personal garbage.
Many people do not recycle anything and they place 3-4 bags out on collection day every week. My family of 4, 1-2 bags a week.
To encourage people to change the way they buy things. Checkout "the story of Stuff" - Google it!
Too many idiots don't recycle anything, they should be fined for not participating.
We have 1 bag / week

<b>11. Why?</b>
How would you charge households with 4 or more people compared to a two person resident.
Maybe more people would recycle
you need both a carrot and stick approach to recycling
Good in theory, what happens to the extra garbage? Perhaps a penalty? It would be ugly if over limit bags were left sitting.
Bag size abuse! 26x36 bags holds ½ as much as a 35x50 then it just becomes a game. (Running bags over to neighbors, etc).
If limit is inadequate most families don't have trucks to hand garbage elsewhere.
Does not always work. Encourage others to dump their neighbor cans.
Hopefully, more items recycled
To reduce waste to land fill
Why not?
Larger households produce more waste. People might start dumping their garbage inappropriately to avoid penalties.
There are enough options for reducing household waste (recycling and yard waste compost) that are currently being under utilized
1 house may have 2 people living there and/or may have 6!
I see this as a being a very possible. Having driven out to the landfill, I see that most of the waste is paper, cardboard and other materials that can be recycled.
It has been very successful in other municipalities and it encourages people to recycle combined with a blue box program it would drastically reduce our waste.
We need penalties for destroying our earth. "out of sight out of mind" is a common thought but shouldn't be accepted.
Don't need extra costs
I have a neighbor who would never make a bag limit. They're late and then the birds get into it. What a mess.
Each residence has a different # of people should be bags/person not residence
Too many people don't recycle
User pay should be the way to go
Provided more study is done.
If efficient, convenient recycling options are in place a bag limit would not be necessary.
Allow more bags but charge for them. That charge could help cover other waste reduction efforts.
Possibly We already recycle considerably. If charged more if over the limit it would give revenue towards some of these other listed possibilities or it would encourage more thinking of reducing garbage. People have an option as to whether they pay more or not which may

<b>11. Why?</b>
be more effective.
Increases costs to families
Costs of program to residents taxes are already among the highest in the province.
Increased costs to residents
More garbage will end up in road side ditches around town it will go some where
Save the landfill & encourage more recycling to help environment
People might stop & think before purchases & disposals.
Maybe it would encourage people to use recycle that arent using it.
reduces waste promotes use of recycling facility
We usually have one small bag yet many have 5 or 6.
if done correctly it should also reduce cost to residence less pickup less cost.
Charge by the bag, after 2 bags per week. To eliminate relatives from the farming community utilizing the curbside pick up.
Encourages Recycling
It will force more people to recycle.
Because we need to and can reduce waste to landfill "we know" we have already done it. We have reduced our garbage for pick up 50%
Encourage people to recycle
We try to keep our waste to a minimum. Cart system is more costly as it is not as efficient.
This will make people be more consciences of what they are doing with waste.
Only if you start recyclables pickup at the same time especially helpful for people that cant take their recycling to the depot.
waste changes wuth the seasons
If everyone recycled their would be less bags at the landfill.
Would make people more conscience of what they are throwing away would maybe recycle more.
2 bags if recycables are also picked up
I really want this because this is what will get the widest attention
People would be more likely to recycle.
The 30% will end up in the streets if there isnt a good recycling program
Good way to force people to recycle
Some weeks less others more. Whats stopping a neighbor from putting garbage bags in your bin if there're over and your under at level.
I already recycle as much as possible
Makes sense
It's the cheapest option that will force people to recycle to minimize their waste.

<b>11. Why?</b>
Reduce Landfill
reduce landfill by 30%
Makes people more responsible
People need to assume personal responsibility for reducing waste
Would encourage recycling I've seen 6 or 7 bags at a house and its not from yard refuse
the present system works for us.
Again will encourage dumping in country side plus our tax will not come down we pay enough now.
May reduce unnessecary waste
Not needed.
Some people don't recycle cans bottle paper, etc.
Absolutely. Incentive for recycling would result in less waste.
Christmas would be crazy. Everyone would go over the limit.
As long as recyling is picked up at curbside!
Because people will think before they put it in the trash cause they can only have so much trash.
Everyone else is doing it shouldn't we?
If you restrict people will dispose of waste anywhere they want.
Garbage will be left on hwy or road in town
Yes! Yes! Yes!
Encourage more recycling particularly if collection program implemented
To hard to enforce and control. A beaurocratic nightmare.
more recycling
Limit amount of garbage per household. People can purchase a sticker to send more. Sechelt BC The amount of garbage at some households is staggering.
People should be using the awesome recycle program & they are too damn lazy. This forces them.
many need a carrot (or a stick) to get started.
People would have to think about what they throw out!
Moste waste is recyclable
If people recycle, compost there should be very little garbage
Because people have been lazy to recycle \$ motivates people if we have to pay for more bags
Responsibility for thoughtful household waste management
People would be dropping their extra bags at other people residence or holdings their extra



<b>11. Why?</b>
bags & creating unsanitary conditions.
It's an easy way to reduce landfill waste
Where would we get rid of extra garbage
Depending on the time of year or personal activities the amount of garbage varies many times I might have 1 or 2 bags, but after a cleanup or special family function more. Throughout the year this could average out.
Force people to recycle as some households do nothing.
Make ppl more aware of amount of waste they produce
It would include improved recycling & composting options for households.
No limit pickup a cart replace the same
Too much cost for policing etc, less high priced control.
Should be a limit 1 - 2 bags
Number of residents per household varies
To make homeowners responsible for their own recycling.
Garbage would just accumulate in yards
But a cost shouldn't be issue for residence doing their part. I agree with a small charge for curbside p/u for recycling
better for environment
A charge on anything over 2 bags
May force people to be more responsible/accountable
Even Flagstaff County has a bag limit & they only recycle cardboard & #2 plastic
As a household an elderly person with incontinence we would always exceed the bag limit and therefore be penalized for something that can't be changed.
Some weeks I may not have any garbage to collect. Others I have more than the quota - am I to store garbage still the next week? Not very sanitary!
Make residents move away of recycling material.
We have to keep our city clean. People may stock pile.
Seems reasonable. Encourages recycling!
Reduce waste collection. Increase recycling collection.
90% of other centres have bag limits.
Don't turn into another province of BC!
Not sure. If the limit were 2 bags and some. Will have four bags what happens? Build Up.
Moving, Christmas such more trash then normal.
Education the answer
It is what it is, educate and encourage.
As long as it doesn't go below 2 bags, like Christmas etc., are there exceptions?

<b>11. Why?</b>
People drop their dog (poop) in neighbors bag.
Keeping in mind the size of the household. I believe people would be more serious about recycling if this was in effect.
Difference to each individual household some more than others.
It will force people to consider recycling and composting more.
Limitations are useless. Education is key to get people on board.
But With exceptions. Sometimes (2 or 3 times a year ther are just higher waste times!)
To help reduce rectckabkes going to landfill.
Excess waste will end up in places not suited for waste.
Some poeple would use our garbage container.
Cetnra Cam does a very good job with waste if taken there.
Has this worked elsewhere? Do people pawn their excess garbage on someone else.?
No carts please. Uinsightly in the yard and costly to the City, they'ss get upset and destroyed by pranksters.
that 30% would end up in the landfill anyway. Hauled in privately.
Incentive to reduce waste.
People might drop off bags of garbage where they shouldn't
Recyle or pay extra for over limit.
YES!!! Reduce waste.
People can learn to compost E recycle more.
YES!!! Make people think about other ways to deal with waste other than lazy way (just in garbage) - many garbage days. I see many item that could be recycled but are not in the garbage's if neighbors.
Just STOP the abuse residents and some yard care companies. It is common to see twenty bags of yard waste on this block. It infuriates me. I know we pay for it.
Families with several people in a household would be penalized more than smaller households.
I regularly find that "extra" bags of garbage have been put into my garbage storage area.
In my neighbourhood I think I'm the only one who recycles, I only have one small bag of garbage per week.
Common sense!
Absolutely
Implementation cost is minimal.
But only if you also provide recycle pickup.
Sometimes a person has more. We do most all at Centra Cam depot.
Forces people to recycle./

<b>11. Why?</b>
Reduce landfill
People have to think about reducing waste.
Increase recycling and decrease landfill waste.
Too easy to abuse system. Eg. Placing garbage on another's property.
What do I do with the extra (if any) bags?
Possibly the bag limit may work
Might encourage more recycling.
People would try harder to reduce their waste by recycling.
Number of bags should vary with number of people in each household.
It should reduce operational costs significantly.
Waste reduction.
It would eliminate garbage heaps.
If there a limit garbage will just pile up in backyards and alleys.
Not sure please see question #9.
I don't think it's a problem.
Until there is a blue box program it makes no sense.
Not enough people recycle - they should be charged heavily for having too many bags for pickup.
Will reduce waste going to landfill.
Concentrate on recyclables sent to Centra-Cam.
It gives people time to get used to the system. It encourages recycling.
I notice bags of lawn grass being needlessly headed for landfill. We would all be more careful in what we send to landfill.
Expensive bills currently high.
To reduce residential waste to the landfill by an extra 30%.
Christmas always brings more garbage - as well as guests hard to control.
Recycling facilities are available and should be used by all residents.
City already charges \$50 a month on water bill for services can't afford anymore, will see or lose house!!
As a family of five we produce one sometimes two bags per week yet see similar families produce more.
Implementing a bag limit system will have negative consequences. Above quota bags will start being found dumped in rural roadways and other rural private areas. This is not fair to the rurals. Educate and accept the waste that is put out.
It would encourage recycling.
We would recycle more.

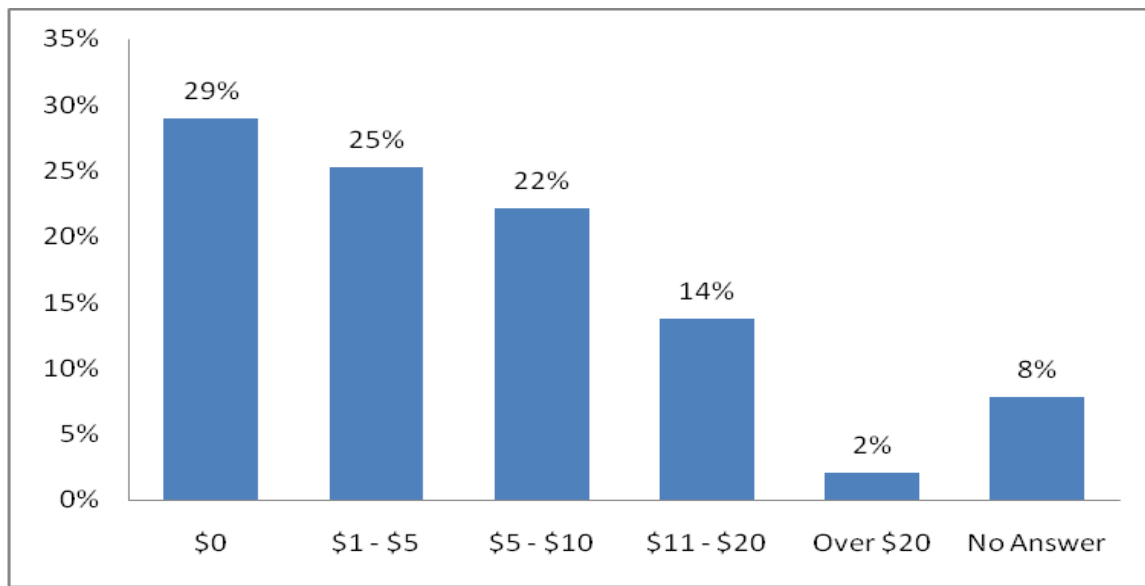
<b>11. Why?</b>
Certain times of the year would result in problems.
Bag limit - not carts.
To reduce landfill costs.
To encourage people to use recycling depot.
There are five people in my home. We already limit what we put out but there's still a lot of waste for five.
No bags birds and animals rip apart.
We only have 2 bags per week.
More people would become aware for the need to recycle. Two bags are more than enough.
We do not have curbside pickup now seniors are unable to take to Centra-Cam.
Not if it would cost anything.
But only if a blue box recycling system is also in place. Using fuel to drive to recycle is not efficient or friendly.

**Question 12. Please indicate the additional amount you would be willing to pay on a monthly basis to add options that would significantly reduce waste to landfill.**

- ☐ 0\$
- ☐ \$1 - \$5
- ☐ \$5 - \$10
- ☐ \$11 - \$20
- ☐ Over \$20

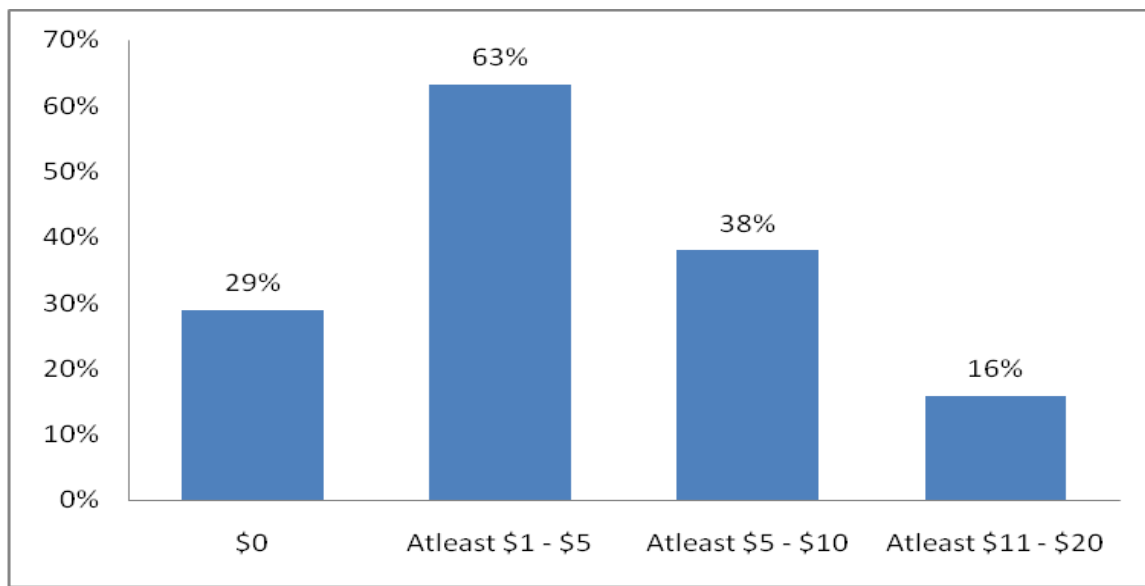
The purpose of Question 12 is to measure willingness to pay for waste management programs. The option selected most often was \$0/year at 29%, however 63% of respondents are willing to pay at least \$1 - \$5 per year, and 38% are willing to pay at least an additional \$5 - \$10/year.

Results are shown graphically in the following two figures.



**Figure 11a. Willingness to Pay**

Figure 11b illustrates willingness to pay atleast a specified amount ( ie. Atleast \$1 - \$5, atleast \$5 - \$10, etc)



**Figure 11b. Willingness to Pay (At least)**

**Question 13. What is Your Age?**

- ☐ 18-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45 – 54
- ☐ 55-64
- ☐ 65+

Questions 13 and 14 below were asked to gauge the demographic that responded to the survey. Analysis of the population response was provided in at the beginning of the survey section and was used to identify the potential for non-response bias.

**Question 14: What area of the City do you live in?**

- ☐ SE
- ☐ NE
- ☐ NW
- ☐ SW
- ☐ Downtown

The majority of respondents are from the southwest sector of Camrose. This is also where the majority of Camrose's population resides.

**Question 15: Other Comments?**

Comments received on the survey are provided below. Generally respondents are concerned about current waste rates; are interested in alternative options (such as blue box programs, organics collection, etc.) but are also concerned about associated costs.

**Table 9. Other Comments**

<b>15. Other Comments?</b>
Investigate the possibility of collaborating with other communities to establish a waste co-generator for electricity and methane.
#5 No preference
We pay for weekly pick up of recycables
Taxes and utilities are already high enough As it is we are already begging for street cleaning and snow removal You've got big industries making lots of waste and recycling nothing
By re-evaluating each year we could better manage and see the growth of out changes. The first few years: -Bag/cart limits -mild fines for excess garbage -Profit created for the city -consequences felt for homeowners/renter  Once profit has been saved/generated -organics dept at landill -curbside collection of organics -additional restrictions on waste collection -addressing commercial organic waste collection  I believe change will not happen spontaneously. Humans are creatures of habit and convenience, once it is easier to reduce waste than deal with the amount we are currently creating  Thankyou for your time and including me
#12 I would like to know what is proposed before agreeing to pay for it
#7 - I understand that due to penalties against the trucks we don't pay much for garbage disposal?
Further to #11 this is a seniors town and it not always easy to dispose of waste for some
Garbage removal in Camrose is a good & workable system. Don't screw it up!
#7 to easy to forget
We already recycle and are down to one bag of garbage weekly. Those who send more should be the ones paying more.
I tired of all the garbage in bins that could be recycled
#7 - Confusing!
We should be able to recycle #5 plastics

<b>15. Other Comments?</b>
#14 - North Central
The recycling depot should only close at night
#12 - more for blue box program
Camrose could and should be a leading community in AB in reducing our waste!!!
additional surveys before decisions on various matters would be appreciated
I think there is to much plastic not recyclable
#5 - Open all the time
#3 - for Compostable Food Waste - they would like to learn how
GIGO - garbage in.... Garbage out...
Our thinking has got to change
Recycling fee paid by city residents to run centra cam not charged to county residents. But they have access. Curbside recycling is needed badly
Why fix something that isnt broken??? Would increased tipping fee to commercial industries help to make them more responsible??
#12 - One old man doesn't have much waste
Free blue box weekly pick up! Do not pick up cardboard in trash. Limit system needed.
Any curbside collection in 10.
Should be paid for by the individual household.
We havent had a lawn for 12 years. No clippings and no noise!!
We (our household) already recycle most items possible. If everyone did the same, the problem would be minimal.
Disappointed that garbage fees keep increasing and the recycling and disposal fees shout no be with collection. Collection is part of disposal. What are we recycling?
More garbage cans and recycling containers in public areas to reduce garbage on streets and sidewalks
Sherwood Pard has quite a good system - check thiers. Winnefred Stewart Assoc. makes recycling products - perhaps centra cam could do the same.
We just relocated to Cold Lake from Camrose
#5 - Doesn't matter
Everyone should be responsible to take their own recyclables to the recycle place. Why shoud I have to pay extra for those that don't.
You need to find a way more cost effective and lower taxes.
It is disgusting to say the least to look out on garbage day and see how much junk, cardboard etc. is put out each week by lazy and uncaring people. Many households have 7 or 8 bags weekly.
Put a three bag limit out and see people change their ways when they have to purchase tags from your office for \$1.00 per bag over 3. This would educate them quicker then any other method you could think of. Try it. It works.



<b>15. Other Comments?</b>
We put out a 1/2 a bag a week because we recylce paper, glass, tin, mixed paper, cardboard, and #2 plastic. We mulch our lawn. Thanks.
Blue box program would be awesome!
#12 - Depends on convenience
We see a tremendous amount of cardboard being thrown out. Can this be stopped?
Thank you for asking
Nothing seems to be addressed to commercial the largest contributor
I feel Centra Cam plays an important roll in giving handicapped a job. However there are those who don't have access to a vehicle
Satisfied as is - educate.
#1 Encourage more recycling per household perhaps woth some kind of incentive. Equals more participation with less control measures and cost.. #2 74% is commerical waste add same option as above to lower this percentage.
#5 - If I load up my vehilce with material I spent time sorting and then the depot is closed it discourages me. #7 If people can recycle efficiently it will reduce waste pickup costs.
#5 Anytime, any day is convenient for us.
Chrgе big companies more because most don't recycle at all.
Thankyou for finally taking steps to reduce waste. Some people will be resistant but this is so important for us and our children.
Blue bag pick up of unseparated recyclables will be the most successful way to greatly decreasing waste. In my Edmonton neighborhood where this was done, it was very rare to see a household put out more then one bag of garbage.
12 - We recycle
3 - I'm not sure where the recycle areas are for these items.
6 - I need more info as to how this service is being utilized.
10 - I currently utilize the Centra Cam Recycle Depot
5 - Anytime Does it need to be open to drop things off?
15 - 1. The City should advertise the availability of the private recycling Blue Box Program. 2. We need several convenient locations for summer grass clippings. We can't always mulch. 3. Could bins be placed in different parts of the city?
Recycling is a lifestyle somehow it has to be made more attractiveand people have to learn how simple it is once you get into the habit.

<b>15. Other Comments?</b>
Landfill should not accept paper, cardboard or other recyclables that have a place in the Centra Cam recycle depot.
I love the system Sherwood Park uses!
We feel we do lots of recycling already.
I would be willing to pay more only for curbside recycle pickup service. I've recently seen this used in St. Albert and each residence had 1-2 bags of garbage and 1 recycle bag. It's user friendly so people participate weekly!
Generally: Would like to see more plastic types recycled and a city operated food compost site.
#3 Tire shop. #5 Anytime
#5 This resident was very confused with this questions but basically placed a check mark beside Friday, Saturday, Sunday.
We are able to do much of our own recycling.
Regular (free) shredding service or minimal payment.
Please be tough on this matter, not enough people care. # 12 I'm not sure what options you are considering.
First I am very obstinate (stubborn). This I admit. However some years back I had all these nice cardboard boxes which I took to the recycle depot. Told to take them home. Knock them down, bundle them then bring them back and they would accept this. I looked at all of the bodies (workers) sitting on their backs laughing at me. I told them, I know where the dump is. That's where all the boxes end up. To this day I refuse to recycle certain things. Yes, I am stubborn but I think I had and still have a point. I have also had to pay recycling fees every month. Plus also recycling on sewer.
G Mundt
Instead of 2 free days per year make it 4 and unload in designated areas rather than in household landfill for a mixed load. Most people obey the rules if they know them ahead of time and can build a load for proper separation when unloading (mixed loads it seems always are sent to household landfill.) #3 We do not have asphalt, concrete, pesticides or tires. #5 Any week day is best for retired folk to avoid lineups and crowds and also when staff on duty. #8 The boxes of information mailed out once or twice/year to Twitter/Direct E-Mail are useless.
Industrial/Commercial waste needs to be reduced
7 - If a calendar was provided.
We have family in Spruce Grove. What a wonderful system they have with their container. Then everyone has to container their garbage. And it is much easier for the garbage men as they do not have to leave their trucks at all.
We don't have enough to change anything

<b>15. Other Comments?</b>
We pay enough now and our taxes are very high. There should be some money in our taxes to help with waste.
I don't need the recycle depot to be open (staff present) when I drop stuff off. Simply having the containers available 24/7 is good enough.
Other plastics besides #2 to be recycled as well.
So glad you are doing this survey and are considering changes. Already think Camrose is an amazing city and better recycling facilities and waste reduction program will only make it better.
Waste of time you never listen anyway.
Reducing what is sent to landfill is a great goal.
I know of lots of people who routinely throw their recyclables into the garbage because taking them to Centre Cam is a "hassle". In today's society everyone wants things too easy & convenient.
I strongly believe we need to improve our collection system, as well as expand it. By implementing a curbside pick up recycles and food and yard waste, tonnes would be diverted from the landfill, and there would be no need to enforce a bag limit system.
If the City composted all the food & yard waste it collected it could sell the finished compost back to residents for use in our gardens or use it in City Flower beds.
The general public will be more likely to "compost" if forced to separate food / yard waste and leave curbside rather than have a yard composter. Again in general people are lazy!
Seeing this survey makes me hopeful that camrose will join this century when it comes to Waste Management!
As a young family, we have too many other major expenses coming up to allow a higher amount (diapers, formula, etc).
Your survey is a good idea but I would not be overly surprised to find that a high percentage of recipients, likely those who just can't be bothered to recycle, wouldn't even be bothered to read the survey, let alone fill it out and send it in. I think that's the nature of the beast! This are the ones who need to be hit where it hurts most their pocket book.
Would it be feasible, after giving it a good amount of publicity, to have people (volunteers or paid) go from door to door "with pencil and survey in hand and "grill" the people; "Do you recycle or not, if not, why not!".
I have been a recycler for years. I make regular trips to the recycle facilities. I have found that in many cases its difficult to fill one back for pick-up to the landfill I also compost.

## 15. Other Comments?

It angers me to see the volumes of cardboard, Christmas wrap, etc that finds its way to the curb. Sometimes I stop to pick up cardboard to take to recycle.

I understand that some of our larger businesses who "produce" a lot of card board can't recycle. It's too costly, I'm told! How do you educate people to take a good hard look at what they're doing to the environment! Recycling is easy! Everyone can do it! (Unless one doesn't care, too lazy, too much trouble!! There's no excuse good enough!

City of Camrose should implement citizen clean up weeks twice a year.

Like Brooks idea of Garbage Bins

To many people throw out articles that should be disposed of that should be burnt or crushed to reduce space in the landfill.

Waste should be incinerated! Used Daipers, Old folks Home etc. Every kind of filth goes into the landfill should be incinerated!

All dumpsters (back of business bldgs would have to be locked to prevent people from throwing their "extra" garbage in them.)

Encourage all Albertians to view "The Story of Stuff" and then lobby hard to move our society in that direction.

PS. When is the city going to recycle that eyesore in the valley; the never used ski jump?

Sure would be nice to clean up old car boils and large junk from all over the ctity.

I would like to see people more mindful of garbage as it leads to a lot of littering.

It is high time Camrose took recycling seriously. I've seen smaller communities across Canada and elsewhere where complete recycling is mandatory. Please follow through!

## 15. Other Comments?

I think that it is great that the City of Camrose is looking at ways to reduce waste. In my opinion, all levels of government need to make the environment one of the priorities. Jobs and sustainability could both be accomplished with this. The minority world cannot continue to use the most resources.

As you point out in your survey households only make up 26% of the waste sent to the landfill, by banning cardboard and other recyclables from the landfill industry would also have to comply. The should make a significant reduction. In 1990, Wetaskiwin banned recycables from the landfill. If you went with a load of cardboard you were directed to the recycling depot.

Edmonton and other communities have different depots where you can drop off recyclables. Is Camrose large enough for this? Could other plastics be recycled, in particular yogurt plastic?

Could there be recyclable bins set up downtown, and all public venues (Canada Day, Swimming Pool, Ball Games, etc) for bottles and other recyclables?

The easier you make it for people to recycle the more they should comply. Extra fees may have to be collected on an income based schedule or part of property taxes. Do not tax low income and poor people more then they can afford.

We live across the alley from the Mirror Lake Centre, I sent my partner over to the dumpster to recycle the cardboard that the engineering department had thrown out. It should be important for all city workers to help with the goals that the city sets.

This questionnaire was hard to understand in some areas, misleading ie composting in your yard or in City holdities?

1. After an appropriate period for education I think fines should be levied for abuse.
2. Impose biodegradable bags for yard waste
3. Lobby for less packaging!!!
4. Recycle all plastics please (recyclable of course)

Not fair to have to pay sewer charges for the water used on lawn & gardens

When I drop off my recycling, the depot doors are closed, but this is not a problem as the bins are accessible 24 hours a day. For me it doesn't matter when the deport is open, as long as the drop off bins are accessible 24hrs/day, 7 days/week

I am excited to see the city stepping up in the waste management area finally! Good Job!

<b>15. Other Comments?</b>
I believe our costs are to high now, such as taxes & services; Seniors don't need anymore added costs. In most cases seniors are not great contributors to the landfill.
Where do we contact about messy garbage in back alley. They miss pick up then birds or cats get into it. Andy they don't clean up after themselves.
Limit the pkg of flyers a week, no need for the some to be in both newspapers & done in a separate bundle to the door.
I already use my gas to drive to recycle. Restore & Edmonton with what cant be recycled here.
Please charge more to industry for disposal of their waste (74%!!) Businesses should be major contributors to waste reduction efforts since they are the ones producing the most waste.
Allow people the option of paying more by bag limit rather than forcing additional charges on everyone. Some cant afford additonal fees. Lots of people are on fixed income or low income. Our combined income (working) is under \$35,000 gross!!
We already pay the highest or nearly the highest taxes in the province, stop raising the cost to live here! You will deter growth.
Remember landlords pay for tenants garbage in suited units - More expenses means increased rents making Camrose less desirable to live in.
It is already expensive to live in Camrose. Please don't raise costs for families.
Can any of the programs carry themselves ie return's your taxes are too high for services provided now show me value for \$ paid.
This survey is long overdue! Wish plastic packaging by food manufacturing could be recycled + more plastic containers.
In the winter garbage should be collected every 2 weeks as other cities do.
Buy city bags with tag more bags used the higher the cost.
Better management would reduce cost & reduce waste to landfill. To charge by bag, cart or box would eliminate the sons, DTGS, Relations from the farms putting garbage at the curbside at relatives it is happening in my area.
What about landlords who are forced to pay for their tenants water & garbage? Rents will go up. Don't you have affordable housing goals to meet too?
Wish there was a burn pit for branches & twigs
Waste management education is the key
I think the city has provided many options for waste disposal. We just have to educate people more.
At this the taxes charged on property being high should cover the cost of recycling. Tax payers are already stretched to the limit maybe its time business's pay more check the dumpsters around town no recycling use. One or two fewer students hired for summer to sit and do nothing would pay for this service.

<b>15. Other Comments?</b>
I'd like to see a program in place like Sherwood Park or Stony Plain. Would like to see a true composting facility in Camrose as 50% is organic waste.
7. Hard to keep track even if a schedule/calender sent out. Need to account for holidays or like last year, garbage truck breakdowns - different day pickup (later).
Have bylaw officer implement program and follow up for new residences for appropriate garbage containers. IE with utility bills.
I answered #0 to #12 because I recycle as much as possible.
I have a blue box at curb which is excellent more should have but reduce the nate charged to us. More compost in personel yard. Use paper bags again cut bck on plastic packaging. Get rid of plastic diapers. We have washers and you could have clothes line wooden. Have appt's use bins for different items. Have people take pride in themselves and surroundings if we work together we will accomplish more.
Its not hard to recycle but curbside pick up helps as they are many seniors who are unable to do this. Bag reduction & curbside pickup. The amount going into landfill should be considerabley lower.
<p>Have retired my wife and I chose Camrose as our retirement city. We moved here six years ago from Grande Prairie and began to recycle as we had done before. On my first trip to the recycle depot I must say I was very disapointed. In Grande Prairie there were two rows of large plastic bins with a raised sidewalk in the middle to serve both rows of bins which wre clearly labled for glass, tin, plastics, newspapers etc. When the bins were full a cherry picker truck came to remove them and replace with empty ones. Someone from your department should make a trip to Grande Prairie and bring back some ideas. When it came to plastic, if one city can take all plastic regardless of the # why not here? Although Camrose has made improvements ther are ways to make it more were friendly.</p> <p>Now let me speak a little about yard waste, grass in particular. In Grande Praire there were the very large steel dumpsters to start with the dumpsters were empty your bags. However as the bin filled up and the end gate shut, portablt steps were in place along side the dumpster. These were rather wobbly when carrying up bags of grass although the yard attendant would generally help. Camrose has bunkers, no wobbly steps. " Hey a plus for Camrose". I do not have a truck so far the frist three years I would load up the trunk of my car with bags of grass and haul it to the recycling place. Eventually the trunk needs vacuuming. Then I began to notice as I went for my walks that there are people who have trucks and still have many bags set out on garbage day. Not all of them can be household waste. I only set out one bag ½ to ¾ full of household waste per week. I'm sorry to admit but I no longer haul my grass. I will start again but give me something in return. A token that would give me access to the compost pile for a free bag or two of compost for my flower beds in the spring.</p>



## 15. Other Comments?

After all it is my grass. In the spring and fall I could have up to mine or ten bags of dusty yard waste. By car this is a total of three trips for sure. Is it possible to issue yellow stickers that I can attach to the bags to indicate that these bags are yard waste and must be collected in a different manner.

In reference to item #7 in the leaflet where it indicates a range of 5 to 10% cost saving if I were on a rotating schedule. My question is a cost savings to who? Is it the city, the garbage collectors or is it me that saves the 5 or 10%. If its me, will I see it on my monthly bill?

AS for item #9 abpit the cart system and an increased cost of 10 to 30/month. Sure you must realize that we as senior citizens on a fixed income can not support this kind of an increase. I'm not sure what a cart system consists of but I make a reference to a city in SK wehre my family members lives. They have a mini dumpsters for their garbage in the back lane. This system has a deal with abuse such as old lumber, broken furniture, old mattresses and pretty soon someone sets fire to it. DO NOT consider this an option.

Thank you

We think there is a huge need for styrofoam recycle.

We pay more then other areas without asking us to pay more and buy a greenloin.

What are are we to do with our artifical flowers from grave site? There's a lot of used flowers there.

The last thing we need is any reason for the City to add more charges to our utility bills!!!  
The roads are shot!

I live in an apartment. Why would I pay additional cost to subsidize a roofing compnay who dumps thousands of pounds of asphalt shingles annually at the landfill.

Provide incentive for recycling remember not to penalize. Those of fixed incomes by increasing costs prohibitively.

Target apartments for recycling especially organics. #6 Any evening or weekend.

Again, cannot stress enough blue and green bin curbsige pickup.

We need some improvement. But restricting is not the answer.

I think woman usually do family recycling & I don't think women go to industrial part of town very often so who is recycling there?

I wish there was an online version of this.

With residential users only making up 26% of the waste stream, greater results would be achived by focusing on the other 74% of users.

The schools are great children learn to recycle.

Finally something is being done!!! Thank you.



<b>15. Other Comments?</b>
Please look at Sherwood Park System
<p>August 19 2009</p> <p>City of Camrose Waste Survey 5204 50 Avenue Camrose, Alberta T4V OS8</p> <p>Dear Sir ar Madame:</p> <p>RE: Waste Survey</p> <p>Further to the responses on my household's survey I would like to make the following suggestion. While I applaud the citizens of Camrose who take it upon themselves to reduce, reuse and recycle the majority of Camrosians continue to remain ignorant to the amount of household waste generated.</p> <p>I would ask that the first step the City of Camrose should take to reduce household trash output is closely monitor what garbage collection is accepting. It is not uncommon on my street for each household to throw away large items, in conjunction to their 5+ weekly bags of trash, such as furniture, children's toys, household goods, boxes of clothing, construction waste (ie: wood scraps, tin, vinyl siding) with waste collectors picking up all items. Majority of these items could be reused by simply taking them to Camrose Emergency Shelter or the Camrose Thrift Store. My neighbors would surely think twice about throwing out "gently" used items if disposal wasn't as easy as piling it on the mountain of black bags on their curbsides.</p> <p>I have numerous friends whom reside in larger urban areas such as Strathcona County and the City of Sherwood Park and I envy their curbside recycling system for all waste materials. While I am not ignorant to the fact that tax payers dollars are used to implement such a system, if Carnrose aims to brag itself up as one of the best places to live, we should consider putting our money where our mouth is.</p> <p>If the City of Camrose is looking for citizens to volunteer to further waste management reform, I would be happy to participate.</p> <p>What percentage does Big Valley Jamboree recycle? If they did this would save us a lot of landfill space.</p> <p>Thank you for getting feed back from residents.</p> <p>I am on a fixed income and or can not afford to pay extra for those who don't bother to recycle</p>

<b>15. Other Comments?</b>
School System used littering penalties pride and leadership by our elected community people City Employee pride not just spend more etc.
You may want to look into the program they have in Fort Saskatchewan, AB or Kindersley Sask. They both have great facilities! And also everything can be recycled! The public would like to know why we are paying a recycling fee? Where does the money go?
Keep garbage removal as is. Curbside removal for recyclables will naturally reduce waste make a bag limit isn't needed but a good idea as long as there isn't a fee that is just redundant.
It's about time the city changed its garbage policies
Thank you for this survey and initiative.
Having visited Stony Plain recently, I like their clear & blue bag pick up.
Recently we started recycling all materials that could be dropped off at Centra Cam. We easily cut our bagged waste down to a third of what it was.
Thank you for this survey and initiative. Having visited Stony Plain recently, I liked their clear and blue bag pickup. Recently we started recycling all materials that could be dropped off at Centra-Cam. We easily cut our bagged waste down to a third of what it was. I was a hassle to sort and take it that far. We really want to recycle if the City could make that easier or more convenient for us it would be appreciated. Please find out what works well in other similar communities. Don't be afraid to make big changes. My 65 year old parents made huge changes to their attitudes and behaviors.
#5 Sunday (Day) doesn't matter which one. #7 too confusing
My fear in the City's attempt to reduce waste is that persons on fixed incomes would be adversely affected by further cost increases. There needs to be a balance.
Don't increase fees! Too high already especially water.
#3 - Concrete N/A, Pesticides N/A #5 - No preference #10 - All cost I can do all these things.
If I could see more of how tax dollars were spent I may have answered it differently. We pay high tax in Camrose as compared to other cities.
As wonderful as recycling is, it does not seem financially beneficial when only a small portion of residence will utilize these services.
City does a good job of its program.
Thanks for listening and asking. **We are tired of paying more, when the tax for air? #7 Too confusing, end up missing pickup and ? Pay for excess the following week.
#7 Ours is curb pickup.

<b>15. Other Comments?</b>
/Blue Box Program as in Edmonton would be great, but cost is a worry for me. #5 Depot is open perfectly fine for me. #12 I'm on a limited income. Every penny must count my taxes are very high!
We should not pay for water that goes on the ground. Note I put a lot of water on flowers, vegetables that I use and not down my sewer.
#7 But pick up same day each week.
#7 - If in a consistant pattern.
#3 Asphalt, Concrete N/A
I'm pleased you are considering improving your services. The fee should remain low however.
#3 - Fluorescent Tubes, Wood, Asphalt, Concrete, Pesticides, Tires - N/A
Program has improved from past years waste.
We just moved to Camrose from Sherwood Park - they had a great system. We try to follow is as much as we can but organics would help a lot!
A recycling program like Edmonton's would be ideal. I also like the container idea as our cans have been stolen three times.
#5 - Any Day. #12 - We pay \$5.00 a month now.
#5 - Ok now. #14 - 5417 - 53 Street
Thank you for inviting the opinion of Camrose residents. Thank you for helping us to care for the environment.
Tree planting incentives should be offered to improve air quality, beauty, habitat for animals and wildlife and improve the climate (precipitation cycle).
Don't pickup yard waste and leaves, cardboard, newsprint - Centra Cam people don't bother to recycle. If they had to pay extra?? #5 - If it isn't broken don't fix it.
#7 - If it is reflected in our bill.
#5 - Work shift work. I appreciate the flexible times as present. #7 - Notification to be organized enough to have garbag out on correct date. #12 - Plase keep to a minimum but whatever it takes to change things for our kids!
#5 - No preference.
Could the recycling depot accept plastics rather than #2? #5 most food containers. This would reduce our waste.
Implement #11.
We set out garbage every three weeks. Everything else we take regularly to the recycle depot.

<b>15. Other Comments?</b>
#3 - Fluorescent tubes, wood, asphalt, concrete, pesticides, tires - N/A #5 - Doesn't matter to my schedule.
Blank
Cancel Camrose phone book. Two are enough. Less advertising.
I would like to know how to stop unwanted flyers?
We already pay for the recycle depot why can't a pickup day be implemented like the "garbage day" pickups?
Please seriously consider recycle pickup. Convenient and will help reduce landfill waste.
Cost once a month is high enough. Some years ago we paid once every two months and was a lot less than today's bill.
Our recycle station is not convenient for people to use... yard is closed weekends, etc., could be placed also in other locations. Ex: Fire Hall yard. Wetaskiwin has program to copy. #3 - Fluorescent Tubes to Totem. Wood, asphalt, concrete, tires-N/A #5 - Gate should always be open. #7 - Not needed if you enforce recycling. Do not collect cardboard, grass etc. #8 Information sent with utility bills for homeowners & Articles in newspapers for renters. #12 - Calgary charges \$11.36 for combined waste removal and curbside pickup (\$7.36 waste & \$4 for waste) Statement About Our Waste: Commercial industries makeup 74% of the total waste stream) Why don't they separate their waste? Charge more for unseparated waste!
Discontinue the practice if "flyers" in local newspapers and door delivery.
I don't know how it can be done but get more people thinking about sorting waste. How do you make people care? #5 - All days are good for me.
Our utility bills are bleeding everyone to death now.
I see too many not recycling - especially cardboard and it annoys me.
Would like to see all plastics recycled.
If we can reduce waste it follows that we would reduce cost so that should translate to less cost and less money having to be spent for this service.
We live on 54th Avenue, our back alley is disgraced by garbage.
#12 - See question #9.
Charge more for too many bags. Should be a limit per household. #12 - I recycle almost everything.
Recycle all types of plastics.
Perhaps a spot where tree branches and shrubs could be dropped off at recycle. I noticed a lot of unwillingly ignoring clear bold signage at the grass bunker at recycle

<b>15. Other Comments?</b>
depot.
It's time we had a recycling pickup with our garbage! Willing to pay for this service. I absolutely hate throwing plastics into the garbage!
Can't afford more cost. I am a widow on low income.
Establish a systgem (sorting at source or at recycling depot) to cut down on plastic containers in the waste curb collecton and in the landfill.
#5 - Check the rotation used in Sherwood Park with a calendar for the whole year.
#3 - Wood - Burn it.
Taxes went up \$15 a month water is under \$20 bill is \$80 taxes too much are taxes are higher than Red Deer and City offer less to do and charges more unless your rich can't afford what the City has.
#6 - Do we pay for this service?
#7 - Crows take garbage can't put out until day of.
We need recycling pickup! Two papers each week it piles up quickly.
#6 - Hazardous waste should have a year round rop off. All waste occurs in the time we are in. If an appropriate outlet cannot be found, it will be dumped into household waste, or rural dumping just to get rid of it.
#14 - I believe one of the quadrents hould have been SW not 2 items SE.
#9 - The cart system needs mor einfo put out to diget the concept, costs and logistics.
Error in the previous question. You have SE twice. If 46 Ave and 48 Street is SE, I am in SE.
Recycle bins in more areas would help drivers.
Camrose is awesome city to live in. Thanks for continually trying improvements.
#14 = SW area of City Camnrose could and should be leading community in AB in reducing wastes at all levels: personal - business - schools - government.
We live in the SW section.
#14 - We are in the SW part of Camrose.
I have heard rumors that Centra-Cam brings some cardboard to the landfill as there is "no money" in recycling. I sure hope this is not the case as we need to have faith that our efforts to keep things out of the landfill are being maintained throughout the system/process.
I am happy the City is considering options to reduce waste. I'd love more information on recyling food waste - composting, etc. Since this is the largest landfill waste product, we should concentrate on this aspect very closely. I for one could use a lesson/cheat sheet on organics recycling!

## 15. Other Comments?

I don't think the city should implement a bag limit on households. I have two children in diapers and that adds to our bags weekly. Also I live in a house where the basement is a separate suite so the garbage that comes out of our house is for two households. I know a lot of houses are rented to two families and this needs to be considered. We recycle what we can but can't make the people in the basement suite do the same.

Fines for those that exceed bag limits, fines for excessive yard waste that is put in landfill/curbside pickup contractors need to be more accountable for their waste (wood) as well as the garbage that accumulates on new construction and gets blown around in new areas (ie: Valleyview).

#12 - We hired an independent firm for recycling pick-up.

The city provides a good recycling program now. If people were really interested they would use Centra-Cam now but a bag limited will force them into recycling.

The main thing is a pick-up for recyclables.

I appreciate that the city is trying to help the environment but what about helping those people who live in the city. The ones who pay taxes. The ones who pay servant workers! At this point we are paying higher taxes based on last years economy! And we can all (almost all) hardly afford to make ends meet with an increase in costs. Waste management that puts even more stress on families today. Is the environment more important then the people who live on this planet? I agree we need to take care of this planet with more homeless people? Do what "environmental" thing you need but stop the added extra costs. People can't afford it. I have five people living in my home. We only flush the toilet when its brown not when it yellow to save water. We use rain barrels to water gardens and plants. We take cardboard to the recycle spot same with bottles. We all want to do our part to look after earth but I'm sorry my family's needs come first! This family and many many more can not afford any extra costs! We live from pay check to pay check it's just not a good thing to add more stress with the two metal pipe plants slow or closed. I know that there are other families who feel the same way. You may see "oh it's just a few bucks each month. But that's not how a person feels when they can not afford milk or eggs or bread, etc...to feed their family. And yes for some that is exactly what we think. What about the senior citizens who can't even afford gas to heat their home? Do you think that extra \$10 \$30 makes a big difference? I know someone who would say ya that's one more bill that we will get cut off on me! When you take stuff to the landfill there is already a cost. We already pay for this landfill monthly on our City of Camrose bill. I'm ok with that but only cause I've budgeted for it. I'm sorry but we can't afford to add more into that bill. It's the difference between heat, water, power, food, medicine etc...even if it's a "small" amount to you!!! Wrrpa the cost up anyway you want! It's still not one that most people can afford!!!

Should accept more plastics.

<b>15. Other Comments?</b>
Grand Park area. Thank you for all the work. Apologies did not see the deadline. #2 - it might be a good idea to look into bins at shopping centres and malls. We could recycle when we go shopping #5 - I am ok with any day. #7 - Because of cost saving. Same days has advantage of consistency. #9 Could be costly for people on low income. #11 - This limit could cause hardship for people with no vehicles.
We need curbside recycling now.
#Error
The rate of recycling will not increase until you make it "easy" to do so by being able to put all in one container and put it out like the garbage is. #5 - Blue Box Program #7 - What would be "other benefits"? #12 - A blue box system to replace existing under contract would only cost \$2 or so.
See PDF #479
See PDF 480
See PDF 481
See PDF 482
See PDF 483
See PDF 484
See PDF 485
See PDF 486
See PDF 487

## 4.0 APPENDIX

**Table 10. Improvement of Services.**

<b>How Can Current Services Be Improved?</b>
More Frequent free tipping at Landfill
Residents waste collection from november to april every second week
I think they are sufficient if people would use them
Hazardous waste round up quarterly
Provide recycling bins for residents without cars and to encourage recycling Also provide coloured glass recycling facility
Changes to compost bunker; limited # of bags to be collected

<b>How Can Current Services Be Improved?</b>
Curb side p/u of recyclables
Hazardous Bin Year Round
I think the above is quite good if people would just use it
You are doing well
They are adequate
?
Satisfactory Now
Make recycling a bylaw (must be done)
if there is a way to re-use styrofoam, please include at Centra Cam
more free dumps per year
more recycle options / recycle pick up
Recycling pick up
Recycle more plastic
Residential blue box
more plastics recycling
good
Curbside organic recycling
Blue box home recycling pick up
Hazardous waste not often enough. Should have a drop off site
expand residential pick up
more plastic recycling options (1,4,5)
Landfill services to open on sundays
If you make it easier to recycle then people probably will
More hazardous waste round up
Another free dump week
Do hazardous waste more often
Offer more recycling
curbside recycling
Mandatory recycling and composting program



<b>How Can Current Services Be Improved?</b>
Doorstep recycling pick up
Curbside compost recycling
Curbside Recycling
I am satisfied now
Curb side recycling
Advertise over CAM FM 98.1
Never heard of Concrete and Asphalt Recycling Facility
Recycle pick up in front of house
More Hazardous waste round ups
Happy with present service. Can concrete and asphalt be recycled somehow??
help people set up compost bins
Blue boxes
Refuse to pick up lawn clippings. If people cant recycle their grass, they shouldn't have lawns.
Add some evening hours at the landfill or expand options at CentraCam to accommodate working class.
Set up a compost bunker in the SW part of the city. Too far (expensive) to drive to NE
Curbside recycling program
Increase types of plastic accepted at recycling depot
Have curbside recycling
Pick up at house
very satisfied with services
separate the garbage
More then 2 per year for Hazardous waste round up
By implementing a bag limit
Recycle all plastics
Should be recycling all plastics not just #2
Increase frequency of hazardous waste
More advertising. I didn't know you had a compost bunker at Centra Cam.

<b>How Can Current Services Be Improved?</b>
Satisfied as is!
Good
Hazardous Wste more often.
Start blue bag (recyclables a) plus clear bag (organic) collection weekly. Create a sorting centre.
Have more hazardous waste roundups more often.
Pickp for household recycling. Not all citizens can get to Centra Cam.
Add recycle of all plastics.
Blue bag pick up weekly
Try and educate people to use these facilities.
Recycling with garbage pickup
More Recycling Bins
We use almost all of the above transport our own grass clippings and household organics.
Pickup service for seniors or those without vehicles access.
More ads, more awareness
There pretty good already!
Would weekly blue boxes at end of blocks be an incentive?
Curbside recycling pickup.
Add more plastic's not just #2.
Reycling for all plastics.
Pickup up compost from our alleys and deliver to compost bunker. Pickup recycling at homes in blue bins.
Reduce amount of flyer waste papers.
Take more plastics! (other #'s)
Curbside recycling.
More items at the recycle depot like mixed plastics, egg cartons, tree limbs (cut small).
Like same day weekly pickup
Make compost available for home owners

<b>How Can Current Services Be Improved?</b>
?
Recycle at the door we pay high in taxes % city utilities
I feel these services are sufficient
More focus on recycling composting
I think they are good the way they are.
We have great waste services keep encouraging people to use them
Bi-weekly residential recycling collection
Start door to door recycling
You're doing great
Check Calgary's System
They are ok now
Perhaps provide help to get stuff to depot to such as those on home care.
Ok as is
- Weekly recycling collection -composting available to residents -organic waste collection
Curbside collection of recyclables
Combine waste collection with recycling collection
residential compostable pick up
by accepting all plastics
Pick up recycled (goto #9)
Recycling collection @ resident
By educating people
Its Good
More recycling of plastics 1 - 7 only having recycling for #2 at present.
Increase the amount at items allowed to be recycled & such as the different plastics
Have a place for small appliances & large appliances year round
?

<b>How Can Current Services Be Improved?</b>
Compost pick up
Recycling for all plastics (not just #2)
Increase time for hazardous waste roundup
A place to dispose of hazardous waste through out the year vs 2 x year.
Small battery disposal
See Question 10
Promote the end to junk mail delivery door to door!
Raw wood product ie pallets, crates trees etc should be cut up for camp sites in the province.
Increase recycling items at depot
Don't know
Recycling materials should be picked up weekly curbside.
Advertise as people know locations, whats accepted, how to recycle re: what's refundable, how to separate paper types.
More people to use Centra Cam
Increase HHW
Good
Recycling of the other plastics
Fines for failure to recycle?
Battery Recycle
Greater support for household compost or compost separation in waste pick up (like white horse, yukon)
accept more items at recycling depot
Investigate the possibility of expanding plastic recycling beyond only number 2
I think having a blue box program would greatly benefit the senior population
Compost access tax for bags of garbage recycle pick up, compost pickup (See Sh park)
These services are adequate
Is ther some where for electronics other then computers (ie kettle, coffee pot)
Collecting recyclables and providing bins for these.

<b>How Can Current Services Be Improved?</b>
Blue boxes at residences picked up
Haven't studied enough to have opinion
curbside recycling
Investigate a styrefoam/plastics recycling facility
door to door pick up of recyclables
Practice sufficient, conservation & waste reduction in these areas!!! Set an example for citizens.
Find at pagend
Have a permanent location open year round
bag limit fine for over limit
Increase Hazardous waste round or create full time drop off
all
More toxic round ups more advertisements about what is taken at the sites
Recycling of clear plastics
Not sure
Add to item that can be recycled
Need batteries & other plastics to be recycled. (centra cam if possible)
doing a good job
Charge people that don't recycle
Blue box pickup
Be some type of service to pick up recycling at the home as more people probably would if didn't have to take it to Centra Cam
Curb side pick up
Hazardous waste drop off all year long
Free curb side recycling
More comprehensive program with either household pickup or more depots
Curbside re-cycling
Curbside service for recycling

<b>How Can Current Services Be Improved?</b>
Curbside (FREE) pickup of recyclable items. (Blue Box)
Good Now!
All are excellent
No comment
Use a united bag program / tag-a-bag
Mandatory recycling w/blue bins that are picked up at houses and garbage bag limit/household
More hours open to public
They are fairly satisfactory
Landfill to be open either longer days or open weekends
To me this is a waste; I don't believe there are a lot of people participating
Take more plastics not just #2 & small batteries
don't know
Open longer during week & weekends
Provide curbside recycling pickup. Provide composters for home use at reasonable cost.
Blue bin and green bin schedule.
blue box at peoples homes
Take #1 and #5 plastics to reduce waste in the landfill
Keep as is
Need better advertising I've been in Camrose 10 yrs & just discouraged this although still wont go as don't like that part of town.
We take a lot to recycling, etc but I think city pick up would help out.
Continuous Hazardous waste drop off
Send to residents with utilities bills
Weekly pickup of recyclables. Access to concrete recycling. It is locked.
Offer more options & larger bins (drive through idea) batteries, more plastics #'s
Awesome maybe more plastics collection
Expanded plastics recycling curbside pickup

<b>How Can Current Services Be Improved?</b>
Take compost. Accept wider range of recycling (more plastic/only take #2 bottles at Centra Cam)
Accept all plastics at Centra Cam, City curbside recycling composting, impose limit an amount of waste.
curbside pickup
Have TK Environmental pick up recycling at every household
Concrete & Asphalt Recycling Facility - Very bad customer service & difficult to access.
Recycle more types of plastic
More frequent hazardous waste round ups
Hazardous waste longer time period.
They can add styro foam to the recycle depot & have it turned into insulation
Curbside recycle pick up
More types of plastics that can be recycled at Centra Cam depot

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County of Stettler  
**Rural Water  
Servicing  
Strategy**

**Wednesday, August 19th, 6 - 8pm, Big Valley Jubilee Hall**

**Thursday, August 20th, 6 - 8pm, Donalds Community Hall**

**Saturday, August 22nd, 6 - 8pm, Nevis Community Hall**

**wegot**

STETTLER INDEPENDENT

## Recycling collection rolls along in Stettler

By Richard Froese - Stettler Independent

Published: August 26, 2009 11:00 AM

Updated: August 26, 2009 11:26 AM

"Participation is unbelievably high," said Mark Pedersen, owner of Can Pak Environmental Inc. of Alix, which began the contract service on April 20.

"It is much stronger than I expected - it is working out great."

"We are collecting between 12 and 15 tons of recycling a month, and we don't normally keep that level after four months."

In other communities, the participation is high at the start and then levels off or declines, he said.

"Overall in the Town of Stettler, it has gotten higher," said Pedersen.

"This is well overdue for the town."

With this bi-weekly service, items such as newspapers, paper cardboard, plastic containers, and metal containers like cans are taken to a processing depot in Edmonton, he said, which is also lessening the loads to the regional landfill.

Now he wants to extend this collection service in the town.

"We want to expand this to commercial customers and apartments," said Pedersen.

He believes that the strong participation has been made by providing a basic system for people.

"We've made it very simple," said Pedersen.

"When you make things simple and convenient, more people will participate in the program."

"They just have to put the recyclables into the bin and we take it from there," said Pedersen.

This overwhelming participation in the program reflects the commitment and desires of residents, the town and Heartland Beautification Committee.

"I'm not surprised because there is such a demand," said Susan Nelson, who chairs the committee.

"This is something that people want."

Several years ago, a survey by the committee found a high demand for residential curbside recycling collection.

"I've had many people say that with this recycling collection, they're noticing that they are putting out

Text 

Recycling picking up - Town of Stettler residents are strongly supporting the recycling curbside collection that started four months ago as contractor Can Pak Environmental keeps busy filling the truck as participation grows.

by Richard Froese



the power WOMEN  
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fewer bags of waste," said Nelson, adding that it is helping to reduce waste taken to the landfill.

Now she wants the program to expand in the community.

"I'm hearing a strong demand for collection from the commercial community," said Nelson.

"I think that's the next phase to consider."

Prior to the start of the program, each house in the town received an 18-gallon green container with the message "Keeping Stettler Clean and Green" – the motto of Heartland Beautification Committee.

Extra bins are for sale for \$10 at the town office.

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#480

Customer who  
dropped this  
survey said  
to check out  
'Canmore'

J. C.



Encourage people to.  
Compost, sell composters  
and explain how they  
work, we use one  
and have had a  
comment from a neigh-  
bor that it was a  
eye sore, it is a  
bought one and is not  
unsightly but they are  
not used to people  
recycling.

What I find very frustrating is the lack of knowledge of what can and cannot be recycled.

For example, the hazardous waste. I do not know what that is, what it includes, is it for empty containers as well as partially full? Also, when I am done using a container I do not want to store it for a half year in order to properly dispose of it. I would much rather get rid of it with all my other recycle stuff at the same time.

Household AA batteries ect...Why is there not a place to recycle them. I end up throwing them in the garbage, knowing that is not good but not knowing where I can get rid of them easily. If there was a container with the other recycle, I could haul it all at once and get rid of them easily.

Where do I get rid of wood besides the dump?

Why do businesses not have a levy to recycle? Why do they not recycle more? How much do businesses generate in recycle material that is making it into the landfill?

Oh, and lastly, the Centra Cam recycling depot stairs need to be fixed. I fell off the stairs in mid winter due to the slope of the stairs, as they are so worn, and hurt myself. By getting hurt, that almost made me stop recycling. As well the holes for the paper are too small to get your containers in to dump, which makes putting your paper in a nuisance., and that is if it is not locked. Also, there are too many weekends where the containers are overflowing ie, cardboard. More containers should be placed out when Centra Cam is closed.

I am just including a few more comments on your waste survey. You had mentioned questions about a bag limit proposal. I think that this is a great idea. But to elaborate even more there is another option to this idea. While we were living over seas in Japan, we learned of their garbage disposal system. They had a wonderful garbage/reduction waste program. Each type of garbage had its own color coded bag. (ie – food went in a green bag, plastics when in a pink bag, etc...) Then each day had its own garbage pick up. Monday was green bag/ food day and ONLY those bags were picked up. The next day was the pink bag day and so on for the remainder of the week. And each household was responsible for purchasing their own bags at their own expense. It really made you aware of how much garbage you were throwing away. It literally MADE everyone recycle and throw garbage away where it belonged. It is quite a complicated system to start I am sure but in the end it is worth is and VERY efficient.

Michelle Steeves  
4905 58 Street  
Camrose AB  
780-672-2211

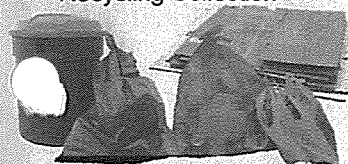
JUL 24 2009

#482

Regular Garbage & Recycling Collection

Regular Garbage & Organics Collection

Regular Garbage Collection Only  
Note: Organics should be placed with regular garbage during winter months



**AUGUST 2009**

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**SEPTEMBER 2009**

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**OCTOBER 2009**

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**NOVEMBER 2009**

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**DECEMBER 2009**

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**JANUARY 2010**

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**FEBRUARY 2010**

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**MARCH 2010**

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**APRIL 2010**

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**MAY 2010**

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**JUNE 2010**

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27	28	29	30			

**JULY 2010**

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

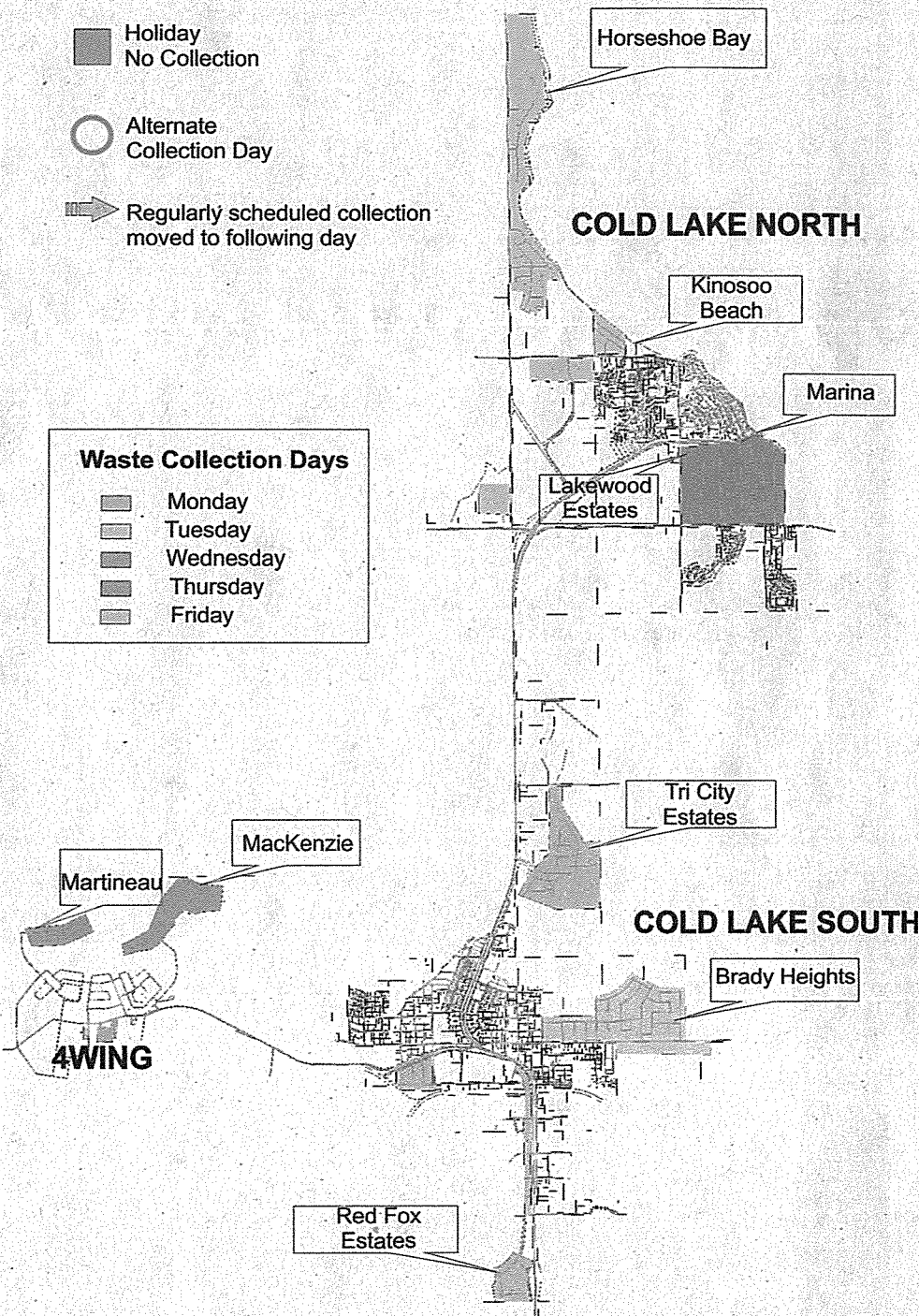
Holiday  
No Collection

Alternate  
Collection Day

Regularly scheduled collection  
moved to following day

**Waste Collection Days**

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday



For more information contact  
City of Cold Lake at 780-594-4496  
or visit [www.coldlake.com](http://www.coldlake.com)



## Materials must be placed curbside by 7:00AM

### REGULAR GARBAGE COLLECTED ONCE A WEEK

Limit of Three (3) Bags or Containers or Bundles  
per household per week

Aerosol Cans (empty)  
Animal Waste (must be bagged)  
Ashes (cold & double bagged)  
Broken Glass (wrapped)  
Carbon Paper, Cd's  
Ceramics & Clay Items  
Chip Bags  
Coffee Cups  
Decorations  
Dog & Cat Food Bags, Cat Litter  
Diapers, Dishes & Drinking Glasses

↑  
76cm  
(30in)  
↓



Floor Sweepings, Frozen Juice Containers  
Garden Hose, Hardcover Books  
Kitchen Utensils,  
Latex Gloves, Light Bulbs/Tubes (wrapped)  
Microwave Popcorn Bags,  
Motor Oil Containers (empty)  
Non Recyclable Packaging(cookie bags, string,  
wrapping, toothpaste tubes)  
Pots & Pans, Styrofoam  
Textiles( shoes, clothing, linen),  
Vacuum Cleaner Bags

### RECYCLING COLLECTED EVERY TWO WEEKS

No Limit to Recyclables acceptable for collection  
every two weeks

#### In a Clear or Transparent Blue Bag

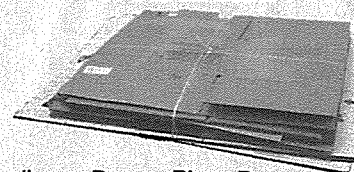
Aluminum Cans  
Beverage Containers  
Glass Bottles & Jars  
Milk Jugs & Cartons  
Plastic Bottles & Containers  
Plastic Tubs & Lids (yogurt  
margarine, sour cream, ice  
cream containers)  
Plastic Retail/Grocery Bags  
Tin Cans



#### In a Separate Grocery Bag

Clean/Dry Paper,  
Cards, Catalogues,  
Envelopes, Flyers  
Junk Mail, Magazines,  
Newspapers,  
Paper Egg Cartons  
Paper Drink Trays  
Paperback Books  
Phonebooks  
Shredded Paper

#### Cardboard



Appliance Boxes, Pizza Boxes  
Cereal Boxes, Shoe, Cookie & Cracker  
Boxes, Paper Towel Rolls,  
Tissue Boxes, Detergent Boxes

### ORGANICS COLLECTED EVERY TWO WEEKS

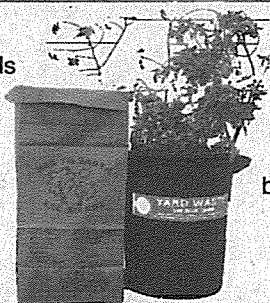
Limit of Ten(10) Bags or Containers of Organic Waste  
Plus Five(5) Bundles of Branches or Brush

#### Kitchen Food Waste

Fruit & Vegetable Peelings,  
Bread, Rice, Pasta  
Sauces  
Coffee Grounds & Filters, Tea Bags  
Egg Shells,  
Meat, Fish, Dairy Products,  
Cooking Oil & Fat (Cool, wipe with a paper towel  
& place in bag)

#### Leaf & Yard Waste

Grass Clippings, Plants, Weeds  
Leaves, Straw,  
Branches & Brush



Organics must be placed in  
Heavy Paper OR Compostable Bags OR  
a Can affixed with an Organics Label  
available FREE from City Hall

Only Approved Compostable Bags identified  
by the following logos are acceptable at the curb



### ALTERNATIVES TO LANDFILL

Materials not collected at the curb can be diverted  
through the 3R's - Reduce, Reuse, Recycle

**E-waste** (TV's, Computers, Microwaves, Stereo Equipment)  
Cold Lake Recycling Centre

**Oil** (Automotive, Containers, Filters)  
Cold Lake Transfer Station

**Batteries** (Auto)  
Cold Lake Transfer Station

**Batteries** (Rechargeable)  
Contact Local Retailer or [www.rbr.org](http://www.rbr.org) for locations

**Outdated/Unused Pharmaceuticals**  
Contact local pharmacy

**Prescription Eye Glasses**  
Walmart, Dr. Ross C. Campbell & Dr. Al R Edwards 5205 51Av

**Good Quality Used Clothing/Toys**  
Dr Margaret Savage Crisis Centre c/o Cheepers 5206-50Av

**Paint** - Cold Lake Transfer Station

**Toxic Round Up** - Contact the City of Cold Lake for future Round UP dates



Aug 8 - 2009.

Just to tell you how we keep the  
garbage bag to one each week.  
all yard grass limbs that are composting  
material. ~~I have~~ I have a composter  
that I use for kitchen waste, make real  
nice composted soil. All yard waste is  
bagged and taken to Centra Cam.

always find lots of bins to put.  
With jugs glass tin cans & plastic  
realy lots of newspaper. We do this  
because we want a better place for  
the great grand children to grow up.  
We have quite a load each time -

"Come on people help out!"

#484

I have lived in small communities all my life. Camrose is the largest "town" I have lived in but I find that the waste that people put out on their curbs is disgraceful. When I lived in Okotoks in 1992 they imposed a 2 bag limit per household. Anything over that and you had to buy tickets or the extra bags would not be picked up. My mother tells me that Okotoks has a goal of being garbage free in the next few years.

Previous to living in Camrose we lived in Flagstaff County (Forestburg) and even they imposed a 5 bag limit several years ago and had stopped taking yard waste and the only recycling they offer is cardboard, #2 plastic and compost for yard waste. It amazes me the things that people on our street put out for garbage pickup and that the garbage truck actually does pick up. I have seen BBQ's, baby swings, various broken bulky items and even last week a wooden park bench (that appeared to be in good condition) – which by the way they did NOT take – but that is the first time I have seen them leave something. I would assume that people do this because they are either too lazy to take it to the landfill themselves or do not want to pay the tipping fees.

We are a family of 5 and one of our children is still in disposable diapers. We have 1 to 2 bags of garbage for pickup per week. Our neighbor who does not recycle (not even yard waste) consistently has 3 to 6 bags of garbage per week and she has one husband and no kids living with them. If you offered curbside recycling however I am sure they would participate or be forced to if you put in an organics ban and a bag limit.

We have a garburator in our kitchen sink and that is how we dispose of most food waste. We pay to have our recycling picked up as we are too busy with kids and work to come in regularly to Centra Cam ourselves. We bring our yard waste to the compost. I keep our other plastics that Centra Cam does not take and my mother takes them back with her to the recycling facility in Okotoks when she comes to visit us. I started doing this after we moved here in 2006 and I had to pay a visit to the landfill and was disgusted by the sight of it. I cannot stand to send these things to the landfill when I know they can be recycled.

It seems to me that the residents of Camrose have been spoiled for way too long now and it is time they all woke up and smelled the landfill.  
Perhaps a mandatory visit for all residents is in order??



## Suggestion

A good place to start would be to ask every employee on payroll who has access to a computer to study "The Story of Stuff" and encourage each one to respond to it.

Publish the results/reactions on your website. Pass this suggestion on to the mayor + council.

The other problem with a bag limit is the litter problem we have in Camrose. We have apartments across from us and the people from there are forever dumping their garbage in our yard. I have also seen people stop in back alleys and dump their garbage in commercial dumpsters. What is the City going to do about this problem. How will the City protect law abiding citizens who have people put their garbage bags in other people's garbage cans just to avoid paying for extra bags.

I think there are a lot of things the City needs to look at.

#486

Aug. 11<sup>th</sup> 2009.

We as older people - recycle all we can & take it to the proper areas - paper, cardboard, glass, cans etc. we have maybe one average can of house hold garbage a week - some grass & leaf clippings - we don't see any need for big carts or large cans. once or twice a year we drop off any hazardous things we might have collected - our taxes & water rate is high enough so we do our best to help the city by recycling everything we can properly - fines & penalties those who ever do it, we all can help each other to keep waste & costs down.

Thanks for this survey & the chance to put in our thoughts on how to reduce waste.

This survey in itself should make people stop & think about how uncaring they are towards our environment.

Sincerely,

South West Meadows  
Srs.

From Allen Roy 6605 35<sup>th</sup> AVE

AUG 16<sup>th</sup> 09

#487

To whom it may concern,

Having been and still involved in the construction industry for the last twenty years, I have been witness to much more waste than the average person here in Camrose.

Each and every time I attend the Camrose landfill, I am amazed how we as individual home owners are always ~~told~~ urged to recycle, yet commercial business are allowed to transfer waste that is more than 50% recyclable!

I have seen the waste level's increase dramatically since the city has allowed many of the new "box store" businesses to open there doors here in Camrose.

I challenge you all as city officials to stand firm and force by whatever means available, to make these big businesses recycle there waste more fully!! ~~thou~~ Please stop using homeowners as scape goats to gain funds to make up for these stores!

Thankyou

Allen Roy

**City of Camrose**  
Solid Waste Collection and Diversion Study

**Section 4: Diversion Options  
Analysis**



**KC ENVIRONMENTAL  
GROUP LTD.**

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS.....</b>	<b>II</b>
<b>FIGURES AND TABLES .....</b>	<b>IV</b>
<b>1.0 INTRODUCTION .....</b>	<b>1</b>
<b>2.0 STATUS QUO .....</b>	<b>1</b>
<b>3.0 WASTE COLLECTION OPTIONS.....</b>	<b>2</b>
3.1 FULLY-AUTOMATED COLLECTION .....	2
3.2 SEMI-AUTOMATED COLLECTION .....	4
3.3 BI-WEEKLY WASTE COLLECTION.....	4
3.4 USER PAY SYSTEMS/VOLUME LIMITS .....	5
3.4.1 TAG-A-BAG .....	6
3.4.2 CART LIMIT .....	7
3.4.3 VOLUME BASED SUBSCRIPTION.....	7
3.5 RFID TRACKING SYSTEMS.....	8
3.6 PROGRAM IMPLEMENTATION.....	9
3.6.1 TENDERING WASTE COLLECTION.....	9
3.6.1.1 Cart System.....	9
3.6.1.1a Contractor Owned.....	9
3.6.1.1b City Owned.....	10
3.7 WASTE LIMITS.....	11
<b>4.0 RECYCLING OPTIONS.....</b>	<b>11</b>
4.1 ENHANCED RECYCLING DEPOT .....	11
4.1.1 PLASTICS OPTIONS.....	12
4.1.2 PERMANENT HOUSEHOLD HAZARDOUS WASTE DEPOT .....	15
4.2 CURBSIDE COLLECTION OF RECYCLABLES .....	16
4.3 NEWSPAPER CURBSIDE .....	17
<b>5.0 COMPOSTING OPTIONS .....</b>	<b>17</b>
5.1 CURBSIDE YARD WASTE COLLECTION – SPRING THROUGH FALL .....	17
5.2 CURBSIDE COLLECTION OF ORGANICS .....	18
5.3 GRASS CYCLING .....	19
5.4 ALBERTA CARBON OFFSET CREDIT SYSTEM .....	20

<b>6.0</b>	<b>LANDFILL OPTIONS .....</b>	<b>20</b>
<b>7.0</b>	<b>COMMERCIAL DIVERSION OPTIONS.....</b>	<b>24</b>
<b>7.1</b>	<b>ALBERTA C&amp;D STEWARDSHIP PROGRAM .....</b>	<b>24</b>
<b>7.2</b>	<b>UNIVERSITY OF ALBERTA – AUGUSTANA .....</b>	<b>24</b>
<b>8.0</b>	<b>PUBLIC EDUCATION AND SOCIAL MARKETING .....</b>	<b>24</b>
<b>9.0</b>	<b>PROGRAM COSTS.....</b>	<b>25</b>
<b>10.0</b>	<b>APPENDIX .....</b>	<b>35</b>

## FIGURES AND TABLES

Figure 1. Whistler Signage – 1 .....	21
Figure 2. Whistler Signage – 2 .....	22
Figure 3. Whistler Signage – 3 .....	22
Figure 4. Whistler Signage – 4 .....	23
Figure 5. Whistler Signage – 5 .....	23
Table 1. Various Plastics .....	12
Table 2. Program Cost Data – Stand Alone Options.....	26
Table 3. Program Cost Data – Combined Options.....	30
Table 4. Program Cost and Diversion Summary.....	34

## 1.0 INTRODUCTION

Section 4: Diversion Options Analysis provides the following information:

1. Description and outline of advantages and disadvantages of a range of waste management options for:
  - a. Waste Collection
  - b. Recycling
  - c. Composting
  - d. Landfill
  - e. Commercial Waste Diversion
  - f. Public Education
2. Program implementation requirements for each option.
3. Cost analysis of feasible options based on survey results and current system review.

## 2.0 STATUS QUO

A description of current waste management services (waste collection, recycling, composting, landfill and public communications) provided by the City of Camrose is outlined in Section 1: Local Research.

### **Advantages**

- Easy (already in place)
- Project implementation costs are \$0.00

### **Disadvantages**

- No incentives to reduce waste
- Doesn't allow City to take advantage of new contract to provide for a fuller range of options
- Collection costs will likely increase with no additional service benefits
- Does not move city forward



### 3.0 WASTE COLLECTION OPTIONS

Program options for waste collection include:

1. Fully-automated Collection
2. Semi-automated Collection
3. Bi-weekly Collection
4. User Pay Systems/Volume Limits
5. Radio Frequency Identification Device (RFID) Tracking System

A description of each option as well as the associated advantages and disadvantages of each are provided below.

#### 3.1 Fully-Automated Collection

Automated collection is based on a cart system. Wheeled carts with lids are provided to residents (ownership models are provided in Section 5.2.2). Residents place carts according to set specification (1 m distance from curb, etc). In a fully- automated system, the collection truck driver operates a mechanical arm from inside the cab of the truck which reaches out and grasps the cart, empties the cart into the truck, then mechanically places the cart back at the curb without the operator having to exit the truck.

Approximately 30% of municipalities across Canada have implemented a cart system (either fully or semi-automated) with this number steadily increasing. The automated cart system appears to be the future model for waste collection.

#### Advantages

##### **Advantages of automated collection:**

- Operational cost efficiencies:
  - One man operation lowers labour costs
  - Elimination of lifting reduces injury and Workers Compensation claims
  - Reduced collection time per household reduces labour and fuel costs, and may require fewer trucks (collection time estimated at ~ 15 seconds/household)
- Although operational cost efficiencies of an automated system accrue to the service provider when collection is contracted out, these efficiencies allow the City to attract competitive pricing from private service providers. Generally hand-bombing or manual collection prices are higher than automated collection
- Expandable to waste/organics/recyclables



- Fewer trucks and reduced collection time reduces greenhouse gas emissions
- Reduced labour requirements helps to address missed pick up due to labour shortages

#### **Advantages of cart system:**

- Cart design (ventilation, lids, and holding capacity) allows for year round collection of organics (food and yard waste)
- Cart design allows for biweekly waste collection (if coupled with other diversion programs such as organics collection)
- Acceptable volumes of waste are easier to establish with a cart than with bags if a volume limit is imposed – i.e. 1 cart/household
- Radio Frequency Identification Device (RFID) technology is available in some carts. Capabilities as well as advantages and disadvantages of RFID technology is described in Section 5.1.6
- Funding may be available for municipalities to purchase carts
- Carts have 10-year warranty with a unit cost of approximately \$60 to \$80 (landed). Over 10 years, cost of carts is at least 50% cheaper than bags purchased over the same time frame
- Less plastic waste than bag collection
- Reduces problems with animals and rodents
- Visually attractive – neater than bags and uniform system
- No breakage from overfilling or from animals if waste is put out overnight

#### **Disadvantages**

- Capital investment required at outset if municipality is purchasing. A container must be purchased for each household and homeowners may object to paying for any increase in cost
- The costs of implementing and maintaining a containerized system compared to bags could be prohibitive unless the cost can be spread out over time
- Fully-automated system has specific set out requirements which makes back lane collection difficult and in some areas impossible. This has been overcome in all municipalities with cart systems.
- Additional administration is required to manage carts – if residents move, carts are lost etc. Cart maintenance can be contracted out.
- Difficult to monitor for contamination (oil containers in waste, etc) as operator does not leave truck
-

### 3.2 Semi-automated Collection

Semi-automated collection is also based on a cart system. Carts are manually rolled to the collection truck by an operator, attached to a “tipper” or mechanical arm which is then automatically lifted into the truck. In Alberta, most semi-automated trucks are either side load or rear load.

#### **Advantages**

- Semi-automated trucks are able to get into more restricted spaces which could allow back lane pickup to continue if required (1 m restriction is eliminated)
- Operational cost efficiencies as in fully-automated collection but less (semi-automated collection time is estimated at ~ 30 seconds/household rather than 15 seconds)
- Retrofits for semi-automated collection are simple and relatively inexpensive (\$1000 to \$3000 per truck), although most collection service providers in Alberta have automated collection capabilities
- Provides opportunity for public education through operator inspections (i.e. if organics collection program in place, operator can check load before or after it is emptied for contamination and apply sticker, etc according to program) without any significant impact to collection time
- Semi-automated system can be implemented and easily scaled up to fully-automated system

#### **Disadvantages**

- Doesn't achieve same level of operational cost efficiencies as fully automated system
- In long term, collection is expected to go to full-automation. If semi-automated collection is selected to maintain back lane collection, this essentially postpones the change to front lane collection.

Advantages and disadvantages of carts are the same for both fully- automated and semi-automated systems.

### 3.3 Bi-Weekly Waste Collection

Residential waste collection is reduced to once every two weeks. Bi-weekly waste collection works best when combined with weekly curbside organics collection as this option addresses residents' concerns regarding odour.



### **Advantages**

- Cost savings realized from reduced collection can be applied to enhanced diversion programs (cost savings are estimated at 40%)
- Emphasizes diversion at the source – residents may change purchasing habits etc. to meet needs of bi-weekly collection
- Increases participation in diversion programs (curbside organics and/or recycling collection)

### **Disadvantages**

- Cannot be implemented on its own, in order to implement bi-weekly waste collection, alternative diversion options must be provided such as curbside collection of organics and/or recyclables
- Requires effective education program to ensure public acceptance

## **3.4 User Pay Systems/Volume Limits**

The amount of garbage that can be put out for collection is limited according to specified container (bag or cart). Residents must pay additional amount for over-limit waste. Some communities have implemented volume limits for the commercial sector as well.

Weights by household systems are beginning to be implemented in the United States. In Canada, approval of weight systems for waste is still under review by Measurement Canada.

### **Advantages**

- Establishes incentive to reduce waste and use recycling and compost systems
- Focus on waste disposal leads to decreased waste generation on its own as public thinks more about their waste generation and habits
- Financially more attractive in long run as landfill costs rise
- Volume limit can help achieve significantly higher levels of waste reduction
- Volume limit can be reduced over time to achieve increasingly higher levels of waste reduction
- Residents are made aware of the volumes of waste they generate

### **Disadvantages**

- Can be inconvenient for residents who generate large quantities of waste each week
- Equity of limits is sometimes challenged (should a large family be limited to same amount as a single person)



- Incidents of illegal dumping can rise if effective awareness and enforcement mechanisms are not established. (Generally, if illegal dumping occurs it is in the first 6 months. Illegal dumping has not been an issue in Alberta communities that have implemented two-bag/1 cart limits.)

The following User Pay/Volume Limit options are described below:

1. Tag-a-Bag
2. Cart Limit
3. Volume Based Subscription

### **3.4.1 Tag-a-Bag**

The number of bags of garbage that can be set out for collection each week is limited. Bag limit is usually phased in:

- 2010– 4 bags
- 2011 – 3 bags
- 2012 – 2 bags (equivalent to one 360 litre cart)

Residents are required to purchase tags for over-limit bags at a specified \$/tag cost. Diversion programs are enhanced to address increased diversion requirements to meet waste limit.

#### **Advantages**

- As listed under User Pay/Volume Limit
- Easy to count bags
- Easy to designate additional volumes by adding sticker
- City is not responsible for bag purchases – homeowners are (this can be an advantage to the municipality, or disadvantage to the homeowner)

#### **Disadvantages**

- Residents must continually purchase bags
- Residents must pay an estimated \$20 to \$25 per year for bags not including the over-limit cost. Over 10 years residents have spent \$200 to \$250 (therefore, more costly than containers)
- Doesn't allow for operational cost efficiencies available through cart system, i.e. potentially higher WCB premiums for waste contractors, a cost that is passed on to client



- Bags themselves add to the overall volume of waste disposed
- Bags can be overfilled and break, spreading litter and attracting animals/birds/scavengers
- If move to a 2 or 3 stream sort – bags can be unsightly
- Full curbside organics collection is difficult to implement with bags as food waste is heavy
- Not as convenient for residents as they must be lifted out to curbside
- As more and more municipalities move towards automated system, fewer service providers will participate in bid process for collection, leading to increased costs

### **3.4.2 Cart Limit**

Automated system is implemented and weekly collection is limited to one cart (cart size can be decided by municipality i.e. 65 gallon or 95 gallon). Some municipalities provide 2 or 3 options for cart sizes and/or provide residents with the option to purchase bags (or tags) for additional waste set out.

#### **Advantages**

- Waste limit is simple and easy to implement ( 1 cart)
- Makes enhancements to 2 or 3 stream cart collection systems easier
- As listed under cart advantages

#### **Disadvantages**

- As listed under cart disadvantages

### **3.4.3 Volume Based Subscription**

Residents subscribe to a certain volume of waste and pay accordingly. For example, if bag system residents may pay \$8.75/month for 2 bags, \$14.25/month for 4 bags, etc..

For cart system residents pay a graduated price for small, medium or large carts.

#### **Advantages**

- As listed under User Pay/Volume System
- Can be implemented with either bag or cart system

### **Disadvantages**

- Increased administrative requirements – must manage various subscription levels, track different sized containers or number of bags at various households (RFID technology on carts can reduce administrative requirements for carts)
- Increased administrative requirements increases operational costs

## **3.5 RFID Tracking Systems**

RFID are small electronic devices that consist of a small chip and an antenna. Carts with RFID emit radio signals that enable an electronic reader to collect key data on the cart's use. The RFID serves the same purpose as a bar code; it provides a unique identifier for that object but unlike traditional barcode, the RFID tags can be read from a distance. RFID technology is now available with carts (Strathcona County, Devon and Medicine Hat's carts have RDIF chips). Coupled with proper software and hardware , RDIF cart systems allow for improved scheduling, billing, routing efficiencies, maintenance and inventory tracking.

Municipalities can subscribe to a web-based program (at a certain fee/cart) which collects the data from the RFID. Municipalities can log on to the website and obtain real-time data. This is currently being used in the City of Medicine Hat. As the supplier collects data from municipalities across North America knowledge and information on system efficiencies and data use is pooled and shared.

### **Advantages**

- Provides real-time service verification:
  - RDIF software can record when, and from which container, garbage pick-up and disposal takes place and can record what is actually being collected and transported
- Increases accountability of haulers
- Residents can receive faster customer service data
- Provides option to implement incentive program if RFID technology on organics and/or recycling carts ( i.e. coupons)
- Allows more effective cart maintenance – cart history is tracked and can provide prompts for maintenance or replacement
- Provides for a range of tracking options, for example:
  - To track routes, data can link to a GPS system which shows where collection has occurred and which houses remain



- Forks can be locked to prevent pick up where accounts are in arrears (for commercial applications)

### **Disadvantages**

- Technology is relatively new to waste sector
- Currently only one proven system in Canada (have supplied RDIF carts to Strathcona County, Devon and Medicine Hat). Supplier is looking for pilot community in Alberta
- Requires technical know-how to make most use of data provided. Subscription to web-based program assists with this
- Durability of chip
- Software to track RDIF data costs \$10,000 to \$20,000

## **3.6 Program Implementation**

### **3.6.1 *Tendering Waste Collection***

Examples of RFPs for waste collection as well as other diversion options (curbside organics collection, curbside blue bag/blue box collection) are provided in the Appendix.

#### **3.6.1.1 Cart System**

The following ownership options are available for carts.

1. Contractor owned.
2. City owned.

A description of each ownership model and associated advantages and disadvantages of each model are provided below.

##### **3.6.1.1a Contractor Owned**

Under this ownership model, the waste hauler (in the case of a waste cart) or other service provider owns the carts. Residents pay a monthly or annual fee directly to the waste hauler or the rental fee can be included in the total cost/tonne or household paid by the municipality.

### **Advantages**

- Administration required to manage carts is provided by private sector
- Private sector is responsible for cart maintenance



### **Disadvantages**

- Cost to residents is usually higher than if municipality purchases. For example, one contractor rents out carts at a rate of \$47/household/year (though cart rental is voluntary). Costs can be purchased outright for between \$60 and \$80 per unit with bulk pricing.
- Service provider may not have the ability or expertise to manage a large number of carts.
- City may feel committed to stay with service provider simply because the service provider owns the carts and any changes will lead to disruptions to residents and the City
- City does not own asset. Once a cart system is implemented it is not likely that the City will go back to a manual system. This may result in the City purchasing the carts at the end of contract, in which case – they have paid both a rental fee and the purchase price

#### **3.6.1.1b City Owned**

The City purchases carts for all households and manages carts (i.e. additional carts for new developments, transferring of carts from old owner to new owner, etc.). The City can either service any repairs in-house or can contract maintenance out to a private service provider. (RFP for cart supply should request bidders to provide cart specifications as well as statements regarding container durability, weather resistance, and quality control assurances. Most carts have a 10 year guarantee).

### **Advantages**

- City may be able to receive funding for carts reducing the overall cart/household cost
- City can finance carts over a 10 year amortization period
- As City owns carts City can select most competitive service provider and not feel obligated to stay with the company that owns the carts
- If desired, City can bill homeowners over a period of time

### **Disadvantages**

- Requires significant capital outlay
- Increases administrative and management requirements of the City (can be reduced through service provided by cart manufacturer)



### **3.7 Waste Limits**

Waste limits can be phased in over time or implemented immediately. To implement a waste limit the waste bylaw must be updated, a protocol for over limit waste must be established (i.e. can residents purchase additional bags or larger carts, or is only specified waste collected), and a public education program must be implemented.

## **4.0 RECYCLING OPTIONS**

### **4.1 Enhanced Recycling Depot**

Options to enhance the current depot included the following:

- Provide options for commercial waste, C&D
  - Due to space limitations, it is recommended that commercial waste diversion options, and particularly C&D diversion options be developed at the landfill rather than the depot. Information on Alberta's C&D Stewardship program is provided in Section 1.5.1
- Provide more options for plastics
- Charge commercial OCC with contamination charge
  - It is recommended that education be the first step to address contamination. If improvements are not seen after education, then the depot might consider implementing a contamination charge on commercial OCC
- Provide more HHW round ups or year round HHW services
- Provide additional drop off depots:  
Survey results indicate that there is no significant demand for additional drop-off depots.
- Change operating hours:  
Survey responses for when the recycling depot should be open were generally evenly distributed for all of the options other than Saturday during the day. Based on survey results, Tuesday may be the best day to close the depot if hours are to be reduced.

Survey results indicated a strong desire from respondents for more plastics option, as well as an interest in more frequent household hazardous waste services and recognition of the need to implement programs for commercial waste recycling. Information regarding options for these three areas is provided below.



#### 4.1.1 Plastics Options

Currently the recycling depot collects #2 plastics, plastic film and milk jugs. As of June 2009 milk jugs fall under Alberta's milk container refund system. Table 1 provides a description of plastics and the associated potential markets.

**Table 1. Various Plastics**

<b>Plastic Grade and Description</b>	<b>Recycled Uses</b>	<b>Marketability</b>
#1  Polyethylene terephthalate (PETE)  Most common uses: beverage containers and medicine bottles	Highly recyclable plastic processed into insulation, ropes, furniture, and other bottles	Widely accepted at recycle centers  Highly marketable
#2  High density polyethylene plastics  Most common uses: laundry detergent, shampoo, household cleaner and motor oil containers	Processed into toys, piping, rope and plastic lumber products	Widely accepted at recycle centers  Highly marketable
#3  Polyvinyl chloride plastics  Most common uses: piping, shower curtains, and vinyl dashboards in cars		Not widely accepted at recycle centers  Low rate of recyclability
#4		Not widely accepted at



<b>Plastic Grade and Description</b>	<b>Recycled Uses</b>	<b>Marketability</b>
Polyvinyl chloride plastics (film)  Most common uses: wrapping films, grocery and sandwich bags		recycle centers  Low rate of recyclability
#5  Polypropylene containers  Most common uses: reusable food containers		Not widely accepted at recycle centers  Low rate of recyclability
#6  Polystyrenes  Most common uses: Styrofoam products – coffee cups, meat trays, packaging materials and insulations	Processed into rigid foam insulation	Widely accepted at recycle centers  Highly marketable
#7  Various combinations of plastic  Common uses: reusable beverage containers	Options for recycling limited to consumers returning containers to manufacturer for reuse	Due to unique formulations, rarely collected for recycling  Not marketable

General advantages and disadvantages for plastic recycling are provided below.

### **Advantages**

- Addresses to some degree residents' desire for more plastics options
- Captures more plastics recyclables, therefore increasing diversion rate and extending landfill life



### **Disadvantages**

- Increased administrative costs to market and to sort depending on what option is selected
- Trucking expenses to recycle centre

Two options are available to enhance plastics recycling at the depot, both of which require additional bins at the depot:

1. Accept all types of plastics. Material is then sorted at the depot and only those plastics with market are sent to broker.

### **Advantages**

- Easier for residents as no sorting is required

### **Disadvantages**

- Increased labour costs as more sorting at depot is required
  - Residents' may think all plastics are being recycled, when in fact, a significant proportion is sent to landfill
2. Expand acceptable plastics to include Number 1 and Number 6.

### **Advantages**

- Sorting is done by resident, decreasing labour costs
- Materials are actually recycled, rather than some being landfilled
- Provides opportunity to educate residents on markets and which can encourage changes in consumer decision-making

### **Disadvantages**

- As material is source separated, increases potential for contamination
- Requires administrative costs to market materials.

The following is a list of plastic recyclers in Alberta that accept all plastics. Considerations regarding the selection of an appropriate recycling centre include shipping rates and container availability.

- The Plastics Place Inc., Calgary

- Metro Waste Materials Recovery Inc., Edmonton;
- Plastic Resource International, Calgary
- Raydar Trading (International) Ltd., Calgary

#### **4.1.2 Permanent Household Hazardous Waste Depot**

Camrose currently offers two HHW roundups per year at the Public Works yard. Permanent HHW collection facilities provide greater public participation opportunities as they increase access and convenience to residents and can be more cost effective if there is sufficient demand for the service. Regulatory requirements for both the facility and health and safety training for the staff increases operational and capital costs.

According to Section 11 of the Waste Control Regulation, HHW storage sites should include:

- An impermeable base
- Secondary containment
- Security to prevent unauthorized entry
- Prominent identification as a hazardous waste storage facility
- Emergency response equipment (e.g. spill response kits)
- Surface water controls to prevent entry of surface of water

The most convenient location for the HHW roundup is the recycling depot as it makes the depot a “one-stop” location. As the depot currently manages the paint stewardship program expanding to include HHW may be possible.

To determine whether a permanent facility is needed, the current HHW collection needs of the service area should be assessed and compared with the current collection infrastructure. In 2008, the City collected 14.5 tonnes of household hazardous waste (double the amount collected in 2007). HHW is estimated to be 2% of the waste stream in which case the City is capturing approximately 10% of the available HHW. Although the current infrastructure does meet current service demand, the capture rate can be improved through increased public participation. Education and promotion programs and increased convenience will increase public participation.

Options related to HHW are: 1) maintain the current service level 2) provide additional roundups or 3) provide a permanent HHW collection facility.



The City of Airdrie implemented HHW collection May through September at their recycling depot and are very pleased with their program. Depending on volumes, operational and processing costs for spring through fall HHW collection can be similar to those costs incurred for additional HHW roundups. Advantages of implementing spring through fall HHW collection are that it integrates with other seasonal programs (yard waste), materials do not freeze, it provides increased convenience for residents and collection and processing events may not increase significantly.

The cost for two additional HHW roundups is estimated at \$15,000/year or \$0.25/hh/month. The cost to develop and maintain a HHW collection area at the recycling depot is estimated at \$0.50/hh/month.

Additional information regarding HHW and costs is provided in the Appendix.

## **4.2 Curbside Collection of Recyclables**

Curbside collection of recyclables can be provided through boxes, bags or automated carts. Blue bag collection rates are generally lower than blue box or blue cart and do not require capital investment as home owners purchase bags.

Camrose's recycling depot currently has a capture rate of approximately 41% for curbside recyclable materials (paper, cardboard, metal, glass, plastics). Assuming Alberta's average capture rate is similar to Ontario's which is estimated at 63%, Camrose could expect to increase its diversion of blue box materials (paper, cardboard, metal, glass, plastics) by an additional 580 tonnes annually which would provide an additional 8% in residential diversion and an additional 1.3% in MSW diversion.

Although curbside collection of recyclables was the option selected the most in the survey, there does not seem to be a strong demand for this option as only 21% of respondents selected it as the first priority for implementation.

### **Advantages**

- Convenient for homeowners
- Most people are aware of program
- Matches the diversion system to the garbage collection system (i.e. curbside)
- If achieve above average capture rate (80%) and participation rate, could provide an additional 14% in residential diversion

### **Disadvantages**

- Costly and with limited revenue potential

- Long distances to markets decrease revenues
- Does not address the largest component of waste stream (organics)
- With average capture rate, residential diversion is increased by only 8%, MSW by 1.3%
- Multiple items (recyclables) to manage compared to one stream i.e. waste or organics

#### **4.3 Newspaper Curbside**

Assuming that 50% of residential paper is comprised of newsprint and magazines, Camrose currently captures 70% of the available newsprint through the recycling depot. Curbside collection of newspaper will not increase diversion significantly and may have a negative impact on depot usage as residents may have less incentive to bring materials to the depot if they no longer have to bring in newspaper materials.

### **5.0 COMPOSTING OPTIONS**

Camrose's current composting options provided at the recycling depot and landfill, capture 10% of the available organic residential waste stream (yard and food waste). Options to increase this capture rate and significantly increase diversion include:

1. Curbside Yard Waste Collection – Spring through Fall
2. Curbside Organics Collection (Food and Yard Waste)
3. Grass Cycling
4. Alberta Offset Credit System

#### **5.1 Curbside Yard Waste Collection – Spring through Fall**

Yard waste (grass, leaves, tree pruning and brush) are collected at curbside along with normal garbage collection. Curbside collection of yard waste can be provided either through bags or carts. Options for bags include biodegradable clear bags or the Kraft brown paper bags. Automated carts are recommended for organics collection especially when capturing both food and yard waste due to the weight of the material.

Currently 16% of the available yard waste is captured through the composting options provided at the recycling depot.

Capture rates are generally higher for curbside collection of yard waste as it does not require a significant change in behavior since homeowners already tend to separate their yard waste for garbage collection. The only change required is a change in container type. Assuming a capture rate of 75% of yard waste, residential waste diversion would increase by 12% to 33%. (Spruce Grove achieved 35% diversion rate after implementing this program).





### **Advantages**

- Addresses largest single waste stream (31%)
- Relatively easy to implement as Camrose already has a composting pad and if start program with bag system
- Availability of valuable soil amendment product to enhance City and residential properties. Product can be used in Camrose's parks system which is highly valued by residents. Application can be done through Parks and Recreation department
- Increases carbon offset credits that can produce significant revenue to the City. With a capture rate of 75%, the compost facility could generate \$10,000 per year for 4 years through the sale of carbon offsets in an amalgamated project (additional information regarding carbon offset credits is provided in Section 1.2.4.4).

### **Disadvantages**

- Increases operational costs at landfill to manage compost process (though minimal with yard waste)
- Requires effective public communication (social marketing) as do all programs which bring change

## **5.2 Curbside Collection of Organics**

Food and yard waste is collected at the curbside. Due to the weight of material an automated cart system is the best option for the collection of food and yard waste. The program can be implemented spring through fall to reduce costs or year round. Year round collection increases the capture rate of food waste as spring through fall collection tends to reinforce yard waste collection only in homeowner's minds.

Currently Camrose captures 9% of the available organic residential waste stream. Assuming a capture rate of 65% (the capture rate Strathcona County achieved after one year of program implementation), residential diversion would increase by an additional 18% to 38%.

### **Advantages**

- Provides "biggest bang for the buck" and the highest diversion potential of any solid waste management program as it addresses 52% of the waste stream.
- Camrose already has organics processing capabilities



- Availability of valuable soil amendment product to enhance City and residential properties
- Increases carbon offset credits that can produce significant revenue to the City (additional information regarding carbon offset credits is provided below). With a capture rate of 65%, the compost facility could generate \$15,000 per year for 4 years through the sale of carbon offsets in an amalgamated project.
- Increasing the capture rate once program is implemented can significantly increase diversion rates (i.e. 80% capture rate of organics will increase Camrose's residential diversion rate to 42% through one program)
- Advantages as listed under cart system

#### **Disadvantages**

- Increases capital and operating costs due to increased requirements for compost processing and cart supply
- Processing of food waste requires registration as a Class II composting facility under Alberta Environment Standards for Composting Facilities in Alberta. (City can hire contractor to run compost site which limits risk such as odour. Odour risk can be significant and in some cases, has led to closures.)
- Implementation of food collection program requires effective social marketing
- Disadvantages as listed under cart system

### **5.3 Grass Cycling**

Residents are required by bylaw to leave grass clippings on lawn; no pickup provided for lawn clippings. This option was implemented by the City of Toronto and they achieved an immediate waste diversion of 20%.

#### **Advantages**

- 10 to 20% diversion rate with minimal associated costs (public education costs)

#### **Disadvantages**

- Some residents may not easily accept enforcement of how they manage their lawns.



## 5.4 Alberta Carbon Offset Credit System

Composting facilities generate carbon offsets by diverting waste from landfill. Under Alberta Environment's Specified Gas Emitters Regulation, those companies that are considered High Emitters are required to either reduce their greenhouse gas emissions, pay into a fund or purchase carbon offsets from those who produce them (like composting facilities).

Camrose's composting facility generates carbon offset credits under Alberta's Carbon Offset Credit protocol for composting facilities. Advanced Enviro Engineering Ltd. is currently provided consulting services to amalgamate available offset credits generated by municipal composting facilities in Alberta.

By participating in this project it is estimated that Camrose could generate revenues of approximately \$9000 for compost processed to date. Future proceeds range from an additional \$9000 to \$60,000 depending on the organics options implemented.

### **Advantages**

- No upfront costs to participate. Advanced Enviro will perform all work necessary to bring offsets to market. Costs are taken out of proceeds from sale of credits.
- Links diversion activities to reduction in greenhouse gas emissions which increases public support of programs
- Provides additional revenue to reinvest in diversion programs
- Projects can claim offsets for a period of 8 years
- Helps establish program

### **Disadvantages**

- City is required to test finished product in order to participate in project (however this completes the cycle, as the product is then able to be used)

## 6.0 LANDFILL OPTIONS

Landfill can move towards Resource Recovery Facility. Options to enhance the landfill and its role in diversion include:

1. Physical Enhancements:
  - Improved signage to reflect similar message as recycling depot and to promote recycling and reuse. Examples of signage are provided below.



“Paint your World Green” theme already developed can be integrated with diversion compound signage

- Signage to encourage resource recovery rather than “dumping”
- Provide area for source separation rather than landfilling mixed loads
- Make circular route so users can bring materials to separation areas then return

2. Implement OCC ban to increase capture rate of commercial and residential OCC through the recycling depot
3. Implement grass ban with grass cycling bylaw
4. Implement yard waste ban spring through fall
5. Provide reuse area for large items in good condition

The following photographs illustrate how Whistler has incorporated its theme, “Moving Towards a Sustainable Future” on signage both at the transfer station, recycling depot and at the composting facility.

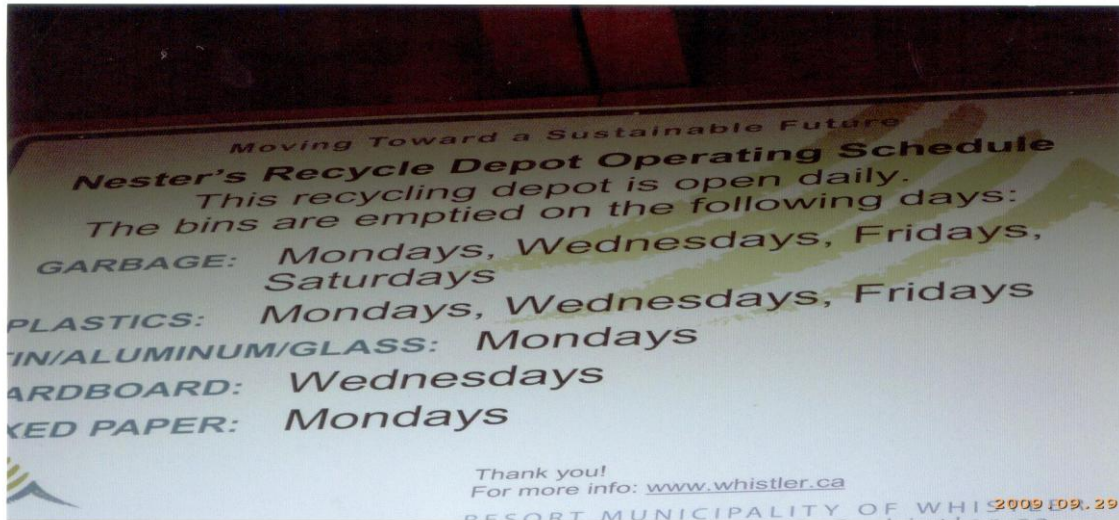


Figure 1. Whistler Signage – 1



Figure 2. Whistler Signage – 2



Figure 3. Whistler Signage – 3





Figure 4. Whistler Signage – 4



Figure 5. Whistler Signage – 5

## **7.0 COMMERCIAL DIVERSION OPTIONS**

### **7.1 Alberta C&D Stewardship Program**

Construction and demolition (C&D) waste accounts for about 25% of MSW sent to landfill in Alberta. The government of Alberta is in the final stages of implementing a C&D Waste Reduction Program expected to be implemented in 2010.

Under this program, anyone applying for a construction building permit would be required to participate. Municipalities will be asked to inform new applicants of the program, distribute program educational material and direct applicants to a delegated administrative organization (DAO). The permit applicant will be required to submit forms, administrative fee and financial fee to the DAO. Once a project is completed, the permit applicant would apply to the DAO for a refund with the amount based on the percentage of waste materials diverted by weight.

It is recommended that the landfill develop a C&D waste diversion compound at the landfill to provide waste diversion services. Operation of the C&D diversion compound can be contracted out or looked after by the municipality.

### **7.2 University of Alberta – Augustana**

The University of Alberta, Augustana campus is currently evaluating a dry recyclables (paper, glass, metal, plastics) collection and diversion program as the first stage of its Integrated Waste Management Plan.

Information and results of Augustana's program can be shared with the commercial sector and other institutions. This sector can be challenged to work towards similar goals as Augustana's and to assist in meeting Camrose's diversion goals.

## **8.0 PUBLIC EDUCATION AND SOCIAL MARKETING**

Camrose has a strong educational program already established that can form the foundation of an extremely effective solid waste education and social marketing program which will result in increased participation and capture rates for solid waste programs. Areas of strength include:

- Public Educational Coordinator, Vicki Cole and delivery of successful waste reduction education programs particularly with children and youth
- Effective website with easy access to solid waste information
- Brochures which inform the public of the available programs and diversion results from these programs

- Development of the “Paint Your World Green” theme which reflects Camrose’s interest and strength in green spaces, and incorporates sustainability and environmental responsibility
- Green Action Committee

The City should continue to use standard marketing approaches to improve the promotion of each of the waste management services provided and to advertise program components. The theme already developed, “Paint Your World Green” reflects Camrose’s interest in green spaces and incorporates environmental responsibility. This theme should be used in all waste diversion programs (at recycling depot and at landfill diversion areas) to reflect an integrated approach and to promote diversion. To increase participation and capture rates, activities and marketing should also focus on achieving specific behaviour goals.

As much of solid waste diversion programs achieve a social good and not always a financial good (although careful planning and system integration can make programs cost effective) solid waste diversion programs require social marketing techniques.

The City could enhance its current public education program by providing social marketing training to its Educational Program Coordinator.

As the City moves towards implementing programs that require more and more behavioural changes, the City might consider increasing the Educational Program Coordinator position to full time as the success of any programs implemented will depend on the associated participation rate and capture rate which are dependent on public awareness and knowledge.

## 9.0 PROGRAM COSTS

Tables 2, 3, and 4 present cost data for selected program alternatives. Cost data includes estimated capital costs, operation costs and full cost recovery rates. These costs have been estimated for the purposes of comparative analyses and to assist in the decision-making process. The costs are preliminary and broad and are not intended for purchasing decisions.

Calculations for these tables were based on the following assumptions:

- Number of households: 5455
- Waste generation rate of 5800 tonnes/year (household waste)
- Capital costs and implementation costs are amortized over 5 years at 5.59% fixed interest rate
- Public communication program and materials are included under operating costs





- Assumes highest waste diversion rate is achieved (i.e. if alternative can reduce waste to landfill by 10 to 15%, 15% rate is used in calculating revenues).
- Estimated revenue is based on diversion rate and the saved landfill-tipping fee. It is assumed that savings in landfill capacity is captured by using this same formula.
- Landfill tipping rate is assumed to be \$31.50 (tipping fee used in budget documents)
- Full cost recovery rate (FCRR) is the amount charged to each household in order to cover the cost of the particular service.
- The Full Cost Recovery Rate for each option includes waste collection, disposal, recycling depot, and toxic roundup costs and subtracts the revenue from diversion.

Table 2 compares status quo full cost recovery rate (FCRR) with the FCRR for curbside collection of recyclables (bags), curbside collection of yard waste (spring through fall – bags), curbside collection of yard waste (spring through fall – carts), and grass cycling. Table 2 illustrates that implementing services that are targeted according to the significance of the waste stream, provides the most cost effective solutions. The tables also show that these options can be implemented within the additional \$5.00/month rate survey respondents indicated they were willing to pay.

Table 3 compares combined options (i.e. waste limit, automated collection, curbside recyclables, etc.) with the status quo. Table 4 provides a summary of the FCRR for proposed options.

**Table 2. Program Cost Data – Stand Alone Options**

PROGRAM	ESTIMATED CAPITAL COSTS	ESTIMATED OPERATING COSTS (ANNUAL)	ESTIMATED REVENUE (ANNUAL)	ESTIMATED FCRR (/HH/MONTH)
<b>A – STATUS QUO (20% Diversion)</b>				
<b>Waste Collection</b>		\$354,138.60		<b>\$5.41</b>
<b>Waste Disposal</b>		\$182,700  (5800 t @ \$31.50)		<b>\$2.79</b>



PROGRAM	ESTIMATED CAPITAL COSTS	ESTIMATED OPERATING COSTS (ANNUAL)	ESTIMATED REVENUE (ANNUAL)	ESTIMATED FCRR (/HH/MONTH)
<b>Recycling Depot</b> (includes advertising budget)		\$384,280.00  (7700 units)	\$83,900	<b>\$3.25</b>
<b>HHW Roundup</b>		\$14,850.00		<b>\$0.23</b>
<b>Concrete Recycling</b>		\$165,100.00	\$215,00	<b>-\$0.76</b>
<b>Landfill</b>		\$652,500.00	\$625.00	<b>\$0.00</b>
<b>Status Quo Full Cost Recovery Rate</b>				<b>\$10.92</b>
<i>The actual amount households currently pay for waste management services is \$5.41 + \$2.94 + \$3.25 = \$11.60. The full cost recovery rate is for comparison purposes with other options.</i>				
<b>SOURCE REDUCTION OPTIONS</b>				
<b>BAG/CART LIMIT (30% Diversion):</b> As waste limits require a corresponding enhancement of recycling/composting options, cost analysis of this option is presented as part of the Combined Options in Table 5b.				
<b>RESOURCE RECOVERY OPTIONS</b>				
<b>B - CURBSIDE COLLECTION OF RECYCLABLES - BAGS (25% Diversion, additional 7%)</b> Includes current services provided at recycling depot and landfill. Collection cost is based on Edmonton area rates, actual cost needs to be confirmed through tender process.				
Public Education Program	Households purchase bags	\$15,000 to implement =  \$3,432.24/yr	Diversion:  \$12,789	<b>\$10.92 + \$4.92</b>
Program Implementation		\$10,000/yr	Recyclables:	<b>= \$15.84 + cost/hh for</b>



PROGRAM	ESTIMATED CAPITAL COSTS	ESTIMATED OPERATING COSTS (ANNUAL)	ESTIMATED REVENUE (ANNUAL)	ESTIMATED FCRR (/HH/MONTH)
Program Management		maintenance  Collection: \$5.00/hh/month  Annual Operating Cost: \$340,732.24	\$,5873	<b>bags</b>
<b>C – YARD WASTE COLLECTION CURBSIDE - BAGS (35% Diversion, additional 25%)</b> Assumes commercial yard waste is not included. Diversion would be greater if commercial sector is required to participate. Spring through fall collection (6 months)				
Public Education Program	Bag costs are not included in this estimate.	\$15,000 to implement=	Diversion:	\$10.92 + <b>\$2.25</b>
Program Implementation		\$3,432.24/yr	\$45,675	<b>= \$13.17</b>
Program Management		\$10,000/yr maintenance  Collection: \$5.00/hh for 6 months  Processing: \$20,000/yr  Annual Operating Cost: \$197,082.24	Finished Product: \$4,375  Offset Credits: \$10,000 (for 1 <sup>st</sup> 4 years)	(without credits)  \$10.92 + <b>\$2.09</b>  <b>= \$13.01</b> (with credits) (+cost/hh/bags) )



PROGRAM	ESTIMATED CAPITAL COSTS	ESTIMATED OPERATING COSTS (ANNUAL)	ESTIMATED REVENUE (ANNUAL)	ESTIMATED FCRR (/HH/MONTH)
<b>D – YARD WASTE COLLECTION CURBSIDE - CARTS (35% Diversion, additional 25%)</b> Assumes commercial organics is not included. NOTE: Municipalities can negotiate a lower hauling rate with cart system. This is not included in the FCRR (i.e. FCRR would be lower). With cart system, full organics can be implemented which can divert up to 50% of the waste stream.				
Public Education Program	Carts (assumes \$80/cart landed)	\$25,000 to implement =	Diversion:	\$10.92 + <b>\$3.81</b>
	\$436,400	\$5,720.40/yr	\$45,675	
Program Implementation	Annual Capital Costs:	\$10,000/yr maintenance	Finished Product:	<b>= \$14.73</b>
	\$99,855.60	Collection: \$5.00/hh for 6 months	\$4,375	<b>(without credits)</b>
Program Management		Processing: \$20,000/yr	Offset Credits:	\$10.92 + <b>\$3.65</b>
		Annual Operating Costs: \$199,370.40	\$10,000 (for 1 <sup>st</sup> 4 years)	<b>= \$13.98</b>
				<b>(with credits)</b>
<b>Other Alternatives</b>				
<b>E - GRASS CYCLING (20% Diversion, additional 15%) Bylaw no lawn and yard waste to landfill.</b>				



PROGRAM	ESTIMATED CAPITAL COSTS	ESTIMATED OPERATING COSTS (ANNUAL)	ESTIMATED REVENUE (ANNUAL)	ESTIMATED FCRR (/HH/MONTH)
Implement grass clippings ban  Public education campaign		\$15,000 to implement =  \$3,432.24/yr  \$10,000/yr maintenance  Annual Operating Costs \$13,432.24	Diversion:  \$27,405	\$10.92 - <b>\$0.21</b>  <b>= \$10.71</b>

**Table 3. Program Cost Data – Combined Options**

COMBINED OPTIONS				
PROGRAM	ESTIMATED CAPITAL COSTS	ESTIMATED OPERATING COSTS (ANNUAL)	ESTIMATED REVENUE (ANNUAL)	ESTIMATED FCRR (/HH/MONTH)
<b>F. AUTOMATED COLLECTION (2 CART SYSTEM); 1 CART LIMIT -garbage; 1 Cart – ORGANICS COLLECTION CURBSIDE; CURBSIDE BLUE BAG COLLECTION (80% DIVERSION).</b> Includes current services at recycling depot and landfill. Does not include reductions in contractor hauling rate. Bylaw <b>no lawn and yard waste to landfill</b> . Assumes 1 cart limit (= 2 bags) In 30% diversion 20% is achieved through changes in household behaviour brought about by increased attention towards waste generation. NOTE: Municipalities can negotiate a lower hauling rate with cart system. This is not included in the FCRR (i.e. FCRR would be lower)				
Public Education Program	Carts: (assumes \$80/cart landed)	\$35,000 to implement =  \$8,008.56/yr	Diversion:  \$109,620	\$10.92 + <b>\$11.75</b>
Program	\$872, 800	\$10,000/yr to		



Implementation		maintain	Recyclables:	<b>= \$22.67</b>
Program Management	Annual Capital Costs: \$199,239.36	Collection: \$10.00/hh/month  Processing: \$30,000/yr  Annual Operating Costs: \$702,608.56	\$5873  Finished Product: \$7,250  Offset Credits:  \$10,000 (for 1 <sup>st</sup> 4 years)	
<b>G. 2 BAG LIMIT, CURBSIDE COLLECTION OF YARD WASTE (BAG) (55% Diversion)</b> Bylaw no lawn and yard waste to landfill.				
Public Education Program		\$25,000 to implement =  \$5,720.40/yr	Diversion: \$63,945	\$10.92 + <b>\$1.78</b>  <b>= \$12.70</b>
Program Implementation		\$10,000/yr to maintain	Recyclables: \$4,175	<b>(+cost/hh/bags)</b>
Program Management		Collection: \$5.00/hh for 6 months  Processing: \$20,000/yr  Annual Operating Costs: \$199,370.40	Finished Product: \$4,375  Offset Credits:  \$10,000 (for 1 <sup>st</sup> 4 years))	
<b>H. 2 BAG LIMIT, CURBSIDE COLLECTION OF YARD WASTE (BAG), BLUE BAG COLLECTION (60% Diversion)</b> Bylaw no lawn and yard waste to landfill. Includes current programs at recycling depot and landfill.				



Public Education Program		\$25,000 to implement =	Diversion:	<b>\$10.92 + \$6.62</b>  <b>=\$17.54</b> <b>(+cost/hh/bags)</b>
Program Implementation		\$5,720.40/yr	\$73,080	
		\$10,000/yr to maintain	Recyclables:	
Program Management		Collection: \$5.00/hh for 6 months + 5.00/hh for 12 months	Finished Product:	
		Processing: \$20,000/yr	Offset Credits:	
		Annual Operating Costs: \$526,670.40	\$4,375	
<b>I. 1 CART LIMIT (WASTE), CURBSIDE COLLECTION OF YARD WASTE (BAG), BLUE BAG COLLECTION (60% Diversion)</b> Bylaw no lawn and yard waste to landfill. Includes current programs at recycling depot and landfill.				
Public Education Program	Carts (assumes \$80/cart landed)	\$35,000 to implement =	Diversion:	<b>\$10.92 + \$8.18</b>  <b>=\$19.10</b>
Program Implementation	\$436,400	\$8,008.56/yr	\$73,080	
		\$10,000/yr to maintain	Recyclables:	
Program Management	Annual Capital Costs: \$99,855.60	Collection: \$5.00/hh for 6 months + 5.00/hh for 12 months	Finished Product:	
		Processing: \$20,000/yr	Offset Credits:	
		Annual Operating Costs: \$528,958.56	\$4,375	



<b>J. CURBSIDE COLLECTION OF RECYCLABLES (BLUE BAG); ENHANCED PUBLIC EDUCATION, WASTE LIMIT (4) (37% Diversion)</b>				
Education and social marketing campaign		\$15,000 to implement =	Diversion:	<b>\$10.92 + \$4.64</b>  <b>=\$15.56</b>
Program Implementation		\$3,432.24/yr	\$31,059	
		\$10,000/yr maintenance	Recyclables:	
Program Management		Collection: \$5.00/hh/month	\$5,873	
		Annual Operating Costs: \$340,732.24		
<b>K. CURBSIDE COLLECTION OF YARD WASTE (Spring through Fall) ; ENHANCED PUBLIC EDUCATION; WASTE LIMIT (4) (50% Diversion)</b>				
Education and social marketing campaign		\$15,000 to implement =	Diversion:	<b>\$10.92 + \$1.92</b>  <b>= \$12.84</b>
Program Implementation		\$3,432.24/yr	\$54,810	
		\$10,000/yr maintenance	Finished Product & Recyclables:	
Program Management		Organics Processing: \$20,000/yr	\$8,695	
		Collection: \$5.00/hh/month for 6 months	Offset Credits:	
		Annual Operating Costs: \$199,082.24	\$10,000 (for 1 <sup>st</sup> 4 years)	





**Table 4. Program Cost and Diversion Summary**

Program	Diversion	Full Cost Recovery Rate (/month/household)
A) Status Quo	20%	\$10.92
<b>Stand Alone Options</b>		
B) Blue Bag	25%	\$15.84 + cost for bags
C) Yard Waste Collection - Bags	45%	\$13.01 + cost for bags
D) Yard Waste Collection – Carts	45%	\$13.98 to \$14.73 (depending on offsets)
E) Grass Cycling	35%	\$10.71
<b>Combined Options</b>		
F) Automated Collection with Year Round Organics (Food & Yard Waste) Collection; 1 Cart Waste Limit, Blue Bag	80%	\$22.67
G) 2 Bag Limit, Yard Waste Collection	55%	\$12.70 + cost for bags
H) 2 Bag Limit, Yard Waste Collection, Blue Bag	60%	\$17.54 + cost for bags
I) Automated Collection, 1 Cart Limit, Yard Waste Collection, Blue Bag	60%	\$19.10
J) Blue Bag, Enhanced Public Education, Waste Limit (4 bags)	37%	\$15.56
K) Yard Waste Collection, Enhanced Public Education, Waste Limit (4 bags)	50%	\$12.84



## 10.0 APPENDIX

### HHW Information

#### Cost of recycling light bulbs:

- Can purchase a “bulb eater” for separating the glass/metal/mercury for ~\$5,500 from Sybertech Waste Reduction Ltd. Still have to factor in expenses to transport the metal, glass, and mercury for processing (glass and metal may just go with other glass metals recyclables?) and operator training.
- Can rent/buy storage boxes from Proeco in Edmonton and they will pick up the bulbs for you. (costs dated January 2009)
  - Recycle costs: \$0.15/foot
  - Supplies:
    - Cardboard drum purchase (holds 160 tubes) \$40.00 each
    - Cardboard drum rental \$10.00 each (per month?)
    - Poly drum purchase (holds 250 tubes) \$120.00 each
    - Poly drum rental \$1.25 per day
  - Site Services and Transport:
    - Enviro technician, \$60.00/hour. Use as required
    - Outside of Edmonton area pick-up, \$85.00/hour
    - Fuel surcharge (16%), as required
    - Insurance fee of 4%
- DBS also provides light bulb recycling:
  - CFL's are \$1.42 each, metal halides \$4.85, fluorescent tubes \$0.26/foot. There is a transport fee of \$33.90 per 205L drum for each pick-up.

#### Cost of paint and other HHW recycling:

- Collection Costs:
  - Talked to the general manager at Enviro Sort. He said that the costs vary depending on if they have other work in the city or not and its location. Generally, if the paint is collected in 205L drums that are still in the original cans it will cost between \$50 to \$65 per drum for the drum itself and pick-up. If the paint is bulked (ie poured into the drum) they will waive the fee. For household chemicals, they will be stored in 1m<sup>3</sup> totes and their cost would be ~\$100 per tote for storage and pick-up. Again, the cost will be waived if stored in bulk (I don't know how that works if there are different chemicals all together in one tote?). Paint and HHW are ARMA products, the trucking receipt for the paint and HHW gets submitted to ARMA and ARMA will pay the municipality the incentives.



For non ARMA products such as fire extinguishers and propane bottles; he said that the cost is negotiable. However, it is assumed that the municipality will charge for these products, therefore covering any costs involved.

- Talked to a Brigitte with DBS (Shawn from ecycle solutions recommended them, they kinda work together). She said that there is an initial \$1,200 set up fee. This set up involved providing 4 paint totes and two toxic totes. Cost to pick up each paint tote \$50. The \$50 will be reimbursed by ARMA. Cost to pick up each toxic tote is \$477.95. She said that they are in Lloyd area approximately every 4-6 weeks and will also pick up the electrics for Ecycle. ARMA will cover the costs of the processing of the toxics, however the \$477.95 pick-up fee from DBS is NOT covered.

- Collection Incentives:

- \$0.22 per paint can (with or without paint in it), or \$50 per full bin (1m<sup>3</sup>) of paint containers.
- \$0.05 per aerosol can, or \$10 per 205L drum, or \$50 per full bin (1m<sup>3</sup>) of aerosol cans (with or without paint in it)
- \$100 per 205L drum of bulked paint (paint poured into a drum). Latex and oil must be in separate drums.

Costs of tire recycling:

- Called Rubber Tech International (that's who Spruce Grove used) and he said that trucking charges varies on the location, but it would cost between ~\$65 to \$100 per tonne of tires. There are approximately 185 tires in one tonne.

Costs of Electronics Recycling:

- Talked to Shawn at E-Cycle solutions. He said that costs to provide cages and electronics pick-up are free. Depending on the volume he said it is possible to receive payback on ARMA electronics (TVs, computers, printers). Non arma products will also be free, but will receive payback on those (stereos, dvd players, VCRs, speakers). Sean also mentioned that they will also provide the municipality with a no charge building to store the electronics (similar to what Spruce Grove has; their tent set up). Shawn will email me more info.





# REQUEST FOR PROPOSALS

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## Solid Waste Disposal, Organics Processing and Recyclable Materials Processing Services

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Date of issue:

September 25, 2008

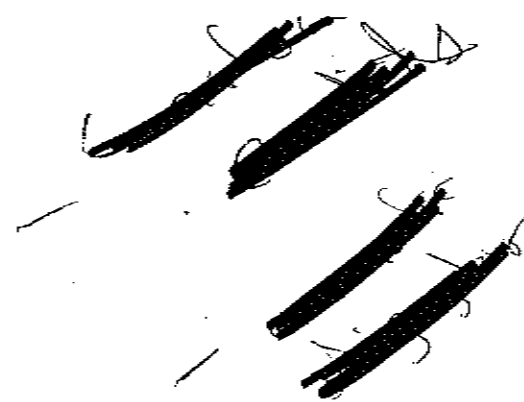
Proposals will be accepted by:

Strathcona County

Utilities

2nd Floor, 370 Streambank Avenue

Sherwood Park, Alberta T8H 1N1



Closing date:

October 10, 2008

2:00:00 p.m. local time



**Strathcona**  
County

## **1.0 INVITATION AND INSTRUCTIONS**

Proponents are encouraged to submit proposals based on the following major service components and are also encouraged to provide a package proposal on a combination of such components, namely:

Service Components:

1. Municipal Solid Waste Disposal and/or Transfer and Disposal (Landfilling)
2. Municipal Organics Processing (Composting)
3. Municipal Blue Bag Container Material Processing and Depot Separated Container Material Processing
4. Municipal Fibre (paper/cardboard) Processing and Depot Separated Fibre Processing

## **1.1 PROPOSAL INFORMATION**

Please submit three printed copies of your Proposal to:

Strathcona County, Utilities  
2<sup>nd</sup> Floor, 370 Streambank Avenue  
Sherwood Park, Alberta  
Attention: Leah Seabrook

Mark the sealed envelopes:

**Strathcona County Municipal Solid Waste Disposal, Organics Processing and  
Recyclable Materials Processing Services**

Proposals shall be received until 2:00:00 p.m., local time, on October 10, 2008.

Proposal packages may be picked up in person at the address above starting Wednesday, September 25, 2008, between 8:30 a.m. and 12:00 noon and between 1:00 p.m. and 4:30 p.m. weekdays.

Proposals received after the Closing Time will not be accepted and will be returned to the Proponent.

The County reserves the right in its sole discretion to extend the Closing Time without notice to Proponents. The County will endeavour to notify Proponents as soon as practically possible in the event of any extension of the Closing Time.

Proposals received unsigned will be rejected. An ambiguous, unclear or unreadable Proposal may be cause for rejection. The acceptability of all submitted Proposals will be at the County's sole discretion.

Strathcona County reserves the right to accept or reject any and all Proposals, and to waive irregularities and informalities at its discretion. The County reserves the right to accept a Proposal other than the lowest Proposal without stating reasons. By submitting its Proposal, the Bidder waives any right to contest, in any proceedings or action, the right of the County to accept or reject any Proposal in its sole and unfettered discretion. Without limiting the generality of the foregoing, the County may consider any other factor besides price and capability to perform the Work in its sole and unfettered discretion.

The County may reproduce any of the Proponent's Proposal and supporting documents for internal use or for any other purpose required by law.

## **1.2 INQUIRIES**

Proponents shall make in writing all inquiries and investigations necessary for the preparation and the submission of proposals.

Any inquiries that relate to additional information, discrepancies, errors or omissions are to be faxed to:

Leah Seabrook  
Fax: (780) 464-0557

However, the Proponents acknowledge and agree the County does not have an obligation to provide a response to any written inquiry, and that it is in the sole unfettered discretion of the County to provide any written response to a written inquiry.

## **1.3 ADDENDA**

Any changes to the request for proposals shall be in writing in the form of an Addendum.

Any addenda issued to the RFP shall form part of the RFP requirements, and the cost for doing the work shall be included in the proposal sum. Verbal representations shall not be binding on the County.

Addendums will be sent to all Proponents who have submitted a Receipt Confirmation Form to the Issuing office.

## **1.4 KEY DATES**

In order to assist Proponents, following are the Key Target Dates and Events with respect to this RFP process. Such dates are not guaranteed and may change based upon circumstances.

A. Request for Proposals issued	September 25, 2008
B. Inquiries received up to	October 7, 2008
C. Closing Date for Submission of Proposals	October 10, 2008
D. Evaluation and Clarification of Proposals (if any)	October 24, 2008
E. Award to Successful Proponent (if any)	October 31, 2008

## **1.5 OMISSIONS AND DISCREPANCIES**

Should the Proponent be in doubt as to the meaning or interpretation of anything in the Proposal Documents, find any discrepancies in or omissions from the Proposal Documents, the Proponent should immediately contact the Issuing Office in writing.

The Proponent shall be solely responsible for any errors, omissions, discrepancies or misunderstandings resulting from the Proponent's failure to examine thoroughly the Proposal Documents and from the Proponent's failure to enquire further with the County.

**441** The Proponent shall not claim at any time after the submission of a Proposal or, the subsequent execution of a contract, that there was any misunderstanding with respect to anything contained in the Proposal Documents.

## **1.6 INTERPRETATION**

No oral interpretation of any of the Proposal Documents by anyone, whether or not employed by the County, shall be effective to alter or modify any of the provisions in the Proposal Documents.

Every request for interpretation of the meaning of any of the requirements of the Proposal Documents shall be made in writing to the Issuing Office.

## **1.7 NO ASSIGNMENT OR SUBCONTRACTING**

This RFP and any subsequent contract which may be entered into between the County and a Proponent may not be assigned or sub-contracted in whole or in part by the Proponent without the prior written permission of the County.

Strathcona County reserves the right to accept or reject any and all proposals, and to waive irregularities and informalities at its discretion. The County reserves the right to accept a proposal other than the lowest proposal without stating reasons. By submitting its proposal, the Bidder waives any right to contest, in any proceedings or action, the right of the County to accept or reject any proposal in its sole and unfettered discretion. Without limiting the generality of the foregoing, the County may consider any other factor besides price and capability to perform the Work in its sole and unfettered discretion.

## **2.0 BACKGROUND**

Strathcona County is a diverse municipality with a blend of rural/urban residents spread over approximately 1243 km<sup>2</sup>. Waste and Recycling services are provided to approximately 25,000 households of which 18,000 are single family urban dwellings, 2000 urban multi family units and 5,000 rural single family households. In 2007 Strathcona County Council approved an Integrated Waste Management Plan. The plan known as "The Green Routine" is supported by Bylaw 11-2008 and is designed to minimize waste to landfill by diverting recyclables and organics. The Green Routine which was implemented on June 16, 2008 is proving increased diversion rates. Statistics are limited and will be provided in the scope of work along with total volumes from 2007, volumes to date for 2008 and projected volumes for 2009. The program is a bi-weekly program including:

- automated waste collection (alternating with organic)
- automated organics collection (alternating with waste)
- weekly hand collection of fibre recyclables
- weekly hand collection of blue bag containers
- fixed day schedule
- spring and fall large item pickup
- yard clean up spring and fall
- Christmas tree pickup

In addition to the curbside program, Strathcona County operates five recycle depots. Four depots have source separated bins for recyclables and one depot has yard waste (grass, leaves and garden waste) and brush bins for recycling.

## **2.1 SCOPE OF WORK**

Enclosed is a summary of information relating to each of the above major service components of Strathcona County's Integrated Waste Management System, which may be of assistance in the preparation of proposals. While Strathcona County has attempted to ensure the accuracy of this information, Strathcona County assumes no responsibility or liability for any errors or inaccuracies, which may exist.

### **Municipal Solid Waste Disposal**

Strathcona County is seeking proposals from qualified firms to accept Strathcona County's Municipal Solid Waste. The County is requesting that interested firms prepare a proposal identifying the details of the firm's plan to most effectively receive the County's MSW waste collection vehicles, weigh those vehicles, transport/transfer MSW to alternate vehicles if required and dispose of the MSW at an acceptable disposal facility. The facility must be licensed and approved by the Province and the local Municipality. The facility shall have the capacity over the length of the proposal to accept 10,000 – 20,000 tonnes of MSW annually. If a transfer facility is proposed, facilities within a 20 km radius County Hall, 2001 Sherwood Drive, Sherwood Park, AB will be given preference. An accurate distance from County Hall, 2001 Sherwood Drive, Sherwood Park, AB to the disposal facility must be measured and reported in the proposal.

### **Municipal Organics Processing**

The key component of the Integrated Waste Management Plan is the diversion of organics. The organics program is a year round program that accepts the following materials:

- leaves, grass clippings, garden waste, house and garden plants, sawdust, wood shavings and kitchen food waste (fruits, vegetables and peelings, table scraps, meat, poultry, fish, shell fish, dairy products, cooking oil, grease, fat, bread, grain, rice, pasta, bones, egg shells, coffee grounds and filters, tea leaves and bags, soiled cardboard, soiled paper and pizza boxes).



*total*  
The 2007 volumes were 4100 tonnes, which includes the curbside collection of grass and leaves (2500 tonnes), yard waste from depots (650 tonnes), and brush from depots (950 tonnes).

With the introduction of the Green Routine program the volumes from June 16, 2008 to August 31, 2008 were 2483 tonnes.

*Waste*  
The projected tonnage for organics material in 2009 is approximately 8600 tonnes, which includes residential organics (7000 tonnes), yard waste from depots (650 tonnes) and brush from depots (950 tonnes).

*Waste*  
Strathcona County is seeking proposals from qualified firms to accept the County's organics. The County is requesting that interested firms prepare a proposal identifying the details of the firm's plan to most effectively receive the County's organic collection vehicles, weigh those vehicles and process the organics into a useable quality compost product. The facility must be licensed and approved by the Province and the local municipality. The facility shall have the capacity over the length of the proposal to accept at a minimum the 2009 projected volumes. If a transfer facility is proposed, facilities within a 20 km radius County Hall, 2001 Sherwood Drive, Sherwood Park, AB will be given preference. An accurate distance from County Hall, 2001 Sherwood Drive, Sherwood Park, AB to the disposal facility must be measured and reported in the proposal.

#### **Municipal Blue Bag Container Processing and Depot Separated Container Processing**

The Integrated Waste Management Plan incorporated the curbside blue bag program to compliment the County's depot program. The following clean and dry materials are accepted in the Blue Bag and depot program:

- aluminum cans, baby bottle liners, beverage containers, fruit and bakery plastic containers, glass jars, ice cream pails, lids from plastic milk jugs, metal cans, plastics #1 - #7 grade, plastic bags (bread, shopping, dry cleaner), plastic bottles (ketchup, mustard, bbq sauce, laundry detergent, fabric softener, shampoo, dish detergent), plastic containers (yogurt, margarine, cottage cheese etc.), plastic egg cartons, plastic film, plastic flower pots, plastic lids from drink cups, plastic milk jugs, plastic utensils (forks, knives, spoons), straws, Styrofoam egg cartons, Styrofoam meat trays, Styrofoam packaging, Styrofoam plates, cups, Styrofoam take out containers, tin cans, wine corks (plastic).

The 2007 volumes collected at the depots were approximately 400 tonnes, (plastic milk jugs -73 tonnes, plastics -77 tonnes, metals -93 tonnes and glass -155 tonnes).

With the introduction of the Green Routine program and the curbside collection of recyclables, the volumes from June 16, 2008 to August 31, 2008 were 440 tonnes.

The projected tonnage for container recyclables for 2009 is approximately 2600 tonnes, which includes residential blue bag (2300 tonnes) and depot collection of separated containers (300 tonnes).

The County is seeking proposals from qualified firms to accept the County's Blue Bag and depot collected containers. The County is requesting details of the firm's plan to most effectively receive the County's Blue Bag Container collection vehicles, weigh those vehicles and process the containers into marketable recycle streams. The facility must be licensed and approved by the Province and local municipality. The facility shall have the capacity over the length of the proposal to accept at a minimum the projected 2009 volumes. An accurate distance from County Hall, 2001 Sherwood Drive, Sherwood Park, AB to the processing facility must be measured and reported in the proposal. Return to County Revenue must be stated in the proposal.

### **Municipal Fibre (Paper/Cardboard) Processing & Depot Separated Fibre Processing**

The Integrated Waste Management Plan requires residents to source separate fibre materials at the curb and the depots. Fibre materials are collected at the curb via re-useable bags or containers, thus the materials are loose for processing. The following materials are accepted in the fibre curbside program and depot program:

- corrugated cardboard, mixed paper (boxboard, catalogs, cereal and other food boxes, coloured, computer, glossy and writing paper, envelopes with or without window, flyer inserts, greeting cards, junk mail, magazines, paper bags, paper drink cups (clean and dry), paper egg cartons, paper milk containers, paper products, paper rolls, phone books, shoe boxes, shredded paper (contained), tissue paper, wrapping paper and newspapers.

The 2007 volumes collected at the depots were 3650 tonnes, which included a separation of corrugated cardboard (1000 tonnes), newspaper (1400 tonnes) and mixed paper (1250 tonnes).

With the introduction of the Green Routine program and collection of fibre materials at the curb, the volumes from June 16, 2008 to August 31, 2008 were 975 tonnes.

The projected tonnage for 2009 is 5750 tonnes, which includes curbside collection of mixed paper materials (4200 tonnes) and collection of separated fibre materials at the depots (1550 tonnes).

The County is seeking proposals from qualified firms to accept the County's Fibre. The County is requesting details of the firm's plan to most effectively receive the County's Fibre vehicles, weigh those vehicles and process the fibres. The facility must be licensed and approved by the Province and local municipality. The facility shall have the capacity over the length of the proposal to accept at a minimum the stated 2009 volumes. An accurate distance from County Hall, 2001 Sherwood Drive, Sherwood Park, AB to the processing facility must be measured and reported in the proposal. Return to County Revenue must be stated in the proposal.

## **2.2 TERMS OF AGREEMENT**

Proposals should be submitted for a five year term (expires January 1, 2014); and a ten year term (expires January 1, 2019) with Strathcona County having an option to award a one year term with additional three – one year renewals for all or any of the aforesaid major service components based upon mutual agreement on the same

terms subject only to a rate adjustment according to a formula. Term is tentatively scheduled to commence January 1, 2009.

The successful proponent is required to enter into a written agreement with Strathcona County to provide the waste management service outlined in such proposal. Strathcona County will prepare such contract.

### 2.3 PERFORMANCE BOND

A performance bond of \$50,000.00 per major service component will be required for each of the four components of Strathcona County's integrated waste management system.

### 2.4 AWARDING OF CONTRACT

Strathcona County may choose one party for the provision of all of the aforesaid major service components. However, as mentioned previously, combinations of proposals are accepted though some restrictions apply and are highlighted in the service component attachments.

### 2.5 EVALUATION CRITERIA:

Strathcona County Utilities will evaluate all the proposals on the basis of the following criteria:

CRITERIA	WEIGHTING
<ul style="list-style-type: none"><li>• Completeness of the proposal in relation to these terms of reference;</li><li>• Quality of service to be provided (including references from current customers);</li><li>• Cost;</li><li>• Business continuity plan – resources provided to stay on schedule, maximum twenty four hour disruption.</li></ul>	<ul style="list-style-type: none"><li>• 50%</li></ul>
<ul style="list-style-type: none"><li>• Distance from Sherwood Park;</li><li>• Customer service deliverable – schedule and hours of operations;</li><li>• Compatibility with Strathcona County operations.</li></ul>	<ul style="list-style-type: none"><li>• 30%</li></ul>
<ul style="list-style-type: none"><li>• Environmental initiatives;</li><li>• Social initiatives.</li></ul>	<ul style="list-style-type: none"><li>• 5%</li></ul>
<ul style="list-style-type: none"><li>• Creative initiatives to minimize costs.</li><li>• Return to County Revenue opportunities.</li><li>• Capacity for future growth.</li></ul>	<ul style="list-style-type: none"><li>• 15%</li></ul>

#### Reference:

- Copy of the Waste Management Bylaw #11-2008 available upon request or available at [www.strathcona.ab.ca](http://www.strathcona.ab.ca)

## 2.6 GENERAL REQUIREMENTS

### Insurance

Proponents shall furnish proof of adequate insurance coverage of the types; and to the limits specified as described in the attached standard contract. Certificate of Insurance shall be filed following notification of the proposal of award. Insurance coverages are Workers' Compensation, Indemnity, Liability and Auto Liability.

### Experience and References

Proponents must provide information that clearly shows the necessary expertise, equipment and experience with Solid Waste Disposal, Organics Processing, Container Processing and/or Fibre Processing. Provide past and current references (minimum of three) that can attest to the integrity, dependability and responsiveness and fairness of the Proponent.

### Record keeping and Reporting

The proponent will keep detailed records of all weights, hauls, manifests and other pertinent data as required by the County and Province. The proponent will conform to all existing reporting requirements by the County or the Province over the life of the agreement. The proponent will provide any records or documentation required by the County for the internal use of reporting to outside agencies.

### Customer Service

The proponent will provide customer service support to deal with inquiries, complaints, or other related issues from the County which may arise from the execution of the agreement and in the course of the day to day business operation.

### Business Continuity Plan

Proponents are asked to submit a business continuity plan in the event of a facility closure, equipment shutdown/breakdown or inability to accept Municipal Solid Waste, Organics, Container Recyclables or Fibre Recyclables. Proponents plan should describe short term and long term contingencies and a description of the alternate facility.

**PROPOSAL FORM**

**STRATHCONA COUNTY  
MUNICIPAL SOLID WASTE DISPOSAL AND OR  
TRANSFER AND DISPOSAL**

**Option 1 – 1 year term**

	Est. Qty	Unit	Unit Price	Total Value
Municipal Solid Waste Disposal				
	_____	Tonnes	\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

	Est Qty	Unit	Unit Price	Total Value
Municipal Solid Waste Transfer and Disposal				
	_____	Tonnes	\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

**Option 2 – 5 year term**

	Est. Qty	Unit	Unit Price	Total Value
Municipal Solid Waste Disposal				
	_____	Tonnes	\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

	Est Qty	Unit	Unit Price	Total Value
Municipal Solid Waste Transfer and Disposal				
	_____	Tonnes	\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

**Option 3 – 10 year term**

	Est. Qty	Unit	Unit Price	Total Value
Municipal Solid Waste Disposal				
	_____	Tonnes	\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

	Est Qty	Unit	Unit Price	Total Value
Municipal Solid Waste Transfer and Disposal				
	_____	Tonnes	\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

**PROPOSAL FORM**

**STRATHCONA COUNTY  
MUNICIPAL ORGANICS PROCESSING (COMPOSTING)**

**Option 1 – 1 year term**

	<u>Est. Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total Value</u>
Municipal Organics Processing	_____	Tonnes	\$ _____	\$ _____
Unit Price: _____	Total Value: _____			
(value in words)	(value in words)			

	<u>Est Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total Value</u>
Municipal Organics Processing and Disposal	_____	Tonnes	\$ _____	\$ _____
Unit Price: _____	Total Value: _____			
(value in words)	(value in words)			

**Option 2 – 5 year term**

	<u>Est. Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total Value</u>
Municipal Organics Processing	_____	Tonnes	\$ _____	\$ _____
Unit Price: _____	Total Value: _____			
(value in words)	(value in words)			

	<u>Est Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total Value</u>
Municipal Organics Transfer and Disposal	_____	Tonnes	\$ _____	\$ _____
Unit Price: _____	Total Value: _____			
(value in words)	(value in words)			

**Option 3 – 10 year term**

	<u>Est. Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total Value</u>
Municipal Organics Processing	_____	Tonnes	\$ _____	\$ _____
Unit Price: _____	Total Value: _____			
(value in words)	(value in words)			

	<u>Est Qty</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Total Value</u>
Municipal Organics Transfer and Disposal	_____	Tonnes	\$ _____	\$ _____
Unit Price: _____	Total Value: _____			
(value in words)	(value in words)			

**PROPOSAL FORM**

**STRATHCONA COUNTY  
MUNICIPAL BLUE BAG CONTAINER PROCESSING**

**Option 1 – 1 year term**

	<u>Qty</u>	<u>Est. Unit</u>	<u>Unit Price</u>	<u>Total Value</u>
Blue Bag Container Processing	_____	_____	_____	_____
	_____ Tonnes		\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

**Option 2 – 5 year term**

	<u>Qty</u>	<u>Est. Unit</u>	<u>Unit Price</u>	<u>Total Value</u>
Blue Bag Container Processing	_____	_____	_____	_____
	_____ Tonnes		\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

**Option 3 – 10 year term**

	<u>Qty</u>	<u>Est. Unit</u>	<u>Unit Price</u>	<u>Total Value</u>
Blue Bag Container Processing	_____	_____	_____	_____
	_____ Tonnes		\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

**Return to County Revenue**

<u>Unit Price</u>	<u>Total Value</u>
\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

- Any other unit prices for pre-separated materials, please include with proposal form.

ie: milk jugs  
metal cans

**PROPOSAL FORM**

**STRATHCONA COUNTY  
MUNICIPAL FIBRE (PAPER/CARDBOARD) PROCESSING**

**Option 1 – 1 year term**

	Est. <u>Qty</u>	<u>Unit</u>	Unit <u>Price</u>	Total <u>Value</u>
Municipal Fibre (paper/cardboard) Processing				
	_____	Tonnes	\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

**Option 2 – 5 year term**

	Est. <u>Qty</u>	<u>Unit</u>	Unit <u>Price</u>	Total <u>Value</u>
Municipal Fibre (paper/cardboard) Processing				
	_____	Tonnes	\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

**Option3 – 10 year term**

	Est. <u>Qty</u>	<u>Unit</u>	Unit <u>Price</u>	Total <u>Value</u>
Municipal Fibre (paper/cardboard) Processing				
	_____	Tonnes	\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)

**Return to County Revenue**

Unit <u>Price</u>	Total <u>Value</u>
\$ _____	\$ _____

Unit Price: \_\_\_\_\_ Total Value: \_\_\_\_\_  
(value in words) (value in words)



# **CITY OF LEDUC**

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables and Organics And Recycle Depot Services**

**October 2007**

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

The City requests Proposals for:

- A. Collection and Processing of Curbside Recyclable Materials**
- B. Collection and Processing of Household Organics**
- C. Collection of Yard Waste**
- D. Recycle Depot Services**

Sealed proposals will be received until **November 23, 2007, at 4:00pm** (local time). All proposals must be sent to the following address prior to the closing date:

City of Leduc  
#1 Alexandra Park  
46 Avenue & 48 A Street  
Leduc, AB T9E 4C4  
Attention: Ron Hanson, Director, Engineering Services

Reference: **Curbside Collection of Household Recyclables, Organics and Recycle Depot Services**

**Proposals received after the closing date or sent via electronic media, including electronic mail or facsimile will not be considered.**

LCE Logistics has been retained by the City of Leduc to provide technical support, assist with the proposal evaluation and make recommendations. Any communication regarding the proposal prior to the stated closing date must be made in writing two working days prior and sent via electronic mail to [lcelogistics@telus.net](mailto:lcelogistics@telus.net). All questions and responses will be shared with all Proponents that have requested a proposal package.

Proposal packages may be picked up in person at the City of Leduc during regular office hours (Monday to Friday between 8:30am and 4:30pm) starting on October 19, 2007.

#### **1) Background**

The City of Leduc (hereinafter called "the City") is responsible for providing a variety of waste management related services to a population of approximately 17,000 residents. The City currently provides curbside collection of household waste, spring large item collection, spring and fall collection of yard waste, to approximately 5300 residential dwellings. A drop off recycling depot (6102 – 46 Street) and a yard waste transfer facility (3719 – 48 Avenue) are currently available for the use of residents.

Presently a semi automated curbside collection program is in place under a separate contract and incorporates a bag limit. The bag limit currently restricts residents to four (4) bags of household waste per week or one (1) 96 gallon/360 L roll out cart.

Commercial waste collection, including multi family residential complexes with more than 5 units and bare land condominiums are responsible for providing their own waste collection services. Commercial and multi family residential complexes are also

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

responsible for arranging recycling services and at this time are not restricted from using the Recycle Depot.

The current Recycle Depot is located at 6102-46 Street in Leduc and is supervised during normal business hours. The types of materials and volumes collected at the depot are outlined in the respective service component section. The primary objective of this RFP is to move to curbside diversion programs with reduced dependence on depot style recycle programs.

The City currently funds its waste management programs through a bi-monthly utility based user pay system.

#### **2) Intent**

In 2007, the City commissioned a survey to determine the position of Leduc residents on related waste management services. This survey measured residents' opinions on a wide range of topics including the establishment of waste diversion goals, reduction of current bag limits, expansion of the curbside collection to include recyclables, expanded materials received at the depot, curbside collection of household organics, expansion of the yard waste collection program and enhancements to education and public awareness.

The City is looking to industry to provide an innovative, efficient and cost effective solution relative to the delivery of the key service components. The intent of this RFP is to obtain formal submissions from qualified organizations, community groups and businesses, herein referred to as Proponents, to provide all of the manpower, materials, equipment and resources necessary to collect, process and market household recyclables, household organics, yard waste and depot services. Proponents are encouraged to submit proposals based upon the key service components outlined in the attachments.

The primary objectives of this Request for Proposal are to:

- Expand upon existing recycling and diversion programs currently provided by the City to include curbside collection of recyclables, organics and/or yard waste;
- Develop a cost effective and efficient method of collecting, handling and processing recyclable materials contained in the residential curbside collection system;
- Recover as much of the recyclable material as practical and reduce the amount of recoverable material delivered to direct landfilling; and
- Protect the environment and prevent potential discharges to air, water or land.

Proponents will be asked to submit proposals based on a 33 month term (expires December 31, 2010) and a 57 month term (expires December 31, 2012). The City will also retain the option of renewing the contract for an additional 3 year period (36

## REQUEST FOR PROPOSALS

### Curbside Collection of Household Recyclables, Organics And Recycle Depot Services

months) or 5 year period (60 months) for all and any of the key service components with the same terms subject only to the agreed upon rate adjustment formula.

The Term is tentatively scheduled to commence April 1, 2008.

The successful Proponent(s) is/are required to enter into a written agreement with the City to provide the services as outlined and accepted in their proposal. The City will be responsible for preparing the contract documents for signature.

### 3) Evaluation Criteria

Proposals received will be evaluated based on the following criteria:

- a) The cost of delivering key service components;
- b) Waste reduction and Recycling initiatives that have demonstrated results;
- c) Compliance with the minimum service requirements;
- d) Quality of Services. References from current customers will be required;
- e) Compatibility with City operations and existing waste management programs;
- f) Completeness of the proposal in relation to the terms of reference.

Proposals will be weighed and scored against the following criteria:

Criteria	Weight
Cost Of Service	50 %
Waste Reduction And Initiatives	20 %
Compliance With Minimum Service Requirements	10 %
Quality Of Service	10 %
Compatibility with Existing Programs	5 %
Completeness Of Proposal	5 %

Or any other criteria considered appropriate by the City at its sole and absolute discretion.

Upon receipt and preliminary evaluation of proposal submissions the City will contact a short list consisting of three Proponents for the purpose of arranging separate interviews.

The City reserves the right to accept or reject any and all Proposals in whole or in part, and to waive irregularities and informalities at its discretion. The City reserves the right to accept a Proposal other than the lowest Proposal in whole or in part without stating reasons. By submitting a Proposal, the Bidder waives any right to contest, in any proceedings or action, the right of the City to accept or reject any Proposal in its sole and unfettered discretion. Without limiting the generality of the foregoing, the City may consider any other factor besides price and capability to perform the Work in its sole and unfettered discretion.

The City recognizes that it may be advantageous to enter into an agreement with one party to supply the key service requirements listed above and encourages Proponents to

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

identify these advantages to the City. However, the City will reserve the right to consider and award combinations of proposals to qualified organizations on a best value basis.

#### **4) Cost Structure**

The City requests that the cost structure be given in all-inclusive unit costs excluding the GST.

#### **5) Submission Instructions**

Proposals will be received until November 24, 2007 at 4:00 PM (local time).

All fully executed, dated and endorsed Proposals will be received at:

City of Leduc  
# 1 Alexandra Park  
Leduc, Alberta T9E 4C4

Attention: Ron Hanson, Director, Engineering Services

Proponents are required to submit **two** bound copies of the Proposal which will include all forms provided, signed and sealed together with the required securities in an opaque envelope, clearly identified with the Proponent's name and the project name. Faxed or e-mailed Proposals will **not** be accepted.

If the Proponent is an individual or a partnership, the proposal shall be executed by the individual or a partner in the presence of a witness and the signer must show the capacity in which he signs (e.g. "Partner" or "Proprietor"). If the Proponent is a corporation, the proposal shall be executed under the seal of the company, affixed in the presence of the authorized officers or two directors. If the Proponent is a joint venture, each party to the joint venture shall execute the proposal under seal in the manner appropriate to such party.

Specific questions related to the Technical Requirements of the Request for Proposals shall be directed to the Attention of D. Skip Kerr at [lcelogistics@telus.net](mailto:lcelogistics@telus.net).

Proposals may be withdrawn or modified only by written notice received by the City at the address given prior to the closing date and time for receipt of Proposals. Faxed or Electronic mail withdrawals will be permitted.

It is the responsibility of the Proponent to ensure that all addendums have been received.

Any premiums on risk, financing charges, or liability insurance shall be included in the quoted price.

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

The cost of completing and complying with all conditions, obligations and liabilities described in the RFP as well as carrying out the work as required by the Contract will be deemed to be included in the price.

#### **a) Narrative**

Each Proposal shall be accompanied by an original letter stating that all the information submitted in support of the proposal is accurate and factual and all representations made regarding the Proponent's willingness to make the required performance guarantees and the Proponent's concurrence with the proposed business arrangement are accurate.

Proponents are to identify the structure of the organization (corporation, partnership, joint venture, etc.), and provide a brief history of all firms to be involved in this undertaking and their proposed role. This narrative should include a written description of the Proponent's proposed approach to managing the various streams of recyclable material generated in the key service components. Along with the proposed approach, as a minimum, the following items should also be addressed:

- Public awareness and educational requirements and inclusions.
- A listing of current projects similar to the proposed, complete with contact names and telephone numbers.
- A description of all mobile equipment required for operation including type, size and quantity.
- A listing of processing facilities contemplated to complete the work.
- A description on how residues will be handled and tracked.
- Relevant statistics data related to participation and anticipated diversion rates.
- Contingency plans in place to ensure continuous ongoing processing of recyclable materials.
- A listing of personnel dedicated to the project complete with appropriate curricula vitae.
- Background information on any sub-contractors, including details of corporate experience in carrying out the type of work proposed.

#### **b) Costing Table**

The City has attached a cost table summary related to the four major service components. This attachment must be included with any submission. Costing issues and concerns that are not contained in the table need to be identified as a separate narrative. Annual adjustments are confined to Edmonton and area consumer price index (CPI).

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

#### **c) Performance Security**

Successful submissions will require a performance bond, irrevocable letter of credit or any other financial mechanism approved by the City in the amount equivalent to \$50,000.00 within fourteen (14) days of being requested. The security shall be in an approved form acceptable to the City. This security mechanism will remain in effect for the life of the Contract with the value. The costs associated with maintaining the required security mechanism shall be included in the total Proposal Price.

Proposals that are unsigned, improperly executed, incomplete, conditional, illegible, obscure, have arithmetical errors, or additions not called for, reservations, erasures, alterations or irregularities of any kind or fail to provide the information requested therein, may be rejected by the City in its sole and unfettered discretion.

After the proposal closing date and prior to the "Notice of Acceptance" to the successful Proponent, the City may enter into pre-award negotiations with any or all the Proponents.

Duration of Offer: Proposals shall remain irrevocable for a period of sixty (60) days following the proposal closing date in order to allow for the City to undertake the evaluation of proposals received and to undertake the negotiations in accordance with its internal review of the submission.

#### **d) Bid Security**

Submissions must include bid security of \$5,000.00. The form of security acceptable to the City is either bid bond from a surety company licensed to do business in Alberta or a certified cheque made payable to the City of Leduc.

#### **e) Proposals Irrevocable**

The form of Proposal provided in the Request for Proposals Document is to be executed as a specialty instrument. After the Proposals have been officially opened, the Proposal shall be irrevocable until it is considered and the Contract is awarded by officials from the City.

#### **f) Proprietary Information**

The City will treat all information received as proprietary information and will not use or incorporate such material into other designs or packages. The information provided by the Proponents will be used for assessing the proposals received.

#### **g) Statutory Declaration (Attached)**

#### **h) Disclaimer of Liability and Indemnity**

By submitting a Proposal, a Proponent agrees:

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

1. to be responsible for conducting its own due diligence on data and information upon which its Proposal is based;
2. that it has fully satisfied itself as to its rights and the nature extended to the risks it will be assuming;
3. that it has gathered all information necessary to perform all of its obligations under its Proposal and the Contract;
4. that it is solely responsible for ensuring that it has all information necessary to prepare its Proposal and for independently verifying and informing itself with respect to any terms or conditions that may affect its Proposal;
5. to hold harmless the City, its elected officials, officers, employees, insurers, agents or advisors and all of their respective successors and assigns, from all claims, liability and costs related to all aspects of the RFP process;
6. that it shall not be entitled to claim against the City, its elected officials, officers, employees, insurers, agents or advisors on grounds that any information, whether obtained from the City or otherwise (including information made available by its elected officials, officers, employees, agents or advisors, regardless of the manner or form in which the information is provided) is incorrect or insufficient;
7. that the City will not be responsible for any costs, expenses, losses, damages or liability incurred by the Proponent as a result of or arising out of submitting a Proposal or due to the City's acceptance or non-acceptance of its Proposal; and
8. to waive any right to contest in any proceeding, case, action or application, the right of the City to negotiate with any Proponent for the Contract whomever the City deems, in its sole and unfettered discretion, to have submitted the Proposal most beneficial to the City.

#### **i) No Tender and No Contractual Relationships**

1. This selection process is not a tendering process but a Request for Proposal. It is part of an overall selection process intended to enable the City to identify a potential Successful Proponent. The submission of a Proposal does not constitute a legally binding agreement between the City and any Proponent. For greater certainty, by submission of its Proposal, the Proponent acknowledges and agrees that there will be no initiation of contractual obligations or the creation of contractual obligations as between the City and the Proponent arising from this RFP or the submission of a Proposal.

#### **j) Representations and Warranties**

1. The City makes no representations or warranties other than those expressly contained herein as to the accuracy and/or completeness of the information provided in this RFP.
2. Proponents are hereby required to satisfy themselves as to the accuracy and/or completeness of the information provided in this RFP.



## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

#### **k) Information Disclosure and Confidentiality**

1. All documents submitted to the City will be subject to the protection and disclosure provisions of the Freedom of Information and Protection of Privacy Act ("FOIP"). FOIP allows persons a right of access to records in the City's custody or control. It also prohibits the City from disclosing the Proponent's personal or business information where disclosure would be harmful to the Proponent's business interests or would be an unreasonable invasion of personal privacy as defined in sections 15 and 16 of FOIP. Proponents are encouraged to identify what portions of their submissions are confidential and what harm could reasonably be expected from its disclosure. However, the City cannot assure Proponents that any portion of the Proponent's documents can be kept confidential under FOIP.

**REQUEST FOR PROPOSALS**

**Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

**Statutory Declaration**

This Proposal is submitted by:

COMPANY:

\_\_\_\_\_

ADDRESS:

\_\_\_\_\_

\_\_\_\_\_

TELEPHONE NO.:

\_\_\_\_\_

FAX NO:

\_\_\_\_\_

\_\_\_\_\_

Pursuant to the Request for Proposals dated

\_\_\_\_\_

We,

\_\_\_\_\_

(Name of Proponent)

The undersigned certifies on behalf of the Proponent that the Proponent is familiar with all of the requirements specified in the Request for Proposals and the Contract Documents provided with the Request for Proposals and that all addenda have been received and understood and that the following addendum may form part of the Contract Documents.

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

\_\_\_\_\_ Date \_\_\_\_\_

(Name of Proponent)

\_\_\_\_\_

(Name of Signing Officer)

Signature of Signing Officer and Corporate Seal:

\_\_\_\_\_

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

#### **A. Collection and Processing Of Curbside Recyclable Materials**

---

In this service component the City is looking to industry to provide options related to collection of curbside recyclable materials from approximately 5300 single family dwellings, duplexes and up to five-plex residential type dwellings.

Proponents submitting a response to this service requirement should consider the following:

- **Minimum Service Requirements**
  - i) Curbside collection of newspaper, mixed paper, corrugated cardboard, tin cans, aluminum cans, plastic containers, milk jugs, glass jars and bottles.
  - ii) Service is year round and must be done at a minimum of bi weekly.
- **Description Of Collection Methodology**
  - i) single stream co mingled
  - ii) dual stream co mingled
  - iii) Blue bag or blue box
  - iv) Tote carts
  - v) other
- **Diversion Goals**

Submission should provide anticipated annual diversion goals based on experience of similar programs.
- **Cost**
  - i) Must be expressed all inclusive of collection, processing and marketing.
  - ii) Must be expressed in a cost per unit per month format.
  - iii) Must identify processing cost included in unit rate on per tonne basis.
  - iv) If the collection methodology includes the use of tote carts, costing for the carts should be identified as a separate cost line item with a description of how carts will be funded.
  - v) Identify at outset of any potential extra cost variables.

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

- **Education And Public Awareness**

Preparation of a narrative description of the proposed communication strategy used to educate and inform Leduc residents about curbside collection of recyclables. This strategy should address and define roles and responsibilities related to program start up and continuous education during the term of the agreement. Include attendance and participation at public forums if deemed necessary as part of the initial start up and on going delivery of service.

- **Implementation Schedule**

Please outline the implementation schedule if work was to commence April 1, 2008.

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

#### **B. Collection and Processing Of Household Organics**

---

In this service component the City is looking for industry to provide options related to collection of curbside household organic materials from approximately 5300 single family dwellings, duplexes and five-plex residential households.

When submitting under this service category Proponents are advised that materials collected under this program are not accepted or eligible for acceptance at the Leduc and District Regional Landfill Facility.

- Minimum service requirements
  - i) Curbside collection of household organics - "kitchen waste" and commingled yard waste;
  - ii) Collection service is year round and must be done a minimum of bi weekly in winter months (November to March) and weekly in summer months (April to October);
  - iii) Materials collected under this program are to be processed at a properly licensed composting facility.

- Description of collection methodology

While it is anticipated that organic carts will be the preferred collection methodology, the City will consider alternative methods.

- Cost

- i) Collection must be expressed all inclusive of collection and processing.
- ii) If the collection methodology includes use of tote carts, costing for the carts should be identified as a separate cost line item with a description of how carts will be funded.
- iii) Must identify processing costs expressed on per tonne basis.
- iv) Identify at the outset any potential extra cost variables.

- Processing Facility and Technology

Submission shall include a description of the proposed processing facility. At a minimum include location, capacity and pertinent operating permit information. Also a description of the composting process and potential end use for the compost should be included with the submission.

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

- **Education And Public Awareness**

Preparation of a narrative description of the proposed communication strategy used to educate and inform Leduc residents about curbside collection of household organics. This strategy should address and define roles and responsibilities related to the program start up and continuous education during the term of the agreement. Include attendance and participation at public forums if deemed necessary as part of the initial start up and on going delivery of service.

- **Implementation Schedule**

Please outline the implementation schedule if work was to commence April 1, 2008.

## REQUEST FOR PROPOSALS

### Curbside Collection of Household Recyclables, Organics And Recycle Depot Services

#### C. Collection of Yard Waste

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Currently the City operates a spring and fall yard waste collection program under the umbrella of its existing residential collection contract. This service extends to the end of the current agreement in 2010. The City is requesting that Proponents submit pricing based on the assumption that the work would commence in the spring of 2010. This service component requests options related to the collection of curbside yard waste from approximately 5300 single family dwellings, duplexes and five-plex residential households.

- Minimum service requirements

- i) Curbside collection of yard waste
- ii) Collection service is seasonal (April to October)
- iii) Weekly during the season

- Description of collection methodology

Proponents should include a narrative description related to the collection strategy; cart, clear bag, bio bag, etc.

- Cost

- i) Costs shall be all inclusive of collection and transportation to the City's processing facility currently located at the Leduc & District Regional Waste Management Facility.
- ii) If the collection methodology includes use of tote carts, costing for the carts should be identified as a separate cost line item with a description of how carts will be funded.
- iii) Cost of processing will be provided by others.
- iv) Identify at the outset any potential extra cost variables.

- Processing Facility

While the City will supply processing, alternatives will be considered.

- Education And Public Awareness

Preparation of a narrative description of the proposed communication strategy used to educate and inform Leduc residents about curbside collection of yard wastes. This strategy should address and define roles and responsibilities related to program start up and continuous education during the term of the agreement.

## **REQUEST FOR PROPOSALS**

### **Curbside Collection of Household Recyclables, Organics And Recycle Depot Services**

Include attendance and participation at public forums if deemed necessary as part of the initial start up and on going delivery of service.

- **Implementation Schedule**

Please outline the implementation schedule if work was to commence April 1, 2010.



## REQUEST FOR PROPOSALS

### Curbside Collection of Household Recyclables, Organics And Recycle Depot Services

#### D. Recycle Depot Services

---

Currently the City provides residents and businesses with recycling services by means of a voluntary drop off Recycling Depot located at 6102 - 46 Street. The City may continue to offer this service for small businesses, apartment residents and residents that are not serviced under the umbrella curbside collection program. Under the current program the depot accepts recyclables separated by material type and utilizes a combination of City owned containers and contractor supplied containers. The going forward strategy anticipates the depot will be configured to mirror and support the curbside collection program. Submissions should indicate strategy related to mirroring the curbside program as well as servicing the City owned containers and provision of additional containers as required.

City supplied containers

One 40 cubic yard roll off container (corrugated cardboard)

One stationary compactor

Three closed top 30 cubic yard roll off containers

Two steller lift containers

Contractor supplied container(s)

Closed top containers as required. Number of additional containers service frequency to be identified by the contractor to prevent overloading of containers.

- Cost for:
  - i) Haulage of containers to processing facility,
  - ii) Contractor supplied containers,
  - iii) Processing,
  - iv) Identify at the outset any potential extra cost variables.
- Processing Facility

Submissions shall identify the processing facilities and proposed processing fees and/or rebates.
- Sale of Products

Submissions should include options for sale of the product and a revenue sharing with the City.
- Education And Public Awareness

Prepare a narrative description of the Proponents' strategy to communicate and inform Leduc businesses and residents about proposed changes to depot activity.
- Work to commence April 1, 2008.

**REQUEST FOR PROPOSALS****Curbside Collection of Household Recyclables, Organics And Recycle Depot Services****Costing Table****A. Collection And Processing Of Curbside Recyclable Materials**

<b>Curbside Collection</b>	<b>Collection Frequency</b>	<b>Cost Per Unit / Month</b>	<b>Processing Cost per MT<sup>1</sup></b>
	Weekly		
	Bi Weekly		
Recycle Tote Carts	One Time Set Up Cost		
	Cost Per Unit / Month		

**B. Collection And Processing Of Household Organics**

<b>Curbside Collection</b>	<b>Collection Frequency</b>	<b>Cost Per Unit / Month</b>	<b>Processing Cost per MT<sup>2</sup></b>
	Weekly		
	Bi Weekly (winter only)		
Organic Carts	One Time Set Up Cost		
	Cost Per Unit / Month		

**C. Collection of Yard Waste**

<b>Curbside Collection</b>	<b>Collection Frequency</b>	<b>Cost Per Unit / Month</b>
Weekly Summer Only		
Tote Carts		
One Time Set Up Cost		
Cost Per Unit / Month		

<sup>1</sup> Pricing is all inclusive of processing but for comparative purposes the cost of processing is requested.

<sup>2</sup> Pricing is all inclusive of processing but for comparative purposes the cost of processing is requested.

# REQUEST FOR PROPOSALS

## Curbside Collection of Household Recyclables, Organics And Recycle Depot Services

### D. Recycle Depot Services

	Cost per haul	Container Rental	Processing costs per MT (rebates)
City Owned		N/A	
Contractor Owned			



## **Request For Proposals Town of Beaumont Waste Management Services**

The Town of Beaumont requests proposals for:

- The collection and disposal of residential and Town generated waste
- Curbside recycling services; and
- Recycling station services

Sealed proposals will be received until **2:00 p.m. (local time), Thursday, May 18, 2006** (the "closing time") by:

Jim Stansberry  
Manager of Planning and Engineering  
Town of Beaumont  
5600 – 49 Street  
Beaumont, AB. T4X 1A1

FAX: 929-3300

The Town of Beaumont reserves the right to accept or reject any and all Proposals, and waive irregularities and informalities at its discretion. The Town reserves the right to accept a Proposal other than the lowest Proposal, without stating reasons. By submitting its Proposal, the Bidder waives any right to contest, in any proceedings or action, the right of the Town to accept or reject any Proposal in its sole and unfettered discretion. Without limiting the generality of the foregoing, the Town may consider any other factor besides price and capability to perform the Work in its sole and unfettered discretion.

### **Further information:**

Any communication regarding the proposal prior to the closing time must be made in writing and sent via FAX to:

Jim Stansberry  
Manager of Planning and Engineering  
Town of Beaumont  
5600 – 49 Street  
Beaumont, AB. T4X 1A1

FAX: 929-3300

Other curbside, multiple bag system options with respective rates, which include, but are not limited to:

- Blue bag recyclables/summer yard waste/garbage

- Variable bag limit system curb respective costs (four bag limit, 3 bag limit etc.) will also be considered.

**Evaluation Criteria:**

1. Completeness of the proposal
2. Quality of Service
3. Cost
4. Waste reduction initiatives
5. Recycling initiatives

**Cost Structure:**

The Town requests that the cost structure be given in all inclusive unit costs excluding GST i.e. monthly cost per household for residential collection and lift cost per front end unit.

## TENDER FORM

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**CONTRACT:**           **Town of Beaumont Garbage Collection Contract**

**TENDER OF:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(Address)

**TO:**                   **Town of Beaumont**  
                          **5600 - 49 Street**  
                          **Beaumont, Alberta**  
                          **T4X 1A1**

The undersigned has carefully examined the Instruction to Tender Agreement and the Appendixes that are attached and include for the following:

1. Bid Schedule
2. Contract Agreement
3. Appendix A - Pick up schedule for the Town of Beaumont

This offer is irrevocable for sixty (60) days from the date in which the tenders are opened and if accepted within sixty (60) days, the undersigned will undertake to enter into a contract.

Dated at \_\_\_\_\_

This \_\_\_\_\_ day of \_\_\_\_\_, A.D. 2006

Signed:

\_\_\_\_\_  
NAME OF COMPANY

Per:

\_\_\_\_\_  
AUTHORIZED SIGNING OFFICER

(SEAL)

\_\_\_\_\_  
ADDRESS

THIS AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_, 2006.

BETWEEN:

THE TOWN OF BEAUMONT, A Municipal Corporation in the Province of Alberta,  
hereinafter called the "Town"

OF THE FIRST PART

- and -

RESIDENTIAL WASTE COLLECTION CONTRACTOR,  
hereinafter called the "Contractor"

OF THE SECOND PART

### **GARBAGE COLLECTION AGREEMENT**

WHEREAS, the Town of Beaumont has By-Law Number 260 in effect to regulate  
a scavenging system for the said Town;

AND WHEREAS, the Town of Beaumont, desires to enter into an agreement  
with the Contractor to carry out and fulfill the duties of the residential garbage collection and  
recycling;

NOW THEREFORE, in consideration of the mutual covenants, agreements and  
considerations contained therein, the Town and the Contractor hereby agree as hereinafter set  
forth;

#### **1. DEFINITIONS**

In the Agreement, unless there is something in the subject matter or consistent therewith:

- 1.1 "Dwelling Unit" means a single family house, each unit of a duplex, triplex, fourplex  
or multiplex.
- 1.2 "Non residential" means business, commercial and industrial establishments and  
apartment buildings.

- 1.3 "Garbage" means all kitchen and table leavings, condemned meats, fish, fruits, vegetables and other such like waste and decomposing matter, tin cans, broken dishes, glasses, rags, cast off clothing, waste paper, food containers, grass cuttings, shrubbery and tree prunings, weeds, garden refuse, and other such like solid waste material, but does not include manure, tree stumps, roots, turf, earth waste or waste that accumulates as a result of building operations and renovations.
- 1.4 "Contractor" means the Contractor's Supervisor or Manager who will control and direct the performance of the Contractor's obligations under this Agreement;
- 1.5 "Regional Landfill" means the Leduc Regional Landfill site located on the property legally described as NE ¼ - 29 - 49 - 24 - W4th;
- 1.6 "Schedule" means the Garbage collection schedule and any amendments thereto as provided for in Appendix A;
- 1.7 "Semi-Automated System" means a Garbage collection system utilizing trucks which are capable of being loaded either manually or by using automated means;
- 1.8 "Director of Engineering" means the Manager of Planning and Engineering;

## **2. TERM AND OPTION TO RENEW**

- 2.1 The term of this Agreement shall be from June 1, 2006 to May 31, 2009.
- 2.2 The parties hereto may extend this Agreement an additional three year term by mutual agreement in writing at least sixty (60) days prior to the expiration of the term.

## **3. EQUIPMENT AND SERVICES**

- 3.1 The Contractor shall collect all Garbage from all residential users using a Semi-Automated System, and deliver all Garbage collected to the Regional Landfill, and shall provide all manpower, equipment and resources necessary to perform these tasks.
- 3.2 Contractor shall collect Garbage from Premises according to the following frequency:
  - a) From Residential Units, once per week; and in accordance with the Schedule Plan (Appendix A);
  - b) That provides for pickup on Tuesday, Wednesday, Thursday and Friday. As part of this contract, this schedule is to be maintained. Normal pickup is to be provided between the hours of 7:00 a.m. to 4:30 p.m.



- 3.3 The Contractor shall designate a person to supervise and manage the performance of the Contractor's obligations under this Agreement.
- 3.4 Services under this Agreement shall be performed utilizing tandem axle trucks of no more than a twenty-nine (29) yard capacity with a GWV of not greater than 23,100 kgs.
- 3.5 The Contractor shall provide for a Semi-Automated System compatible with Shaeffer roll out containers or their equivalent. The Contractor will provide a list of what type, model and year of collection vehicles that will be utilized in this contract.
- 3.6 In addition to the services described above, the following special services shall be performed by the Contractor.
- a) For a period of four (4) weeks after Christmas day, the Contractor shall collect Christmas trees from all residential units regularly collected. Property owners will be advised to cut the trees into lengths not greater than a maximum four (4) feet. Normal pickup service shall be provided during the Christmas holiday period.
  - b) Clean Up Week (Spring and Fall): In addition as part of the service, the Contractor is to remove items that would normally not be included in the weekly pickup due to such factors as size, weight, type of material, etc. The intent of the cleanup week is to give property owners an opportunity to have large and bulky refuse removed that would not otherwise be collected. The Town shall be responsible for advertising costs during the first week of May and October. The Contractor is to provide a bin for the collection of white goods and shall arrange for the recycling of the same. In the past, a 30-yard bin provided by the contractor has been provided for this purpose and left at the Recycling Depot for about a week.
- 3.7 General performance of work during garbage collection is to include for the following:
- a) Return of containers to the curbside location as placed by the property owner.
  - b) Containers to be returned to their upright position.
  - c) That customer service shall be the focus of the personnel used in carrying out the work.
  - d) That any garbage spilled during the loading process be collected and picked up.
  - e) That the instructions received from the Director of Engineering be followed in the execution of the work.
  - f) That equipment leaking oil from hydraulic or drive systems not be used.
  - g) That personnel shall act professionally during the execution of their duties.

- h) All areas to be picked up within 24 hours of scheduled time.
- i) Same day service for all missed pick-ups that are identified before noon of that day.

#### **4. COVENANTS OF THE CONTRACTOR**

- 4.1 The Contractor shall observe and comply with all applicable laws, ordinances, codes and regulations of government agencies, including Federal, Provincial, Municipal and local governing bodies having jurisdiction pursuant to this Agreement.
- 4.2 The Contractor shall abide by the Schedule unless situations dictate otherwise.
- 4.3 The Contractor shall dispose of all Garbage collected to the Regional Landfill in a safe, effective and efficient manner.
- 4.4 The Contractor shall ensure that the trucks utilized in performing the services pursuant to this Agreement are driven in a safe and courteous manner, with due consideration to protection of those roads and highways with the Municipality, and those roads and highways to the Regional Landfill.

#### **5. TOWN RESPONSIBILITIES**

- 5.1 The Town on an ongoing basis provides notice to the public on garbage related issues that includes for advertising for cleanup week, recycling initiatives and all other related subjects.
- 5.2 The Town shall arrange for the maintenance of the recycling bins as required through normal wear and tear. Damage caused through fault of the contractor shall be repaired at their cost.
- 5.3 The Town is a member of the Leduc and District Waste Management Authority and is responsible for payment of Landfill tonnage fees for residential garbage collection under this contract.
- 5.4 The Town will be responsible calculating and notifying the Contractor of the revised pickup number for each of September, December, March and June of each year, and respective monthly contract fee.

#### **6. CHARGES AND RATES**

- 6.1 The Municipality agrees to reimburse the Contractor for the services according to the following:
  - a) Based on the number of active residential water meter accounts, which is equal to the total number of water (meter) customers less the number of commercial users. (Note: For April 1, 2006, the number of residential meters was 2759.)

- b) Number of residential pickups is adjusted on September, December, March and June 1st of each year.
- c) The Contract unit price(s) is for each of 2006, 2007, 2008 and 2009 for the periods June 1 to May 31 of each contract year.
- d) The unit price bid(s) are to be all inclusive for the residential garbage pickup, yearly spring and fall cleanup week held during the first week in May and October.
- e) Optional prices to be considered; curbside blue bag by collection and curbside yard waste collection.

The Town will notify the Contractor if it will proceed with either Option 1, the curbside collection of recyclables and/or Option 2, the collection of curbside yard waste.

- 6.2 The amounts payable for the unit price shall be considered full compensation to the Contractor for the services rendered under this Agreement.
- 6.3 The Contractor shall provide the Municipality with an invoice for each month within seven (7) days of month end. The Municipality shall pay each invoice within thirty (30) days of receipt.

## **7. OCCUPATIONAL HEALTH AND SAFETY AND WORKERS COMPENSATION**

- 7.1 The Contractor shall comply with the provisions of the Occupational Health and Safety Act, R.S.A. 2000, Chapter O-2 and amendments thereto together with all rules and regulations made thereunder.
- 7.2 The Contractor shall comply with the provisions of the Workers' Compensation Act, R.S.A., 2000, Chapter W-15, and amendments thereto together with all rules and regulations made thereunder. Upon receiving written request from the Town, the Contractor shall provide the Town with evidence of such compliance.
- 7.3 The Contractor shall provide and maintain, during the life of the contract, Worker's Compensation Insurance for all of the Contractor's employees. The Compensation number of the Contractor shall be filed with the Town yearly.

## **8. INDEMNITY, INSURANCE AND PERFORMANCE BOND**

- 8.1 The Town shall not be liable for any death, injury, loss or damage of the Contractor or its employees, agents, representatives or contractors resulting either directly or indirectly from any cause whatsoever related to this Agreement, including, but not limited to, the negligence of the Town or its employees, servants, agents, contractors, officials or representatives.

- 8.2 The Contractor shall indemnify and save the Town harmless from and against any and all claims, losses, demands, liabilities, fines, costs, penalties and consequences whatsoever resulting, directly or indirectly, from any non-compliance with or violation by the Contractor of any of its obligations contained in this Agreement.
- 8.3 Throughout the term of this Agreement and any renewal term, the Contractor shall maintain in force and effect the following insurance:
- a) Standard automobile, bodily injury and property damage insurance providing coverage of at least \$2,000,000 inclusive for accidental injury to or death of one or more persons or damage to or destruction of property as a result of one accident;
  - b) A comprehensive general liability insurance policy providing coverage of at least \$2,000,000 inclusive for accidental injury to or death of one or more persons and property damage as a result of one accident. This coverage is to include:
    - i) non-owned motor vehicles;
    - ii) independent contractors;
    - iii) contractual liability including this Agreement;
    - iv) broad form property damage endorsements.
  - c) Such other insurance as may be required by the Town from time to time.
- 8.4 The Contractor shall file with the Director of Engineering, Certificates of Insurance acceptable to the Town. The Certificates of Insurance shall contain a provision that it will not be cancelled without sixty (60) days prior written notice to the Director of Engineering.

## **9. DEFAULT AND TERMINATION**

- 9.1 An 'event of default' shall occur whenever:
- a) The Contractor has breached any of its obligations pursuant to this Agreement and has failed to remedy such breach within thirty (30) days after notice in writing from the Town;
  - b) The Contractor becomes bankrupt or insolvent or takes the benefit of any statute for bankrupt or insolvent debtors or makes any proposal, assignment or arrangement with its creditors or any steps are taken or proceedings commenced by any person for the dissolution, winding up or other termination of the Contractor's existence or the liquidation of its assets;
  - c) A trustee, receiver, receiver-manager or like person is appointed with respect to the business or assets of the Contractor;
  - d) The Contractor's assets are taken under a Writ of Execution, attachment, distress or similar judicial or extra-judicial procedure;

e) The Contractor purports to assign all or any part of its rights or obligations under this Agreement, other than in the manner provided for in this Agreement.

9.2 If an event of default occurs, the Town may, at its option, given written notice to the Contractor terminating this Agreement.

9.3 If the Contractor commits an event of default under this Agreement and as a result it is necessary or expedites for the Town to arrange for the services to be performed by someone other than the Contractor, all costs to the Town of obtaining those services until such time as the Town elects to terminate this Agreement shall be paid by the Contractor, which cost may be set off against any amounts owing by the Town to the Contractor pursuant to this Agreement.

## 10. ARBITRATION

10.1 All matters in dispute under this Agreement shall be submitted to arbitration by a panel of three (3) arbitrators. Each party shall appoint one (1) arbitrator and the third arbitrator shall be appointed by the two party's nominees. The arbitration shall be in accordance with the Arbitration Act of the Province of Alberta and the decision reached shall be final and binding upon the parties hereto.

## 11. RECYCLING PROGRAM

11.1 The Recycling Program that provides for the recycling of newspaper, corrugated cardboard and other marketable materials as deemed 'marketable' by both the Town of Beaumont and the Contractor, are to be recycled whereby the following applies:

- a) That two (2), thirty (30) yard bins owned by the Town are situated at the Recycling Depot site located at the Beaumont Regional Activity Centre. One bin to be used for the collection and recycling of newsprint and other bin is used for collection and recycling of corrugated cardboard.
- b) That haulage and handling of the recycling materials from the site to a designated recycler is to be the responsibility of the Contractor whereby transportation expenses are the cost of the Contractor; and that revenues generated from the sale of the materials are to be received by the Contractor. It is a condition of this contract that the materials be recycled and that the Contractor partner with a recycling firm to carry out this recycling responsibility. The Town may at any time request information on how the materials are being recycled.
- c) That the Town is to be responsible for general cleanup around the recycling site. The removal of contaminated material from the recycling material is the responsibility of the Contractor or the end receiver of the material.

**12. ASSIGNMENT AND SUB-LETTING**

- 12.1 **NO** assignment of the Contract or any right occurring under this Contract shall be made in whole or part by the Contractor, without the express written consent of the Town.

IN WITNESS WHEREOF the parties have executed this Agreement as of the  
day and year first above written.

TOWN OF BEAUMONT

PER: \_\_\_\_\_

THE CONTRACTOR

PER: \_\_\_\_\_

## RESIDENTIAL GARBAGE PICKUP

	Quantity Unit Month Pickups	Unit Price	Extension
1. <b>Calendar Year 2006</b> 2006 (Monthly residential pickups per year – weekly pickup for 7 months)	20,279		
2. <b>Calendar Year 2007</b> 2007 (Monthly residential pickups per year – weekly pickup for 12 months)	35,088		
3. <b>Calendar Year 2008</b> 2008 (Monthly residential pickups per year – weekly pickup for 12 months)	36,840		
4 <b>Calendar Year 2009</b> 2009 (Monthly residential pickups per year – weekly pickup for 5 months)	16,120		
	<b>TOTAL</b>		

**NOTE: GST is extra.**

Note: Growth Rate 5% per year assumed in  
Quantities from 2006 to 2009

## Equipment List

[illegible]



**BRAC Recycle Area (5330 – 50 Street)**

Could be relocated to proposed operations facility North of TWP Rd 510 and West of 50<sup>th</sup> Street.

Supply a cost per pick-up:

**UNIT PRICE (Per Pick-up)**

O.N.P.      1 Town owned 40 yard bin "as required" \_\_\_\_\_

Normal weekly \_\_\_\_\_

OCC      1 Town owned 40 yard bin "as required" \_\_\_\_\_

Normal daily \_\_\_\_\_

**NOTE:**      GST is extra.

*Goes to recycle facility of Contractor choice. All revenue to go to Contractor with copy of weights provided to Town.*

Supply a cost per pick-up for::

**UNIT PRICE (Per Pick-up)**

Mixed Plastic      1 Contractor supplied 40 yard bin "as required" \_\_\_\_\_

Mixed Paper      1 Contractor supplied 40 yard bin "as required" \_\_\_\_\_

Glass      1 Contractor supplied 6 yard bin "as required" \_\_\_\_\_

Metal Cans      1 Contractor supplied 6 yard bin "as required" \_\_\_\_\_

**NOTE:**      GST is extra.

**BRAC Building:**

Supply two 6 yard commercial front-load bins  
Frequency is twice per week.

\_\_\_\_\_

**Town Office**

Supply one 4 yard commercial front-load bin  
Frequency is once per week.

\_\_\_\_\_

**OPTION I**

Weekly collection of blue bag recyclables from curbside residential areas:

			<u>Unit Price</u>	<u>Extension</u>
1.	Calendar Year 2006	22280	_____	_____
2.	Calendar Year 2007	35088	_____	_____
3.	Calendar Year 2008	36840	_____	_____
4.	Calendar Year 2009	12896	_____	_____

**NOTE:** GST is extra.

**OPTION II**

Weekly collection of yard waste organics from residential areas (April 1 – October 31). To be taken to Leduc and District Regional Land Fill. Tipping fees to be paid by Town directly to Land Fill.

			<u>Unit Price</u>	<u>Extension</u>
1.	Calendar Year 2006	14485	_____	_____
2.	Calendar Year 2007	20468	_____	_____
3.	Calendar Year 2008	21490	_____	_____
4.	Calendar Year 2009	6448	_____	_____

**NOTE:** GST is extra.

**City of Camrose**  
Solid Waste Collection and Diversion Study

**Section 5: Action Plan/  
Implementation  
Report**



**KC ENVIRONMENTAL  
GROUP LTD.**

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b> .....	<b>II</b>
<b>FIGURES</b> .....	<b>III</b>
<b>1.0 INTRODUCTION</b> .....	<b>1</b>
<b>2.0 CURRENT SYSTEM SUMMARY</b> .....	<b>1</b>
<b>2.1 WASTE COLLECTION AND DISPOSAL</b> .....	<b>1</b>
2.1.1 <i>RECYCLING</i> .....	1
2.1.2 <i>COMPOSTING</i> .....	2
2.1.3 <i>DIVERSION RATES</i> .....	2
<b>3.0 RECOMMENDATIONS</b> .....	<b>3</b>
<b>3.1 WASTE MANAGEMENT STRATEGY AND GOALS</b> .....	<b>3</b>
<b>3.2 PUBLIC EDUCATION PROGRAM AND ENHANCED SOCIAL MARKETING</b> .....	<b>6</b>
<b>3.3 WASTE COLLECTION</b> .....	<b>8</b>
3.3.1 <i>CART SYSTEM</i> .....	8
3.3.2 <i>BAG/CART LIMIT</i> .....	9
<b>3.4 TENDERING PROCESS</b> .....	<b>9</b>
<b>3.5 COMPOSTING</b> .....	<b>10</b>
<b>3.6 RECYCLING</b> .....	<b>11</b>
3.6.1 <i>RECYCLING DEPOT</i> .....	11
3.6.2 <i>CURBSIDE COLLECTION OF RECYCLABLES</i> .....	12
3.6.3 <i>HOUSEHOLD HAZARDOUS WASTE COLLECTION</i> .....	13
<b>3.7 COMMERCIAL DIVERSION</b> .....	<b>13</b>
<b>3.8 OTHER OPTIONS</b> .....	<b>14</b>
<b>4.0 IMPLEMENTATION PLAN</b> .....	<b>14</b>

## FIGURES

Figure 1. Components of Successful Waste Diversion Programs.....	6
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## **1.0 INTRODUCTION**

This section provides a brief summary of the City of Camrose's current solid waste management system and provides recommendations and a timeline for an action plan.

## **2.0 CURRENT SYSTEM SUMMARY**

### **2.1 Waste Collection and Disposal**

The City of Camrose provides weekly residential waste collection to approximately 5400 households through its waste contract with Waste Services Inc. Also included in this contract is waste collection from a number of municipal facilities and approximately 20 garbage receptacles in the downtown area; as well as advertising for general collection and for a spring and fall "special" collection. This contract will expire in April, 2010.

The average annual amount of residential waste sent to landfill, based on 2006 to 2008 data is just less than 6000 tonnes. The recommended baseline year to measure goals and targets against is 2008 with 5800 tonnes of residential waste collected and disposed. Camrose residents disposed of 360 kg/capita/year in 2008, compared to the provincial average of 290 kg/capita/year.

In 2008, the city of Camrose disposed of approximately 25000 tonnes of municipal solid waste (MSW) which includes waste from both the residential and commercial sectors. The per capita MSW waste generation rate is therefore 1560 kg/capita/year compared to a provincial average of 1130 kg/capita and Alberta Environment's goal of 500 kg/capita. On average, 78% of Camrose's MSW is commercial waste which compares to an Alberta average of 66%. Therefore, programs which address commercial waste will have a significant impact on the amount of waste Camrose sends to landfill.

#### **2.1.1 Recycling**

The City of Camrose provides a manned recycling depot with operations contracted out to Centra Cam Vocational Training Association, a non-profit organization that provides employment programs for people in their program. The drop-off depot is open 24 hours a day, 7 days per week with staffing provided 8:00 AM to 4:00 PM Monday through Saturday, with one 3 hour shift on Sunday. In addition to recyclables, the depot also

has a composting bunker for yard waste and the city's pumpkin and Christmas tree composting program.

The depot diverted 94 kg/capita of residential waste in 2008 and 50 kg/capita of commercial waste. The residential diversion rate for the recycling depot is therefore 21%. This indicates good usage of the depot.

A local private company, TK Environmental provides recycling collection services for both commercial and residential sectors and takes recyclables to Centra Cam twice a week. The current fee for pickup is \$5/week based on approximately 300 hundred customers. TK estimates that if they are able to get 1000 customers they could charge \$5/month.

The City manages an Asphalt and Concrete Recycling Facility at the Camrose Regional Sanitary Landfill. 3364 tonnes of concrete were diverted from landfill in 2008.

Other recycling programs at the landfill divert an additional 686 tonnes of waste.

### **2.1.2 Composting**

In addition to the compost bunker at the recycling depot, the landfill has a compost compound for yard waste (leaf and grass). In 2008, 1800 tonnes of yard waste was diverted from landfill or 112 kg/capita. Including yard waste diverted through the recycling depot, Camrose's compost program diverts 2180 tonnes or 136 kg/capita.

TK Environmental is looking at expanding their private collection services to include yard waste collection in the spring of 2010.

### **2.1.3 Diversion Rates**

Approximately 21% of the residential waste stream is currently diverted through recycling and composting, compared to an average Alberta residential diversion rate of 27%. Approximately 18%<sup>1</sup> of the MSW waste stream is currently diverted through recycling and composting compared to a provincial average of 14.6%. Key to Camrose's MSW diversion is the City's concrete recycling program.

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<sup>1</sup> When concrete recycling is weighted to 4% of overall waste stream



The City of Camrose's current diversion programs at the recycle depot and landfill including concrete recycling resulted in greenhouse gas (GHG) savings of approximately 6700 tonnes of carbon dioxide equivalent. This is equivalent to any one of the following:

- Annual GHG emissions from 1227 passenger cars
- CO<sub>2</sub> emissions from 15,581 barrels of oil used
- CO<sub>2</sub> emissions from 89 tanker truck's use of gasoline
- CO<sub>2</sub> emissions from energy use of 610 homes
- Carbon sequestered from 171,795 tree seedlings grown for 10 years

### **3.0 RECOMMENDATIONS**

#### **3.1 Waste Management Strategy and Goals**

The City of Camrose currently has no specific solid waste management goals established, however general goals for environmental responsibility and green action are documented in the City's Strategic Plan.

The City is currently developing a municipal sustainability plan in partnership with Augustana College with the environment forming one of the pillars of the plan. As well, one of the deliverables of the Action Plan for the City's Actively Green strategic priority is the articulation of the City's environmental plan and policy.

A consistent theme throughout interviews with key stakeholders was recognition that Camrose residents want to be environmentally friendly and that it is important to set a goal.

The following survey responses are related to the development of a waste management strategy and goal:

1. 95% of respondents indicated the City should adopt a goal to increase diversion (or decrease waste sent to landfill) over the next five years
2. 41% of respondents indicated the goal should be to "divert more waste from landfill each year"





3. 40% of respondents selected a goal to reduce waste sent to landfill by at least 38% (or to 1000 kg/person/year from the current 1600 kg/person/year of municipal solid waste)
4. 63% of respondents were willing to pay at least an additional \$1 - \$5/month to add options to significantly reduced waste to landfill.

These responses indicate city residences are in favor of a Waste Reduction Strategy with an associated goal and that they are willing to pay an additional amount for that strategy to be implemented.

It is recommended that the City develop and document a Solid Waste Management Strategy that focuses on waste reduction and diversion.

Based on available waste management programs, an integrated waste management strategy should be developed. The strategy should be based on a set of priorities for managing solid waste in Camrose in the order of source reduction, resource recovery, and disposal and should include waste reduction goals and targets. The strategies should represent a progression towards higher diversion rates and hence a longer life expectancy for the current landfill.

Municipalities across Canada, as they become comfortable with the basic elements of waste diversion are expanding on their strategies to achieve higher diversion rates. An example of this is the increasing trend across North America and Europe to incorporate Zero Waste strategies. Zero waste regards all waste as a potential revenue stream and encourages the redesign of resource life cycles so that all products are reused, with the end result that minimal waste is sent to landfill.

The City may choose to include a Zero Waste statement in the strategy to illustrate the City's direction to reduce waste as much as possible. As an example of the implications of including a Zero Waste statement, the Town of Stony Plain has a goal to make all city events Zero Waste. This encourages waste management strategies to be incorporated at the planning stage and considers green procurement, source reduction, and reuse for each event.

Table 5.2 Program Cost Analysis in Section 5 should be referred to for comparative purposes as it shows program costs are easily balanced by program benefits and diversion.

Further public communications programs can be implemented to identify and adopt the preferred strategy.



**Recommendation 1: The City of Camrose develop a Solid Waste Management Strategy.**

**Recommendation 2: As the initial step in developing its Solid Waste Management, the City adopt the following goals:**

- **Reduce residential waste generation to 195 kg/capita by 2015.** This represents a 45% reduction in residential waste sent to landfill and moves the City towards the overall provincial target of 500 kg/capita of MSW of which Camrose' residential waste comprises 26%.
- **Reduce Municipal Solid Waste generation to 1000 kg/capita (including commercial waste) by 2015 .** This represents a 36% reduction in MSW sent to landfill of which Camrose's commercial waste comprises 74%.

Targets should be reviewed after 3 years, with new goals set for reductions in waste generation

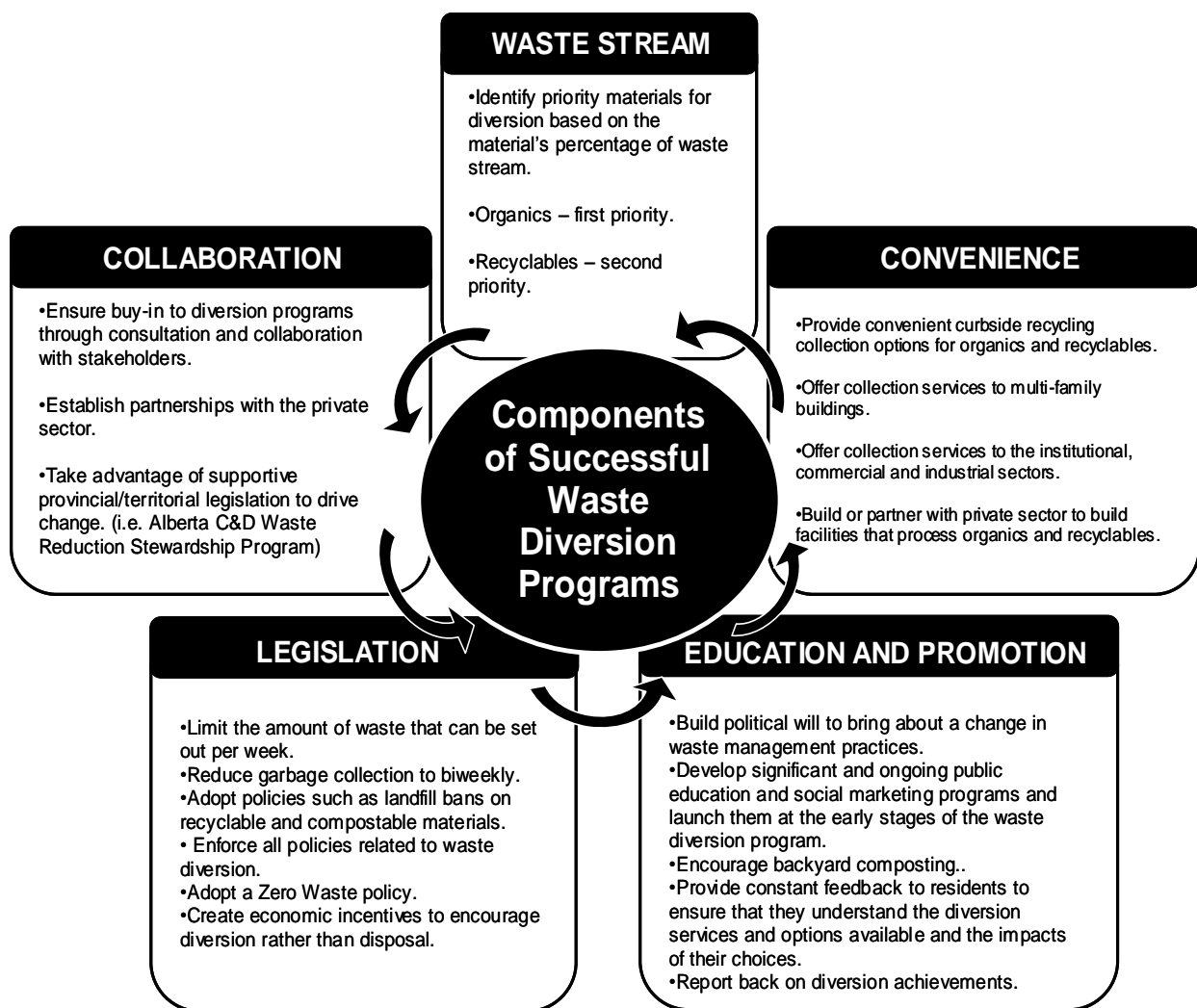
by 2020. These goals should reflect the achievements made over the 3 years and should move

the City closer to its Zero Waste strategy statement if one is established.

The chart on the following page illustrates successful diversion program components and should be considered when developing the City's solid waste management strategy.

**Recommendation 3: Consider Components of Successful Diversion Programs Chart When Developing Solid Waste Strategy**





Sources: KC Environmental Group Ltd. 2007, Green Municipal Fund, 2009

**Figure 1. Components of Successful Waste Diversion Programs**

### 3.2 Public Education Program and Enhanced Social Marketing

Survey results, and in particular the survey comments reinforced the need and desire for public education programs. For example, most respondents selected “More Education” as their 3<sup>rd</sup> preference for programs that the City should implement.



The City of Camrose has a strong foundation for an effective public education campaign. In order to increase participation rates and capture rates for existing and new solid waste management programs, the education program should include social marketing techniques.

The Education Program should:

1. Inform the public of the City's Waste Management Strategy (Recommendation 1) and goals (Recommendation 2);
2. Provide information on Camrose's waste stream and waste generation rates (information provided in Section 1);
3. Inform the public of the associated benefits and costs of alternative waste management strategies (Section 5).
4. Incorporate social marketing techniques to market the social good of participating in existing and new diversion programs.
5. Integrate all solid waste management programs under the City's solid waste management strategy and theme ("Paint Your World Green").
6. Provide social marketing training to the Educational Coordinator

The survey identified that communication with residents is best achieved through utility bill mail outs and articles in local newspapers. However, the Education Coordinator has identified a range of means for communication and has effectively delivered waste reduction messages through the school system and younger demographics. This should continue to be encouraged.

Program implementation, management and review should include public education and involvement throughout. This ongoing education program can be done in house through the City's Educational Coordinator position with a consultants' assistance as needed.

As more diversion programs are implemented the City should consider increasing the current Educational Coordinator position to full-time.

The City may also consider the following educational recommendations:

1. Mail Executive Summary of this report to households with the utility bill.
2. Hold ½ day session focused on solid waste management with key stakeholders (City staff, community representatives, haulers, recycling depot staff, etc). KC Environmental would present the findings of this study and recommendations for the waste management strategy would be consulted on.



**Recommendation 4: The City of Camrose implement an ongoing public education program that incorporates social marketing.**

### **3.3 Waste Collection**

The City's current waste collection contract expires April 1, 2010. This provides an opportunity for the City to collect bids for a range of collection options (waste, recyclables, and organics).

#### **3.3.1 Cart System**

More and more municipalities are implementing automated cart systems. In the Edmonton region, Devon, Beaumont, Stony Plain, Spruce Grove, and Strathcona County have moved to the cart system. Advantages and disadvantages of automated collection are outlined in Section 4: Diversion Options Analysis.

The cost to implement a one-cart system is estimated at \$80/household landed (including delivery to each house). If amortized over 5 years at 6%, the annual cost to implement a cart system is \$1.60/hh/month. If amortized over 10 years, this is reduced to \$0.90/hh/month. Maintenance of the cart system can either be contracted out or completed in house. Assuming \$20,000/year in maintenance costs, the total cost per household for 5 years is \$1.85/hh/month.

As automated collection requires a change to front lane pick-up this option requires an aggressive education and social marketing campaign. Therefore, it is recommended that the City consider implementing automated collection in the 3<sup>rd</sup> year of its solid waste management implementation plan or later.

To gauge the difference in collection costs for manual vs. automated collection, it is recommended that the City's tender documents request a rate for both collection options.

**Recommendation 5: The City of Camrose implement full-automated collection in 2012/2013.**



### **3.3.2 Bag/Cart Limit**

The current waste management system does not include any incentive to reduce waste. A 2 bag or 1 cart limit (one cart = 2 bags) should be phased in over a period of years. Bag limits achieve approximately 30% reduction in waste through change in behavior as a result of increased awareness of waste habits. The bag limit must be documented in the waste bylaw.

A bag or cart limit requires increased options to divert waste. Therefore, the bag/cart limit is recommended under an integrated system where other recommendations for waste diversion are implemented.

59% of survey respondents indicated the City should consider implementing a bag or cart limit (31% indicated the City should not).

It is recommended that a bag limit be phased in according to the following schedule:

2010: 6 bags

2012: 4 bags

2014: 2 bags

In 2012, if the City implements automated collection, the limit should be set at one cart (= 2 bags).

**Recommendation 6: City of Camrose Implement Bag Limit Phased in Over Three to Four Years**

### **3.4 Tendering Process**

It is recommended that the City issue tender documents that incorporate recommendations from this report and request quotes for curbside collection of recyclables and yard waste, and quotes for manual and automated collection

**Recommendation 7: Waste collection tender documents include requests for quotes for curbside collection of yard waste and recyclables, as well as automated and manual collection.**



### 3.5 Composting

Waste management strategies targeted to organics provide municipalities with the biggest “bang for the buck” because they are the largest component of the waste stream and provide the greatest diversion.

In the survey, spring and fall yard waste collection was selected the second most often as a 1<sup>st</sup> preference for options the City should consider implementing, and was selected most often as the 2<sup>nd</sup> preference. This indicates recognition among residents of the significance of organics in the overall waste stream.

It is recommended that spring through fall yard waste collection be implemented in the spring of 2010. As mentioned, the tender documents issued for waste collection should include requests for quotes for yard waste collection and bidders should provide clear requirements for the yard waste collection (i.e. acceptable containers). Current yard waste collection costs in the Edmonton region are estimated at \$5.00/household (for new contracts). To reduce collection costs for yard waste it is recommended that curbside collection for this waste stream only be provided initially from spring through fall (6 months) when yard waste generation is at its peak. This will reduce collection costs to \$2.50/hh when spread over the year.

Spring through fall yard waste collection can reduce waste sent to landfill by up to 35% (including other status quo waste diversion programs) and provides the single most effective diversion results of any diversion program. Increased processing costs at the landfill can be offset through the sale of carbon offset credits generated by the composting facility. Furthermore, when incorporating savings incurred by increased diversion, the full cost recovery rate is greatly reduced.

Although carts are the best method for the collection of yard and food waste, it is recommended that the City begin spring through fall yard waste collection with Kraft brown bags or in carts supplied by the homeowner with “organic” labels provided by the City. It is recommended that the City consider implementing organic waste carts allowing automated collection within the next five years.

For maximum diversion the bylaw should be changed to prohibit yard waste to landfill by the year 2012.

Food waste should be integrated in the yard waste collection program to further divert organics from landfill once organic carts have been implemented.



The current composting system at the landfill should be continued and expanded. To improve the capacity of the system with local resources and to update the system to include food waste, it is recommended that the Landfill Authority engage the assistance of a compost expert in two to three years time.

It is recommended that the City participate in Advanced Enviro Engineering's project to amalgamate carbon offset credits generated from municipal composting facilities in Alberta to generate revenues of approximately \$9000 for compost processed to date. Offsets generated from composting over the next four years should also be sold on the market. If curbside yard waste collection is implemented the city could generate \$40,000 over 4 years from this program.

**Recommendation 8: Implement Curbside Collection of Yard Waste Spring through Fall**

**Recommendation 9: Solid Waste Management Strategy identify organics as the priority for curbside collection based on its higher potential for diversion.**

### **3.6 Recycling**

#### **3.6.1 Recycling Depot**

The recycling depot is currently achieving fairly good diversion rates and residents are generally satisfied with the recycling depot.

There is no significant demand for an additional depot location however survey results did indicate a strong desire for more plastics options.

It is recommended that the recycling depot expand acceptable plastics to include #1 and #6 plastics both of which are widely accepted at recycling depots and have a high rate of marketability.

To reduce operational costs the recycling depot can be closed on an additional day. The best day based on survey results may be Tuesday.

A depot staff member should be trained to provide educational information to depot users both to reinforce the City's waste management strategy and to reduce





contamination. The staff member should focus on incoming commercial OCC to reduce contamination of this stream.

**Recommendation 10: The recycling depot expand acceptable plastics to include #1 and #6.**

**Recommendation 11: Depot staff should provide education to depot users to increase awareness of Solid Waste Management Strategy and to reduce contamination.**

### **3.6.2 Curbside Collection of Recyclables**

In the survey, curbside collection of recyclables was selected the most often as a 1<sup>st</sup> preference for options the City should consider implementing. This is not unexpected, as this option provides convenience. It is important to note that survey results did not indicate any one significantly strong desire (other than more plastics) for a certain option. For example, although curbside collection of recyclables was selected most often, this was only by 21% of respondents.

A curbside collection of recyclables program will likely increase Camrose's residential diversion by 8%. The current collection cost in the Edmonton area for blue bag collection is estimated at \$5.00/hh/month (for new contracts). This rate will be confirmed through the tendering process. Factoring in loss of recycle revenue from depot and an associated reduction in depot operating costs, the expected rate for this service is approximately \$5.50/hh/month.

**Recommendation 12: The City obtain quotes for curbside collection of recyclables in its 2010 waste collection tender.**

**Recommendation 13: The City consider implementing curbside collection of recyclables in 2012 when bag/cart limit is implemented.**



### **3.6.3 Household Hazardous Waste Collection**

The City currently captures approximately 10% of the available household hazardous waste (HHW) stream through its two roundups. Although only 2% of the residential waste stream, it is important to increase HHW capture rates due to their potential negative environmental impacts.

38% of survey respondents indicated the City should maintain current HHW service levels, 21% indicated the City should increase roundups to once/month and 37% indicated the City should provide a permanent HHW facility.

It is recommended that the City integrate HHW promotion in its Solid Waste Strategy and in its public education campaign. The City should continue to monitor whether the current infrastructure meets demand and in the short run. It is recommended that the city consult with the recycling depot and the City's current HHW processor (and other processors) to develop HHW collection facility at the depot spring through fall. Health and safety education on handling materials and increased processing requirements should be considered in the consultation.

**Recommendation 12: The City considered implementing spring through fall HHW collection at the recycling depot.**

### **3.7 Commercial Diversion**

The landfill should move away from being primarily a “dumping” location to a Resource Recovery Facility (RRF). This should be reflected both through signage, and through ease of use for diversion and separation.

A C&D (construction and demolition) diversion program should be established at the landfill to meet the demand that will result from Alberta's C&D Waste Reduction Stewardship Program expected to be implemented in 2010. Items to focus on are drywall, drywall with wood ends, and wood.

The City should work closely with the University of Alberta Augustana campus and keep apprised of waste management strategies employed by the campus. This information should be shared with both the residential and commercial sector.

The commercial sector should be encouraged to use private recyclable collection services available in Camrose.



It is recommended that the City implement an OCC ban at the landfill to increase commercial waste diversion and to increase commercial usage of the depot.

In its waste management strategy, the City should consider goals for the commercial sector as well as opportunities for partnership, as this sector comprises a significant portion of Camrose's MSW.

**Recommendation 14: The Camrose Regional Sanitary Landfill be developed as a Resource Recovery Facility.**

**Recommendation 15: A C&D diversion compound be developed at the landfill in 2010 to meet demand from Alberta's C&D Stewardship program.**

### **3.8 Other Options**

Once a combination of options have been implemented, for example, cart limit, full organics curbside collection and recyclables collection the City should consider implementing bi-weekly waste collection.

## **4.0 IMPLEMENTATION PLAN**

KC Environmental recommends strategies be implemented according to the following timeline:

### **2010 (1st Quarter):**

- Hold ½ day session with key stakeholders
- Finalize Waste Management Strategy and goals
- Issue tender for waste collection (automated and manual); curbside yard waste collection; and curbside recyclables collection
- Develop and implement public communication program (this will continue throughout all years)
- Change bylaw to implement phased in bag limit (2010 - 6 bags)
- Increase acceptable plastics option at recycling depot



- Begin siting and planning for landfill diversion enhancements (C&D compound)
- Participate in Advanced Enviro Engineering amalgamation project for composting facility generated carbon offset credits (this should continue for four years)

#### **(2nd Quarter)**

- Implement curbside yard waste collection (spring through fall)
- Implement C&D compound at landfill

#### **(4<sup>th</sup> Quarter)**

- Monitor program diversion results

### **2011 (1<sup>st</sup> Quarter)**

- Implement bag limit (2011 – 4 bags)
- Continue Public Education Program focusing on review of initial results of Waste Management strategy and informing public of next stages

#### **(3<sup>rd</sup> Quarter)**

- Examine opportunities to receive funding for cart system
- Increase diversion compounds at landfill (i.e. Large Item Exchange)

### **2012/2013**

- Issue tender for cart supply, request bids for both one-stream (waste) and two stream (waste and organics)
- Implement automated waste collection
- Implement 1 cart waste limit
- Implement curbside collection of recyclables
- Monitor diversion results and set new goals for 2020
- Expand composting capacity at landfill to incorporate food wastes

### **2014/2015**

- Implement organics cart if not implemented earlier with waste cart
- Expand yard waste collection to yard and food waste collection, year round
- Implement bi-weekly waste collection



This implementation plan achieves significant diversion results within a five year time frame. KC Environmental recognizes that Camrose residents have a strong desire for information and may need to move a long a more drawn out timeline.

If this is the case, KC Environmental recommends that the City continue to refer to the Action Plan and to continue to work towards implementing the recommendations as they move forward. The most immediate areas of focus for this approach are:

1. Implement Waste Limit (6 bags – 2010; 4 bags – 2012)
2. Implement Spring through Fall Yard Waste Collection
3. Implement Enhanced Public Education and Social Marketing Campaign aimed at increased capture and participation rates for all implemented programs.





# City of Camrose

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## Solid Waste Collection and Diversion Study

KC Environmental Group Ltd.

February, 2010



# Outline

- Review of Current System
- Review of Programs in Other Communities
- Survey Results
- Alternatives and Relative Costs
- Recommendations
- Questions & Answers

# Current System Review

- Purpose:
  - Provides benchmark data to measure progress
  - Identifies areas of strength in current system
  - Identifies areas of focus to achieve improved efficiencies



# Areas of Strength

- Recycling Depot:
  - Key component of current system
  - Key in achieving current residential diversion rate of 21%
  - Management structure (manned and contracted out) most cost-effective method

# Areas of Strength

- Organics
  - Bins at depot and compost pad at landfill provide opportunities to address largest component of waste stream (diverted 2180 tonnes in 2008)
  - Composting infrastructure is in place to implement more diversion programs focusing on organics

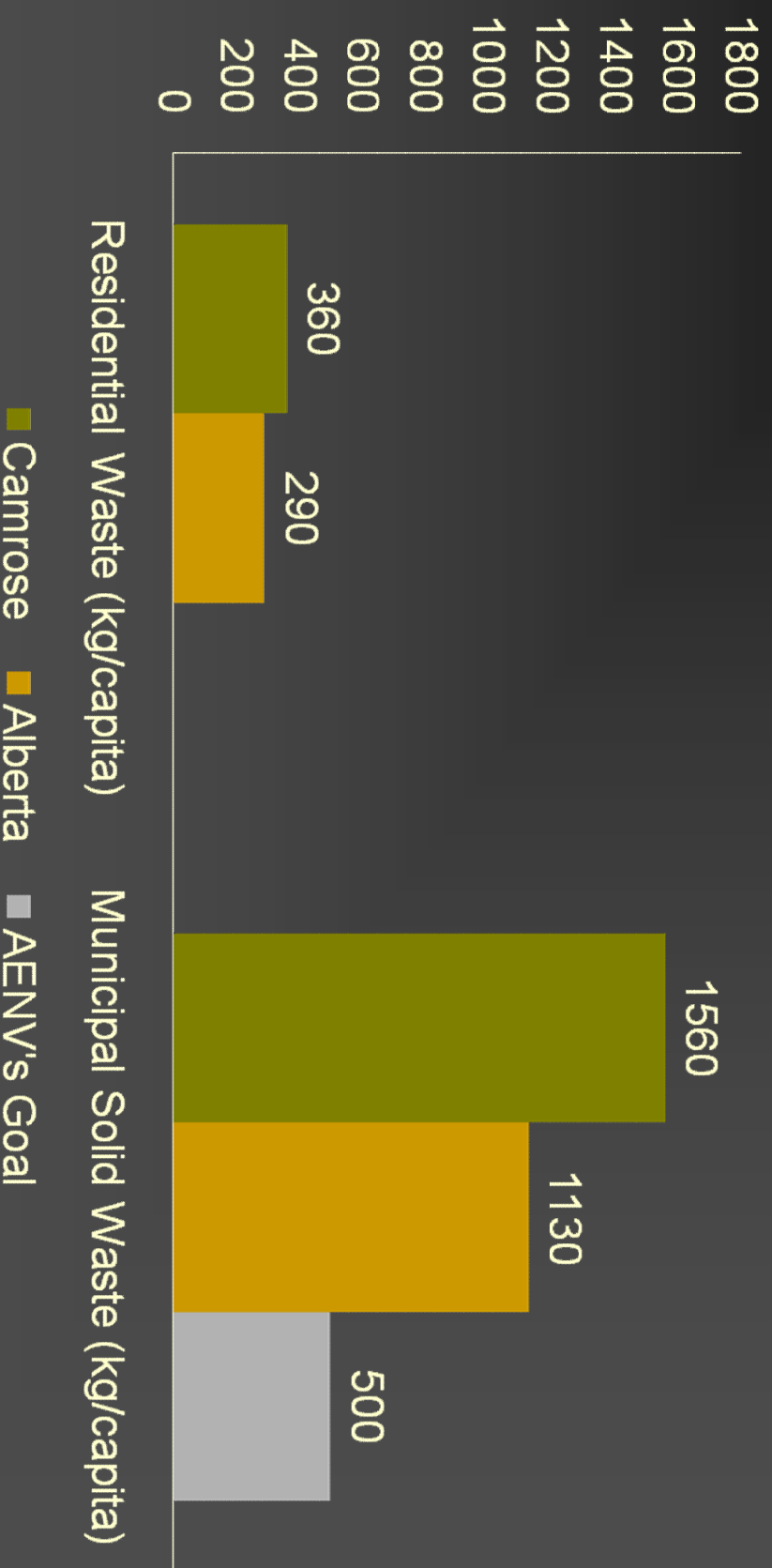
# Areas of Strength

- Concrete Recycling Program
  - CRF diverts significant quantities of commercial waste from landfill (3364 tonnes in 2008).
  - Reduces both landfilling costs and concrete purchasing costs

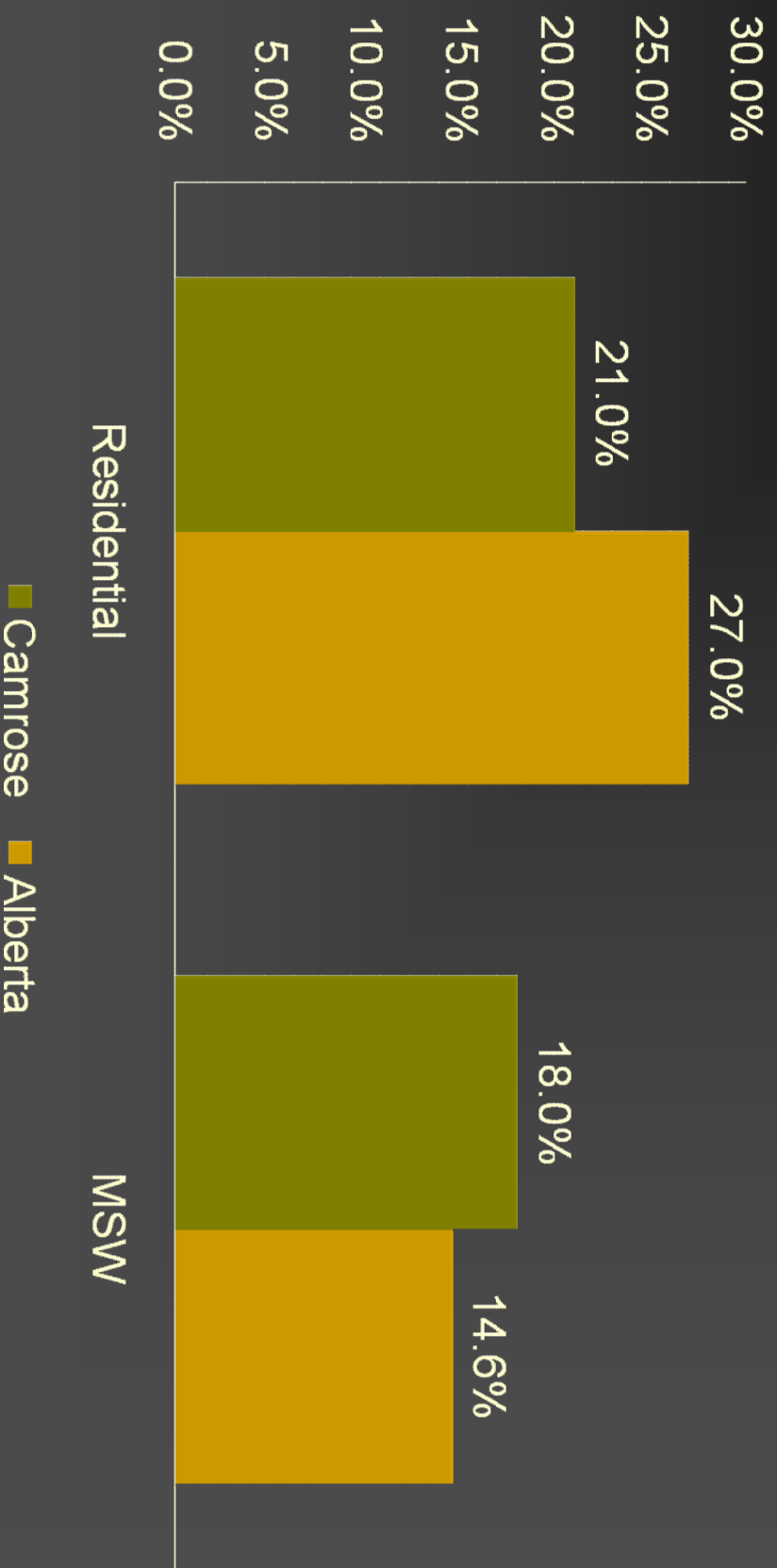
# Areas of Strength

- Public Education Program
  - Strong program already established
  - Public Education Coordinator, Vicki Cole
  - Effective website with easy access to SW info
  - Brochures on available programs and diversion results
  - “Paint Your World Green” theme
  - Green Action Committee

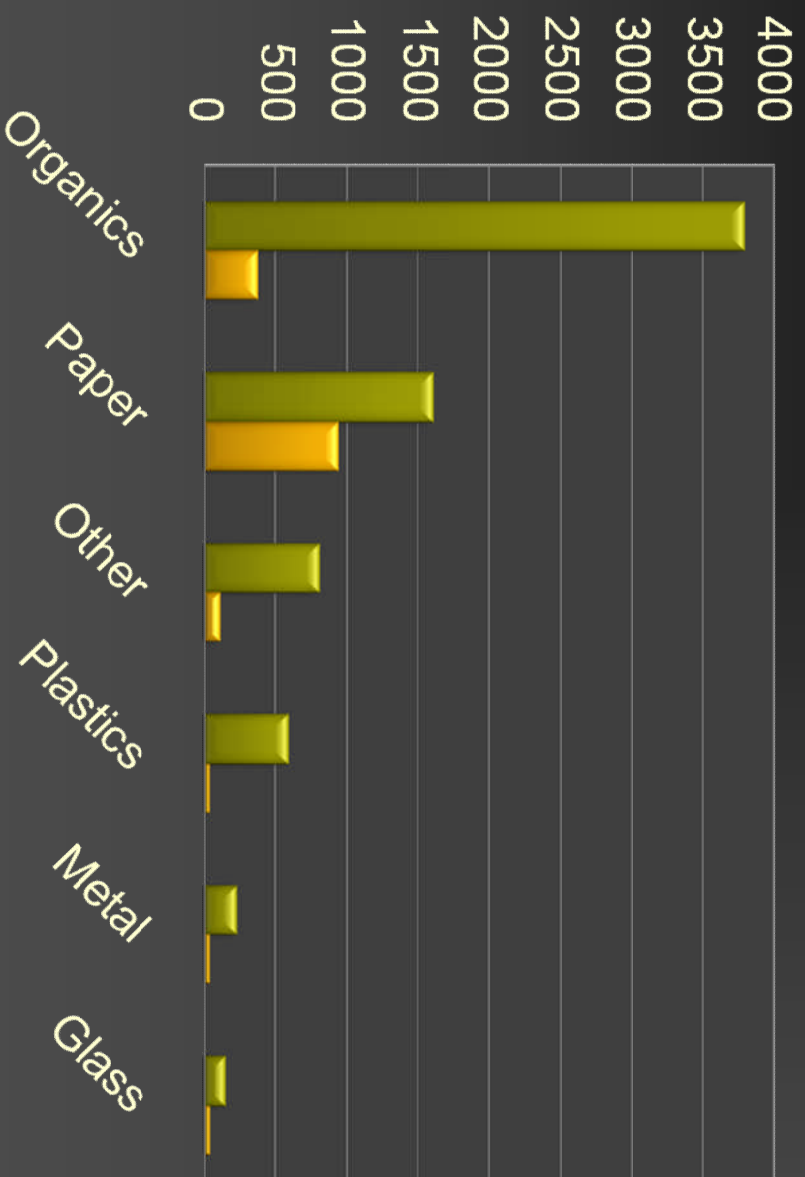
# Waste Generation



# Diversion Rates



# Capture Rates



■ Potential Diversion  
■ Actual Diversion

# Review of Programs in Other Communities

- Interviews :
  - Airdrie, Drayton Valley, Leduc, Okotoks, Spruce Grove, St. Albert, Stony Plain, Strathcona County, Nova Scotia, Manitoba
- Programs:
  - User Pay, Waste Limits, Subscription Systems
  - Curbside Organics Collection, Curbside Recyclables Collection
  - Yard Waste Ban at Landfills
- Program Summary: See handout



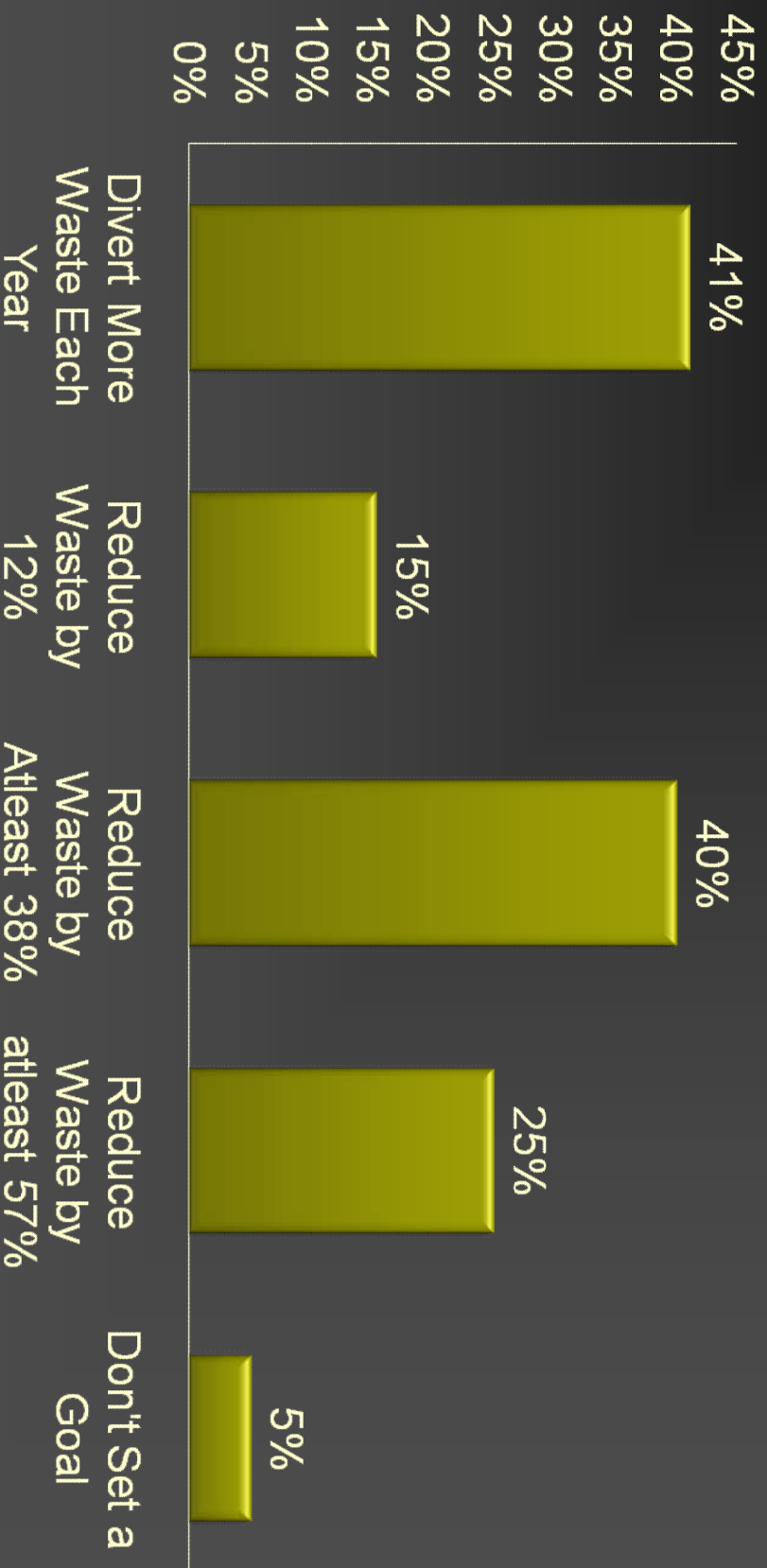
# Survey

- Survey in brochure format sent to all households through utility bill
- 487 surveys completed and analyzed
- Ages 25 to 44 well-represented
- Higher response rate from the 45+ category

# Survey Results

- Strong desire for more information and education
- Residents are in favour of establishing a goal to reduce waste to landfill
- Residents want more options for plastics
- Residents are willing to pay more to reduce waste to landfill

# Goal Setting

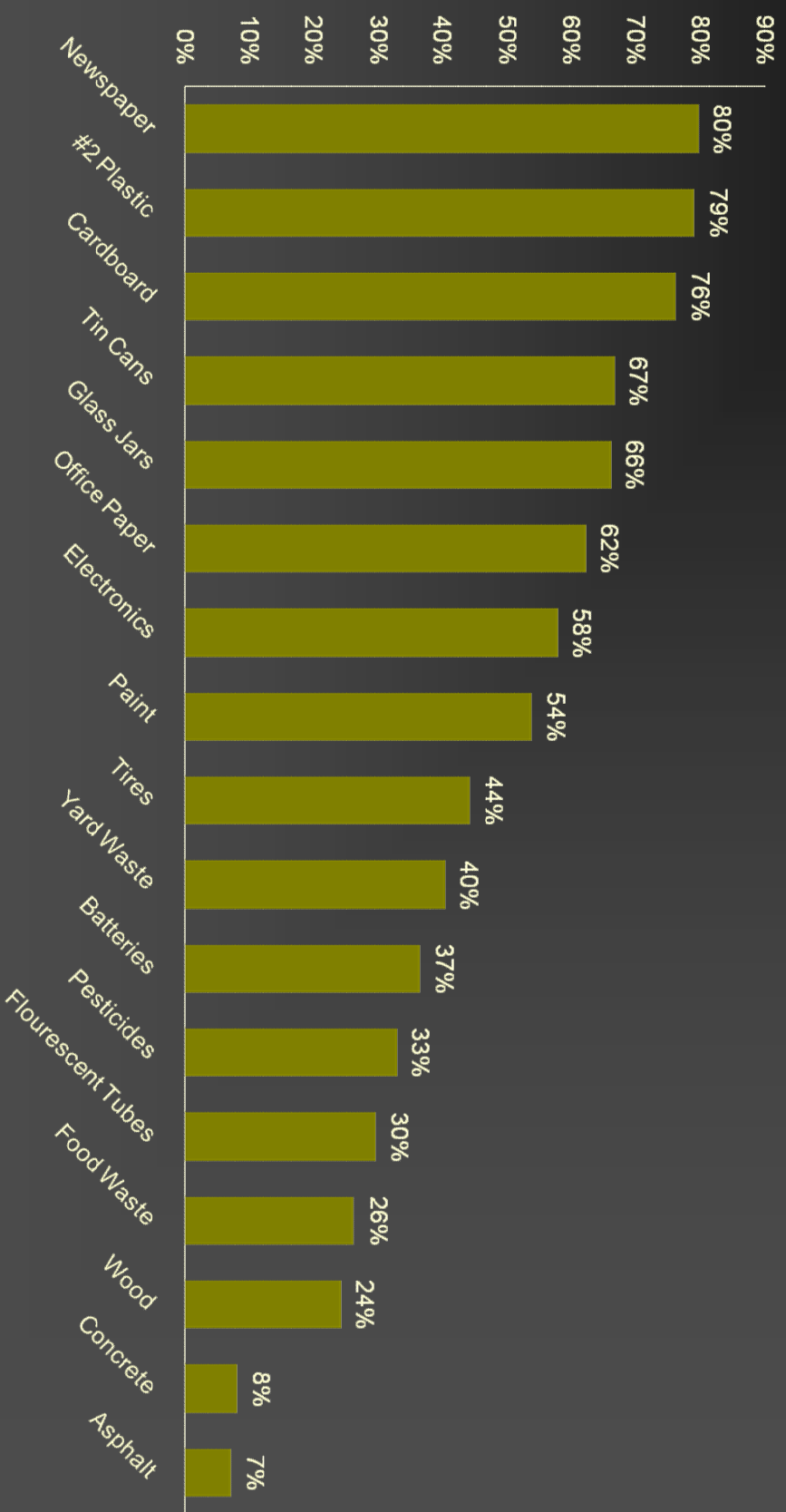


# Survey Results

Suggestions to help residents recycle more:

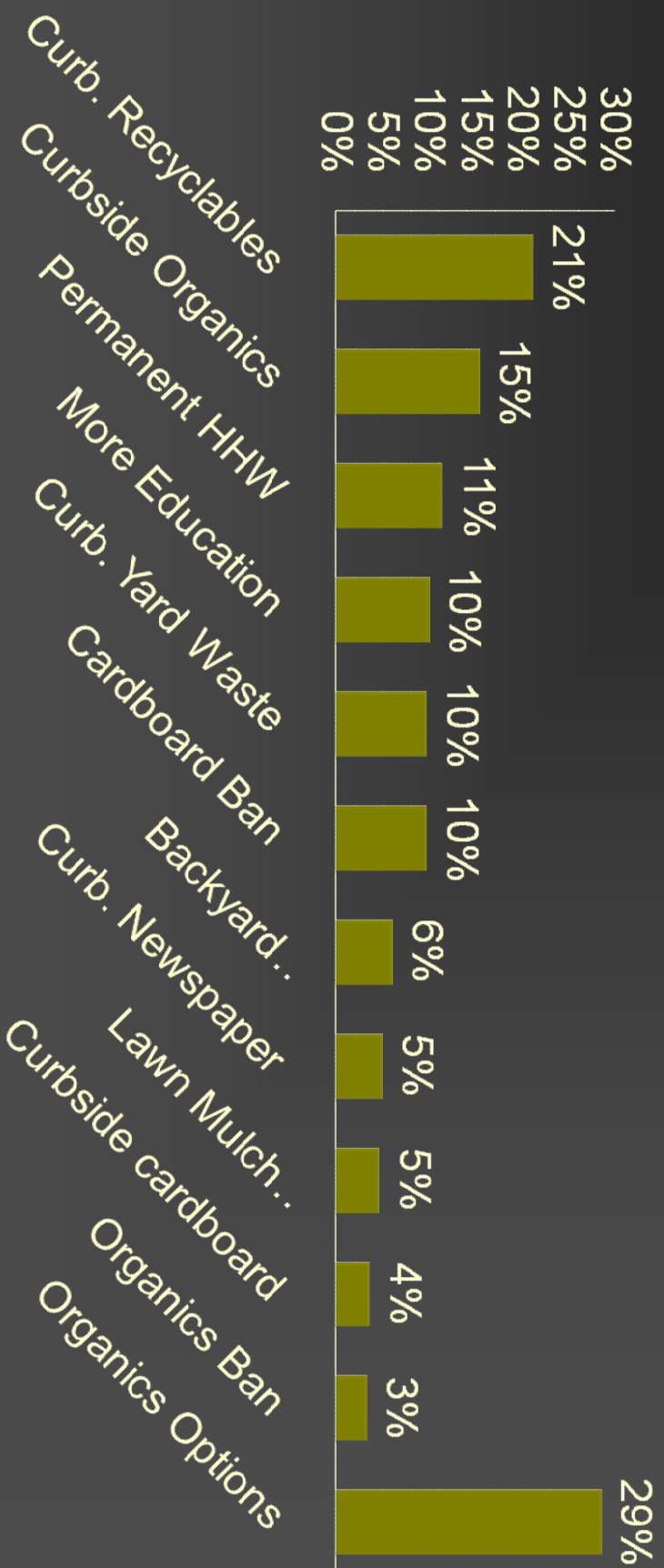
- Curbside collection of recyclables
- Expand depot (more items)
- Increase number of depots
- Improved town access to recycling services
- Curbside collection of yard waste
- Increased education (recycling, organics)
- Incentive to recycle (money back)
- Current system is fine

# Frequency of Recycling (Always)



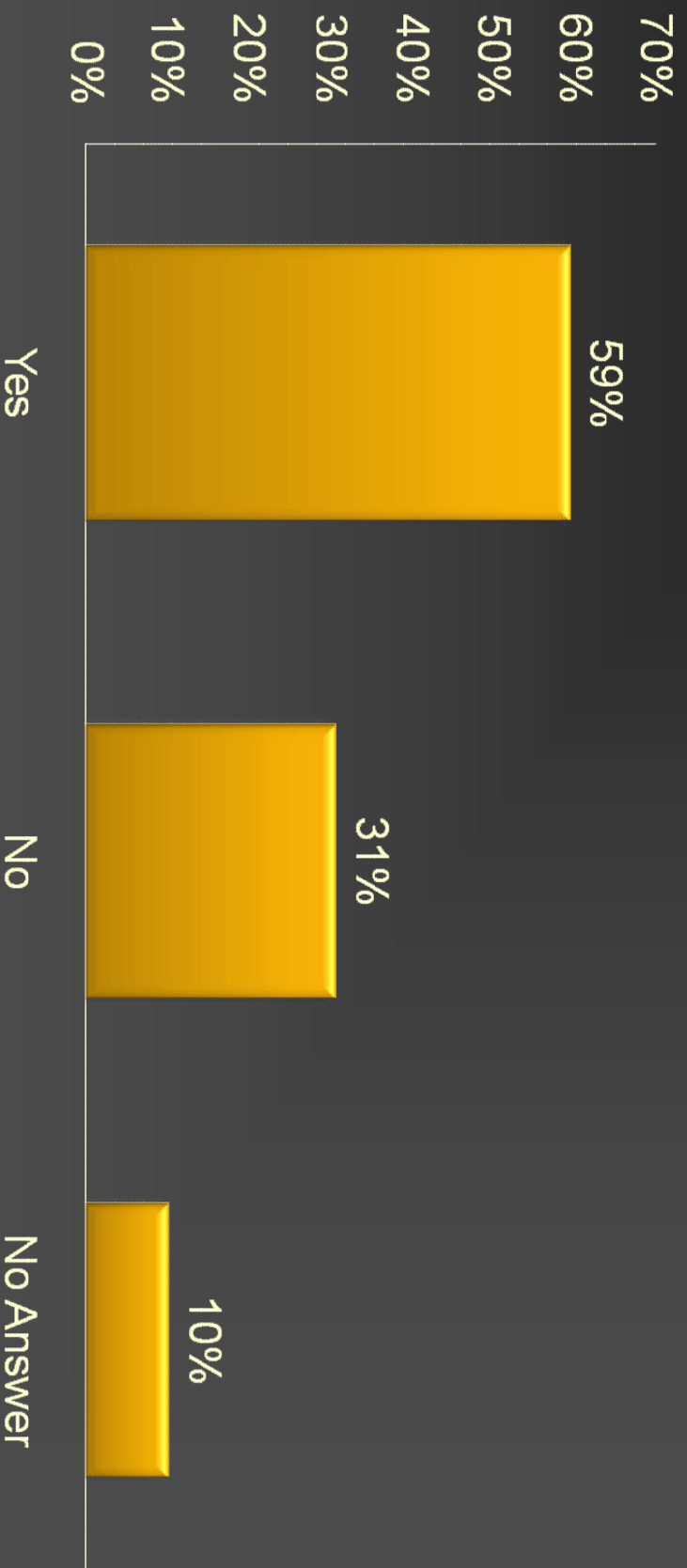
# Waste Option Priorities

Responses Ranked #1



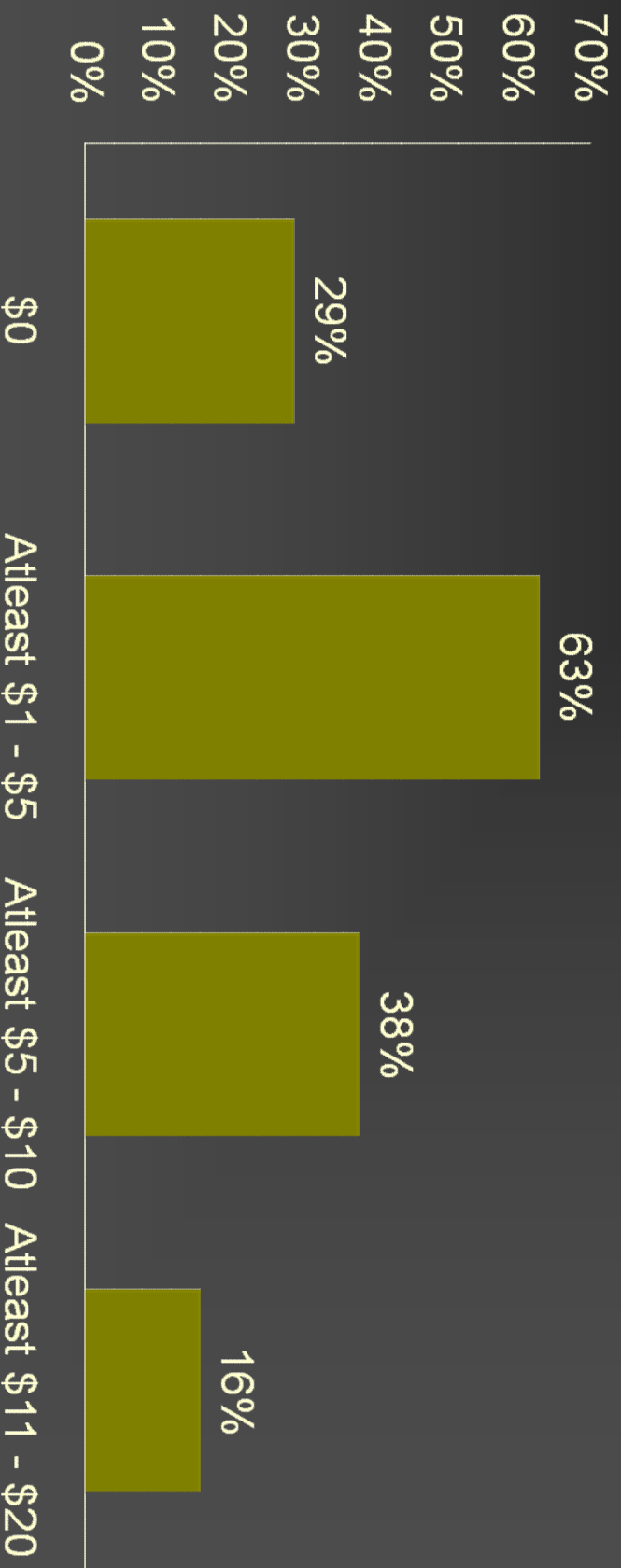
# Bag/Cart Limit

Should the City Implement a Bag/Cart Limit?



# Willingness to Pay

## Additional Amount Residences are Willing to Pay (/Month)





# Alternatives

- Report provides thorough review of available options including program descriptions, associated diversion rates, advantages and disadvantages
- Relative costs for comparison purposes provided in Table 4. Program Cost Data

# Recommendations/Action Plan

1. Adopt Goal:
  - Reduce residential waste generation to 195 kg/capita by 2015 (45% reduction)
  - Reduce MSW generation to 1000 kg/capita by 2015 (36% reduction)
2. To achieve goals, implement recommended strategies incorporated in Integrated Waste Management Plan

# Key Strategies – Short Term

1. Public education and social marketing program
2. Spring and fall curbside collection
3. Phased in waste limit
4. C&D compound at landfill

# Public Education Program: +5%

1. Inform residents of:
  - Bench line data
  - Goals
  - Strategies to achieve goals (IWM Plan)
2. Continue program with roll out of each strategy
3. Implement social marketing techniques to increase participation and capture rates

# Yard Waste Collection: +20%

1. Spring and fall curbside collection starting this spring
2. Yard Waste = 31% of residential waste stream
3. Low cost to implement
4. Diversion result: + 25%

# Cart/Bag Limit: +5%

1. Phase in waste limit
  - 2010 – 6 bags
  - 2012 – 4 bags
2. Diversion result: +5% in short term
3. Increase limit as more options are phased in. Long term goal – 1 cart (2 bags) . Results in 30% diversion, through changes in behaviour and increased participation in diversion programs.

# C & D Diversion Compound

1. Develop at landfill to meet demand from Alberta's C&D Stewardship Program
2. Addresses commercial waste (~78% of Camrose's MSW stream)
3. Addresses 25% of the commercial waste stream
4. Diversion result: + 15% (MSW)
5. Additional diversion programs at landfill will continue to increase diversion

# Commercial Options

1. Begin with C&D diversion at landfill
2. Continue to add diversion areas to landfill over time to create a Resource Recovery Facility
3. Support initiatives at University of Alberta, Augustana program and other public institutions



# Relative Cost Comparison

PROGRAM	ESTIMATED OPERATING COSTS (ANNUAL)	ESTIMATED REVENUE (ANNUAL)	ESTIMATED PER SERVICE RATE (FULL COST RECOVERY – FCRR)
<b>STATUS QUO (20% Diversion)</b>			
Waste Collection	\$354,138.60		<b>\$5.41</b>
Waste Disposal	\$182,700.00 (5800 t @ \$31.50/tonne)		<b>\$2.79</b>
Recycling Depot (includes advertising budget)	\$384,280.00 (7700 units)	\$83,900.00	<b>\$3.25</b>
HHW Roundup	\$14,850.00		<b>\$0.23</b>
Concrete Recycling	\$165,100.00	\$215.00	<b>-\$0.76</b>
Landfill	\$652,500.00	\$625.00	<b>\$0.00</b>
Status Quo Full Cost Recovery Rate			<b>\$10.92</b>
The actual amount households currently pay for waste management services is \$5.41 + \$2.94 + \$3.25 = \$11.60. The full cost recovery rate is for comparison purposes with other options.			

# Recommended Strategies (SR)

PROGRAM	ESTIMATED OPERATING COSTS (ANNUAL)	ESTIMATED REVENUE (ANNUAL)	ESTIMATED PER SERVICE RATE (FULL COST RECOVERY - FCRR)
<b>Recommended Strategies (50% Diversion):</b> Curbside collection of yard waste (spring through fall); Enhanced public education and social marketing campaign; Waste limit (6);			
Education and social marketing campaign	\$15,000 to implement = \$3432.24/yr	Diversion: \$54,810	\$10.92 + \$1.92 =  <b>\$12.84</b>
Program Implementation	\$10,000/yr maintenance		
Program Management	Organics Processing \$20,000	Finished Product & Recyclables:	
	Collection Costs \$163,650	\$8,695	
	Annual Operating Costs: \$199,082.24	Offset Credits: \$10,000 (for 1 <sup>st</sup> 4 years)	

# Comparison with Blue Bag

PROGRAM	ESTIMATED OPERATING COSTS (ANNUAL)	ESTIMATED REVENUE (ANNUAL)	ESTIMATED PER SERVICE RATE (FULL COST RECOVERY - FCRR
Blue Bag (+ 7% diversion) – Combined 37% Diversion Curbside collection of recyclables; Enhanced public education and social marketing campaign; Waste limit (6);			
Education and social marketing campaign	\$15,000 to implement = \$3,432.24/yr	Diversion: \$31,059	\$10.92 + \$4.64 =  <b>\$15.56</b>
Program Implementation	\$10,000/yr maintenance	Recyclables: \$5,873	
Program Management	Collection \$5.00/hh/month  Annual Operating Costs: \$340,732.24		

# Comparison of 3 Strategies

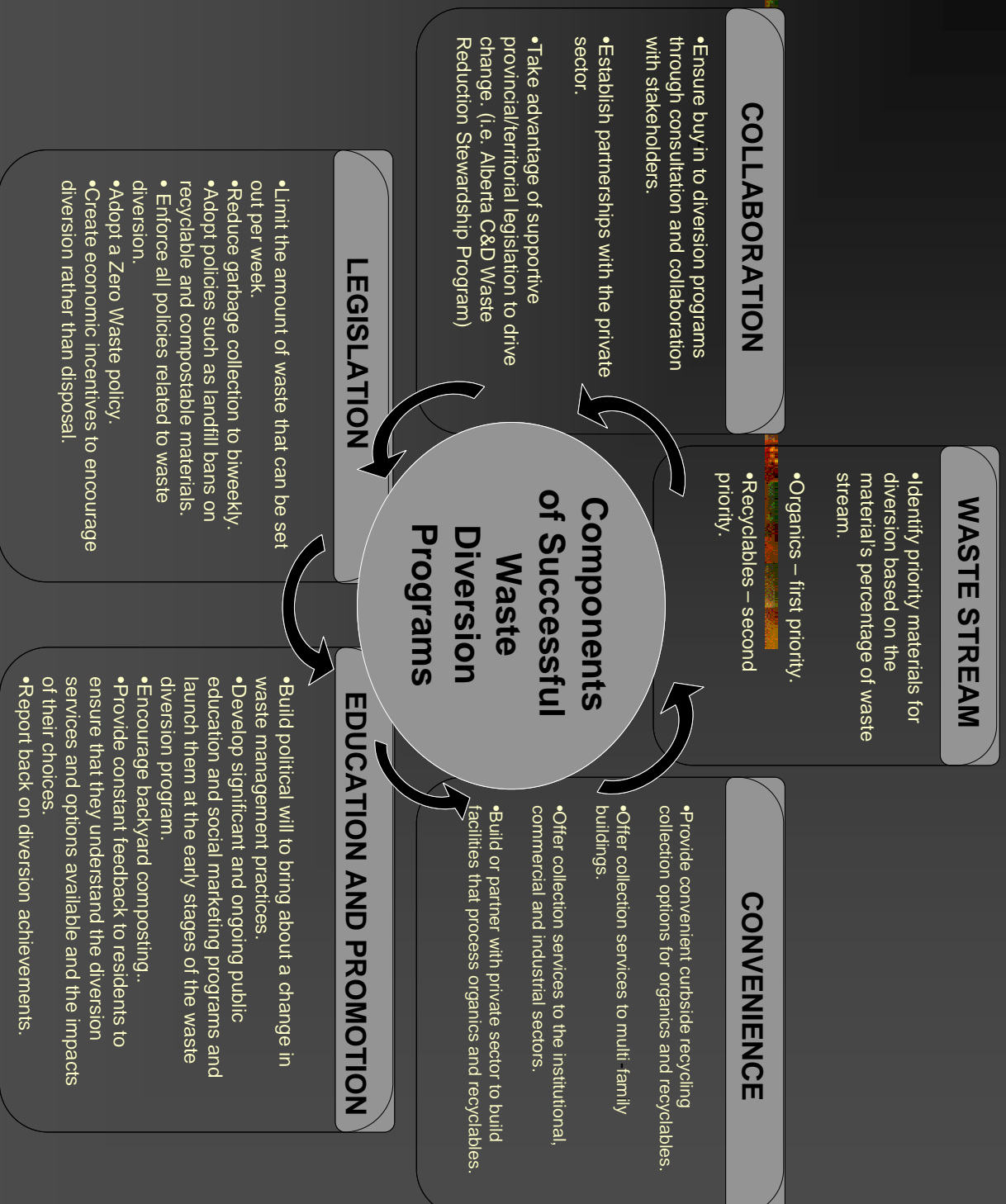
Program	Diversion	FCRR (Month/Household)
Status Quo	20%	\$10.92
Yard Waste Collection, Enhanced Public Education, Waste Limit	55%	\$12.96
Blue Bag Collection, Enhanced Public Education, Waste Limit	37%	\$15.59

# Additional Recommendations

- Report includes number of recommendations which can be implemented along timeline City feels comfortable with
- Public education program will pave way

# Key Strategies – Longer Term

1. Automated Collection
2. Curbside Collection of Recyclables
3. Expand Yard Waste Collection to Full Organics Collection (food & yard waste)
4. Full program (short and long term strategies) can divert 70%+
5. Saving from diversion fund diversion programs



Sources: KC Environmental Group Ltd. 2007, Green Municipal Fund, 2009



# Solid Waste Collection and Diversion Study

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## Questions and Answers

KC Environmental Group Ltd.

February, 2010

