

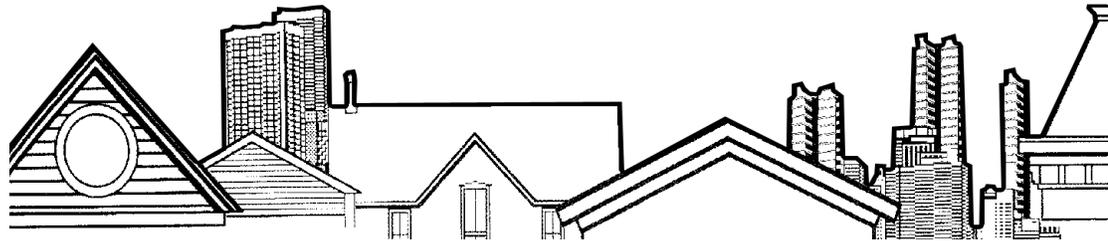


# ACT CASE STUDY

NEW RESIDENTIAL CONSTRUCTION  
WASTE MANAGEMENT PLAN: A FEASIBILITY STUDY

UMA ENGINEERING LTD. AND  
THE REGINA HOME BUILDERS' ASSOCIATION  
REGINA, SASKATCHEWAN

**ACT - Affordability and Choice Today**



HOME TO CANADIANS  
Canada

# **AFFORDABILITY AND CHOICE TODAY (A•C•T) STREAMLINED APPROVAL PROCESS PROJECT**

## **New Residential Construction Waste Management Plan: A Feasibility Study**

**UMA Engineering Ltd. and the Regina Home Builders' Association  
Regina, Saskatchewan**

Prepared for:

**Federation of Canadian Municipalities  
Canadian Home Builders' Association  
Canadian Housing and Renewal Association  
Canada Mortgage and Housing Corporation**

Prepared by:

**Energy Pathways Inc. Ottawa, Ontario**

October 1996

*This case study was funded by Canada Mortgage and Housing Corporation, but the views expressed are the personal views of the authors and the Corporation accepts no responsibility for them.*



## FOREWORD

---

The project documented in this case study received funding assistance under the Affordability and Choice Today (A•C•T) Program. A•C•T is a joint initiative, managed by the Federation of Canadian Municipalities, the Canadian Home Builders' Association, and the Canadian Housing and Renewal Association, together with the funding agency Canada Mortgage and Housing Corporation. The A•C•T Program is administered by the Federation of Canadian Municipalities.

A•C•T, which was launched in January 1990, was designed to foster changes to planning and building regulations and residential development approval procedures in order to improve housing affordability, choice and quality.

Through A•C•T, grants are awarded to municipalities, private and non-profit builders and developers, planners and architects to undertake innovative regulatory reform initiatives in municipalities across Canada. Three types of projects are awarded grants under the A•C•T Program: Demonstration Projects, Streamlined Approval Process Projects, and Case Studies (of existing initiatives).

- *Demonstration Projects* involve the construction of innovative housing that demonstrates how modifications to planning and construction regulations can improve affordability, choice and quality.

- *Streamlined Approval Process Projects* involve the development of a method or an approach that reduces the time and effort needed to obtain approvals for housing projects.
- *Case Study* grants are awarded for the documentation of existing regulatory reform initiatives.

Change and innovation require the participation of all the players in the housing sector. A•C•T provides a unique opportunity for groups at the local level to work together to identify housing concerns, reach consensus on potential solutions, and implement action. Consequently, a key component of A•C•T-sponsored projects is the participation and cooperation of various players in the housing sector in all phases of each project, from development to realization.

All projects awarded a grant under the A•C•T Program are documented as case studies in order to share information on the initiatives and the benefits of regulatory reform with other Canadian communities. Each case study discusses the regulatory reform initiative, its goals and the lessons learned. Where appropriate, the cost savings resulting from modifications in various planning, development, and construction regulations are calculated and reported.



# TABLE OF CONTENTS

---

1.0	<b>PROJECT OVERVIEW</b> .....	i
	<i>Figure 1. Construction Waste Management Opportunities</i> .....	ii
1.0	<b>PROJECT DESCRIPTION</b> .....	1
1.1	Project Objectives .....	1
1.2	Project Methodology .....	1
2.0	<b>PROJECT RESULTS</b> .....	3
2.1	Construction Waste .....	3
	<i>Figure 2. Type of Waste Materials</i> .....	3
	<i>Figure 3. Construction Waste by Volume</i> .....	4
2.2	Waste Management Options.....	4
2.3	Regulatory Environment.....	7
2.4	Industry Policies and Procedures for Waste Management .....	7
2.5	RHBA Promotes the 5Rs.....	8
3.0	<b>PROJECT BACKGROUND</b> .....	9
3.1	Trends Affecting Waste Management.....	9
4.0	<b>REGULATORY REFORM INITIATIVES AND IMPACT ON HOUSING COST, CHOICE AND QUALITY</b> .....	10
	<b>APPENDIX A: CONSTRUCTION WASTE QUESTIONNAIRE</b> .....	12
	<b>APPENDIX B: RHBA BROCHURE ON RECYCLABLE MARKETS IN REGINA</b> .....	13

## PROJECT OVERVIEW

---

In 1989, the Canadian Council of Ministers of the Environment established a national goal to reduce solid waste sent to landfills, setting a target of 50 per cent reduction from 1988 levels by the year 2000. This goal has significant implications for the housing industry.

All levels of government have been taking steps to promote and enforce reductions in the volume and types of waste disposed of at landfill sites. The national goal provided many municipalities, already facing severe landfill shortages, with yet another incentive to develop or step up waste management strategies. By the early 1990s, bans on dumping residential construction materials in landfill sites were becoming commonplace.

Alternatives to landfill disposal construction wastes contribute realizing three objectives:

- Reduce new residential construction costs by reducing i) haulage and tippage fees for construction waste and ii) material costs per project
- Reduce burden on municipal landfills
- Support the national goal to reduce solid waste sent to landfills

Three factors combined to create interest in investigating the feasibility of a waste management plan for Regina's new residential construction industry:

- The Regina Home Builders' Association (RHBA) was concerned about effective construction waste management.
- The City of Regina's existing landfill was nearing capacity.
- Saskatchewan was developing a provincial waste strategy.

UMA Engineering Ltd. and the RHBA were awarded an A•C•T grant in 1994 to proceed with the feasibility study. The project involved the following steps:

- Identifying types and volumes of residential construction waste produced
- Conducting an inventory of current residential construction waste management practices
- Reviewing existing and proposed provincial and municipal policies, regulations and legislation applicable to residential construction waste disposal
- Reviewing industry policies and procedures for waste management
- Consulting with stakeholders
- Identifying and evaluating waste management options based on the principles of "reduce, reuse and recycle"
- Prepare and distribute report outlining options to stakeholders

The project team concluded that recycling alone could divert 50 per cent of Regina's new residential construction wastes from the municipality's landfill. These wastes are primarily paper and wood materials. By employing additional waste management practices, the percentage of diverted waste could be pushed higher.

The study identified opportunities and financial benefits for individual trades and builders to reduce, reuse and recycle construction wastes. In 1995, the collection and disposal of waste materials cost Regina's new residential construction industry about \$330 to \$340 per home.

Following the study, RHBA produced and distributed an information pamphlet promoting effective waste management practices to its membership. The pamphlet identifies several recyclable markets in Regina, giving contacts and locations for delivery of various construction wastes. RHBA also identified initiatives that will promote waste management options. These included an information session, news releases, mailings and demonstration projects.

As a result of this project, RHBA participated in Regina’s Round Table on Solid Waste Management.

**Figure 1. Construction Waste Management Opportunities**

The 5Rs	Reusable/Recyclable Construction Wastes	
<p><b>Reduce</b></p> <p><b>Reuse</b></p> <p><b>Recycle/compost</b></p> <p><b>Recover</b></p> <p><b>Residual management</b></p>	<p>Asphalt</p> <p>Cardboard, paper</p> <p>Carpeting</p> <p>Ceramic/Ceiling tile</p> <p>Drywall/Plaster</p> <p>Excavated material</p>	<p>Glass</p> <p>Metals</p> <p>Plastic</p> <p>Rubble</p> <p>Tar-based material</p> <p>White goods (appliances)</p>

# 1.0 PROJECT DESCRIPTION

---

## 1.1 Project Objectives

Waste management and disposal pose a critical issue for municipalities across Canada. Many require new landfill sites, but environmental concerns, the national goal to reduce the volume of solid waste by half, new provincial regulations and the limited availability of land are pressuring municipalities to look closely at alternatives. Residential construction waste represents a considerable portion of material destined for landfill. Since the early 1990s, growing attention has been given to means of diverting waste from landfill sites.

Finding alternatives to landfill disposal for construction wastes can contribute to realizing three objectives:

- Reduce new residential construction costs by reducing i) haulage and tippage fees for construction waste and ii) material costs per project
- Reduce burden on the municipality's landfill
- Support the national goal to reduce solid waste sent to landfills

Waste management in the housing industry can also contribute to efficient construction practices and to public good will, by demonstrating the concern home builders' share for the environment.

Effective management of residential construction wastes was a concern to members of the Regina Home Builders' Association (RHBA). UMA Engineering Ltd. and RHBA were awarded an A•C•T grant in 1994 to investigate the feasibility of developing a waste management plan for the new residential construction industry.

## 1.2 Project Methodology

UMA, RHBA, the City of Regina and Saskatchewan Environment and Resource Management's Municipal Waste Unit formed the project team. RHBA representation included Carma Developers, Cairns Homes Ltd. and RHBA's Executive Director. Loraas Disposal Systems Ltd., Laidlaw Waste Systems and Canada Mortgage and Housing Corporation (CMHC) also participated. Given the City's limited landfill capacity and environmental concerns associated with locating a new landfill site, several municipal departments had an interest in the project. These included the Waste Division, Municipal Engineering, Planning, and Urban Development.

The project involved the following steps:

- Identifying types and volumes of residential construction waste produced
- Conducting an inventory of current construction waste management practices
- Reviewing existing and proposed provincial and municipal policies, regulations and legislation applicable to residential construction waste disposal
- Reviewing industry policies and procedures for waste management
- Consulting with stakeholders
- Identifying and evaluating waste management options based on the principles of “reduce, reuse and recycle”
- Preparing and distributing a report outlining options to stakeholders

The project team produced a final report, *Regina Home Builders' Association New Construction Industry Waste Management Plan—A Feasibility Study*, which presents the findings of the study.<sup>1</sup>

### *Resource Documents*

*A number of publications are available from CMHC's Canadian Housing Information Centre on residential construction waste management and related subjects:*

- CMHC Activities Which Address Environmental Concerns (CMHC, 1992).
- Construction and the Environment: How Home Builders and Renovators Can Help Build a Green Future (CMHC, 1993).
- Environmental Assessment Guidelines for Residential Development (A•C•T Case Study, 1995).

*Contact the Canadian Housing Information Centre at 700 Montreal Road, Ottawa, Ontario, K1A 0P7, Tel: (613) 748-2367, Fax: (613) 748-4069, TTY: (613) 748-2143.*

---

<sup>1</sup> The report was prepared by UMA Engineering Ltd. on behalf of the project team. A copy may be obtained from the Regina Home Builders' Association, Tel: (306) 569-2424, Fax: (306) 569-9144. A copy may also be obtained on loan from the Canadian Housing Information Centre, 700 Montreal Road, Ottawa, Ontario, K1A 0P7, Tel: (613) 748-2367, Fax: (613) 748-4069, TTY: (613) 748-2143.

## 2.0 PROJECT RESULTS

### 2.1 Construction Waste

New residential construction wastes generally are unaltered and uncontaminated, unlike demolition and renovation waste materials which are usually mixed and altered, i.e. painted or stained. Given the volume of new residential construction waste produced, the potential for reuse and recycling is considerable.

Figure 2 lists many of the wastes produced at construction sites as a result of site preparation and construction.

The Greater Toronto Home Builders' Association (GTHBA) and CMHC have independently assessed the content and volume of waste materials from new housing construction. The findings, shown in figure 3, were quite similar.

RHBA conducted a survey of its members in June 1994 to obtain estimates on the types and volume of construction waste generated. (Appendix A contains a copy of the questionnaire.) The research focused on single-family dwellings as Regina had limited construction activity for multi-family residences. Five standard square-footages were used to compile the results: 1200 ft<sup>2</sup>, 1400 ft<sup>2</sup>, 1800 ft<sup>2</sup>, 2000 ft<sup>2</sup>, 2400 ft<sup>2</sup>. The findings indicated that drywall, wood and cardboard accounted for about 75 per cent of the waste produced. Packaging, other than cardboard, could also account for a considerable portion, ranging from 10 to 25 per cent for 1400 ft<sup>2</sup>, 1800 ft<sup>2</sup> and 2000 ft<sup>2</sup> dwellings.

**Figure 2. Type of Waste Materials**

Building Material	Waste Compound
Roads, bridges, parking lots	Asphalt
Packaging	Cardboard, paper
Carpets	Carpeting
Ceramic/ceiling tiles	Ceramic/ceiling tiles
Drywall	Drywall/plaster
Dirt, tree stumps and limbs	Excavated material
Windows, doors	Glass
Aluminum, brass, copper	Metals (non-ferrous)
Flashing, pipes, roofing,	Metals (ferrous)
Doors, vinyl siding, windows	Plastic
Dirt, bricks, cinder blocks, concrete	Rubble
Shingles, tar paper	Tar-based materials
Appliances	White goods
Wires, cables	Wiring
Plywood, pressure-treated, laminates	Wood (treated)
Framing, scraps	Wood (untreated)

*Source: UMA Engineering Ltd.*

**Figure 3. Construction Waste by volume**

Item	Percentage Volume
Dimensional lumber	25
Drywall	12-15
Manufactured wood	10-15
Masonry/Tile	10-12
Cardboard	10
Other:	28:
asphalt	6
fibreglass	5
other wastes	5
metal wastes	4
plastic and foam	4
other packaging	4

Source: UMA Engineering Ltd.

In 1993, 420 single-family houses, averaging 1500 ft<sup>2</sup> each, were constructed in Regina (population of 180,000). Based on RHBA's survey, approximately 3.2 metric tonnes of construction waste were generated for each home. The total volume of 1,344 tonnes of waste for all new homes constructed in 1993 cost RHBA members approximately \$80,640 for collection and \$50,040 in disposal fees, a total of \$130,680 for the year. These costs reflect bin rentals, tippage fees and other costs associated with waste disposal, such as administration, site clean-up and enforcement. Regina's tippage fees were \$15 per

tonne prior to July 1, 1994 and then increased to \$18.70 per tonne.

In 1994, 393 single-family houses were built in Regina, resulting in waste disposal costs similar to 1993. Housing starts in Regina were down in 1995. From discussions with RHBA members, a 35 to 40 per cent decline was anticipated. The total cost of waste collection for the year was estimated, therefore, at \$82,000 to \$85,000. The cost per home works out to \$327 to \$340, roughly the same as for 1994 at \$330 per home, but up from \$311 for 1993.

The project team concluded that recycling could divert at least 50 per cent of construction wastes, primarily paper and wood, from the municipality's landfill. The percentage could be pushed even higher by employing additional waste management options.

## 2.2 Waste Management Options

The project team investigated the options available under the "5Rs" of waste management:

- Reduce
- Reuse
- Recycle
- Recover
- Residual Management

The findings are summarized following pages.

### *Source Reduction*

Source reduction involves rethinking material use. At least five options are available to the new housing industry:

- Design projects to minimize, within building codes, the amount of materials used
- Use standard, modular building units, either pre-cut or partially assembled prior to site delivery
- Use more durable building materials, which may initially be more costly
- Develop an on-site waste management program with ample space for drop-off bins and separation areas
- Purchase in bulk to reduce packaging

### *Reuse*

Off-cuts from framing lumber may be used for bridging, blocking or as firewood by neighbouring residents. Excess insulation may be used in interior walls for soundproofing. Reuse of construction materials depends largely on waste management practices employed by subtrades.

### *Recycling*

Recycling involves physical, chemical or biological reprocessing of materials to produce a new product. Paper fibre and wood account for approximately 50 per cent of the waste generated at new housing sites in Regina, all of which can be recycled. The pulp and paper industry has been shifting from processing only virgin forest products to using recycling

### *The 5Rs*

*Most people are familiar with the 3Rs of reduce, reuse and recycle (waste reduction and diversion). A more comprehensive perspective denotes the hierarchy of all aspects of waste management as follows:*

- *Reduce*
- *Reuse*
- *Recycle/compost*
- *Recover*
- *Residual management*

*The final option entails temporary storage at transfer stations and permanent disposal at landfills.*

programs as a major source of paper fibre. The Canadian Pulp and Paper Association has noted an increasing demand for recyclable papers, and only a portion of this can be satisfied by domestic supply.<sup>2</sup>

The growing demand for recyclable paper has had a distinct impact in Regina. There has been an increase in theft of waste paper from drop-off depots, recycling businesses are growing, and commercial haulers are providing courtesy recycling bins with garbage bins.

A problem can exist, though, with disposal bins at construction sites. They often become garbage dumps for the neighbourhood, and this increases costs to builders significantly.

---

<sup>2</sup> UMA Engineering Ltd., *New Construction*, p. 11

The project team identified various construction waste materials that can be taken to local businesses, organizations and the City itself for recycling:

- Asphalt or asphalt/concrete
- Beverage containers—glass, metal, plastic
- Building materials
- Concrete, clean
- Fill, clean
- Metals—non-ferrous (e.g. copper, brass, aluminum); ferrous (e.g. steel, scrap iron); other (e.g. batteries)
- Paper fibre
- Rubble

Although composting is a form of waste management, and is actively promoted by the City of Regina, organic materials are not present in sufficient quantities at construction sites for this option to be considered with respect to new residential construction waste management.

#### *Recovery*

Recovery can include using garbage to develop alternative fuels or removing recyclables and compostables from mixed wastes. These forms of recovery tend to be costly and require a significantly larger industrial and population base than Regina's to be viable options.

#### *Opportunities for Reuse and Recycling*

*What has been regarded as waste material from the new residential construction industry in fact presents a substantial source of recyclable or reusable materials which can generate revenue:*

- *Dimensioned wood waste pieces*
  - *can be saved for use at other sites*
  - *can be used where short lengths are required*
- *Drywall cut-offs*
  - *can be placed in interior wall cavities for better fire retardation and attenuation characteristics*
- *Asphalt shingles*
  - *can be sent to paving companies for recycling*
- *Wood shakes*
  - *can be reused on other projects*
- *Cardboard boxes*
  - *cabinet and appliance boxes can be returned to source for recycling*
- *Metal strapping*
  - *can be sent to scrap dealers*
- *Wood pallets*
  - *can be returned to source for reuse*

#### *Residual Management*

Residual management, which entails temporary storage and landfill disposal, is the least desirable and most costly means of handling residential construction waste materials. According to the hierarchy of options, this should be used only when source reduction and all waste diversion options have been exhausted.

## 2.3 Regulatory Environment

Solid waste management is the responsibility of provincial and municipal governments. In the province of Saskatchewan, municipal by-laws regulating the collection and disposal of solid wastes are enacted under the province's *Environmental Management and Protection Act*. Two sets of provincial regulations pertaining to waste are administered under this Act: *Municipal Refuse Management Regulations*, and *Hazardous Substances and Waste Dangerous Goods Regulations*. Transporting hazardous wastes, including household hazardous wastes, is regulated under the province's *Dangerous Goods Transportation Regulations*. Saskatchewan's *Litter Control Act* and *Litter Control Regulations* govern the control and prevention of litter. The *Clean Air Act*, *Clean Air Regulations* and *Ozone-depleting Substances Control Act* regulate air contaminant emissions in Saskatchewan.

Environmental liability issues have gained prominence in many jurisdictions in recent years. Saskatchewan's draft *Contaminated Sites Liability* discussion paper (1994) identified a mechanism for assigning liability, but it had yet to be adopted as provincial policy.

The City of Regina's policies for solid waste management are included in the municipality's *Development Plan By-law*. The Public Works Department was developing a *Landfill Revenue Strategy and Rate Review* in 1995 for the next three to five years. The department was also coordinating the development of a *Round Table on Solid Waste Management* for the municipality and the surrounding region.

### *Summary of Regulatory Environment*

#### *Provincial: Saskatchewan*

- Environmental Management and Protection Act
  - Municipal Refuse Management Regulations
  - Hazardous Substances and Waste Dangerous Goods Regulations
- Dangerous Goods Transportation Regulations
- Litter Control Act
  - Litter Control Regulations
- Clean Air Act
  - Clean Air Regulations
- Ozone-depleting Substances Control Act

*Drafted 1994: Discussion paper for Contaminated Sites Liability*

#### *Municipal: Regina*

- Development Plan By-laws
- Landfill Revenue Strategy and Rate Review
- Round Table on Solid Waste Management

## 2.4 Industry Policies and Procedures for Waste Management

RHBA has had no policies or procedures in place for the housing industry's waste management. Builders and developers have been responsible for waste disposal on an individual basis. It was determined through the A•C•T project that it would not be immediately feasible for RHBA to introduce an industry-wide, coordinated waste management plan, as Regina did not have sufficient activity in new residential construction. It was determined that matters of site coordination, security, liability and funding could not be satisfactorily addressed.

## 2.5 RHBA Promotes the 5Rs

RHBA proposed to promote the 5Rs to industry members, and RHBA developers would be encouraged to introduce a policy in their contracts making individual trades responsible for managing the waste materials they produce. Several advantages to this approach were identified:

- No on-site coordination or additional administration required
- Cost effective
- Builder does not assume liability for someone else's waste: the waste generator incurs the liability for producing, transporting and disposing of wastes
- Security for recyclables is less of a problem
- Stakeholder consultation and effort to achieve buy-in is minimal: builders and developers can readily incorporate a waste management policy into their contractual documents

Builders required specific information about what could be recycled and where waste materials could be delivered in order to seize opportunities for alternatives to waste disposal. RHBA produced and distributed an information pamphlet on waste management to its membership. The pamphlet summarized the feasibility study, identified the participants, and encouraged builders, developers and trades to reduce, reuse, recycle and recover. A selection of recyclable markets was included. (See Appendix B for brochure details.) RHBA also planned to use newsletters, mailings, media releases, a 5Rs information session and demonstration projects to promote waste management practices. RHBA developers proposed to include a waste management policy in their contractual documents.

In addition, as a result of the feasibility study, RHBA was invited to participate on the Regina Round Table on Solid Waste Management in the fall of 1996.

## 3.0 PROJECT BACKGROUND

---

### 3.1 Trends Affecting Waste Management

Several trends are having a decided influence on new housing construction waste management practices. Over the past 15 to 20 years, the Canadian public and politicians have developed a much greater concern for environmental consequences arising from the amount of garbage disposed and how it is done. The consequences have been widely publicized, reducing the public's tolerance for environmental degradation. Dwindling landfill capacity also spurs interest in utilizing alternative means of waste management.

Availability of new landfill sites has become increasingly problematic. People do not want them located near their communities, in part because of known environmental problems, but also because of the typical NIMBY (Not In My Back Yard) syndrome.

#### *Summary of Trends Affecting Waste Management*

- *Environmental degradation*
- *Public awareness of adverse consequences*
- *Dwindling landfill capacity*
- *Availability of new landfill sites:  
– environmental concerns, NIMBY*
- *Increasing urbanization*
- *Increase in haulage and tippage fees*

As Saskatchewan's population continues to urbanize, Regina's population grows, accelerating closure of the current landfill site as it reaches capacity.

Diversion of wastes from landfill sites makes increasing economic sense as costs associated with permanent waste disposal increase. Tipping and waste collection fees have increased not only in Regina but in other municipalities throughout Canada.

## 4.0 REGULATORY REFORM INITIATIVES AND IMPACT ON HOUSING COST, CHOICE AND QUALITY

---

At the project team's stakeholder meeting held in April 1995, it was noted that economics will play a strong role in the adoption of waste management practices. There is little incentive for builders to practice waste minimization unless costs increase for recyclable materials and/or dumping, or regulations change. Transportation costs can be prohibitive in a small city like Regina, and it was observed that recycling activity depends to some extent on the proximity of an area to a recycling drop-off depot: the closer the depot, the greater the volume of waste materials from the immediate area.

The project report was viewed as being helpful in identifying waste management practices suitable to the industry and the construction wastes that could be recycled. While Regina's construction activity was considered too low to warrant an immediate

industry-wide waste management program, the feasibility study identified several opportunities and benefits for individual trades and builders to introduce alternative waste management practices.

As noted earlier, the project team concluded that approximately 50 per cent of construction wastes can be recycled. The cost of simply disposing of these wastes at Regina's landfill was about \$330 to \$340 per home in 1995. Reducing these costs will help the construction industry reduce overhead costs and keep housing prices from rising in response to ancillary market factors—in this case increasing waste disposal and landfill fees.

Members of the residential construction industry in other municipalities across Canada can benefit by employing responsible waste management practices.

## **APPENDICES**

## APPENDIX A: CONSTRUCTION WASTE QUESTIONNAIRE

---

### ACT/RHBA Waste Management Feasibility Study

#### *Builder/Subtrade Questionnaire*

Estimate the amounts and types of recyclable and non-recyclable waste that is expected to be generated on site. If possible, please try to proportion the wastes, by volume, per residential unit. The relative size, i.e., square footage of the house or houses should be provided. Also, please provide the actual volume, i.e. number of bins and volume/bin, of waste hauled away and the cost involved.

Estimates (%)  
Size of House (Sq. Ft.)

Asphalt					
Bricks & Blocks					
Cardboard					
Fibreglass					
Gypsum					
Metals					
Packaging					
Plastic					
Wiring					
Wood					
Other					
Total Volume (#bins)					
Cost (\$/bin)					

# APPENDIX B: RHBA BROCHURE ON RECYCLABLE MARKETS IN REGINA

## RHBA New Construction Industry Waste Management

### RHBA awarded A•C•T Grant for New Construction Industry Waste Management

The Regina Home Builder's Association (RHBA) received a grant to investigate the *feasibility of developing a new construction industry waste management plan* under the A•C•T (Affordability and Choice Today) Program, a regulatory reform initiative jointly undertaken by:

- the Canadian Home Builders' Association
- the Canadian Housing and Renewal Association
- Canada Mortgage and Housing Corporation, and
- the Federation of Canadian Municipalities.

The UMA Engineering Ltd. team of Tom Williams and Dianne Canson were contracted by RHBA to undertake this study. Copies of this report may be reviewed at the RHBA office or obtained from the A•C•T Program Manager, c/o The Federation of Canadian Municipalities, 24 Clarence Street, Ottawa, Ontario K1N 5P3 (Telephone: (613) 241-5221 or Fax: (613) 241-7440).

RHBA members and other stakeholders who provided invaluable direction and assistance during the course of this project include:

- *Ken McKinlay*, Executive Director, Saskatchewan Home Builders' Association
- *Ned Kosleniuk*, Chair, Regina Home Builders' Association Land Development Committee c/o Cairns Developers Ltd.
- *Bill Langman*, Chair, Regina Home Builders' Association Builders' Committee, c/o Cairns Homes Ltd.
- *Gerry Alexander*, Manager of Building Inspection, City of Regina Planning and Building Department
- *Bob Baird*, Coordinator, Corporate Environmental Management, Saskatchewan Environment and Resource Management
- *Derrlck Bellows*, Manager of Solid Waste, City of Regina Public Works Department
- *Murray Hogan*, Canada Mortgage and Housing Corporation
- *Carrnan Loraas*, Manager, Loraas Disposal Services Ltd.
- *Sandy Tomlinson*, Loraas Disposal Services Ltd., and
- *Kerr Vaughn*, Laidlaw Waste Systems.

### 4Rs Information from RHBA

Landfilling new residential construction waste is the least desirable and most costly waste management option as it does not conserve resources, minimize waste nor is it necessarily cost-effective. According to the sequential 4 Rs hierarchy of *reduce, reuse, recycle/compost* and *recover*, landfilling should be the option used after source reduction and waste diversion options have been exhausted.

**Reduce:** Buy for contents not containers as more than 35 per cent of residential waste is made up of packaging material. Bulk purchasing reduces packaging waste.

**Reuse:** Many items can be reused. Off-cuts may be used for bridging or blocking, and excess insulation used for soundproofing in interior walls.

**Recycle/Compost:** Recycle paper fibre (i.e. cardboard and newspaper) and wood which accounts for nearly 50 per cent of new construction site waste. Also recycle scrap metal and cans (i.e. plastic, glass, metal). Compost organic material. Select Regina Recyclable Materials Markets are summarized on the following pages.

**Recover:** Energy from waste materials which can not be reduced, reused or recycled may be recovered. Material recovery systems remove recyclables and compostables from mixed wastes.

### Look for these symbols

Help ensure a safe environment for future generations by purchasing recycled products.



Products suitable for  
RECYCLING  
where facilities exist



Products made with  
RECYCLED CONTENT



EcoLogo license for companies with products meeting certain environmental criteria issued by federal government.



Recyclable Material	Contact	Current Price	
Fill Clean non-conforming material charged at Rubble rate)	City of Regina Public Works Landfill @ 777-7000	No tipping fee if following quality requirements met: less than 6 inches in size; less than 1/3 non-earth; no large pieces of metal, wood or garbage	
Metals	CMS Metal Products Ltd. 909 8th Ave @ 352-1667	For non-ferrous metals (i.e.) copper, brass. aluminum, prices fluctuate based on current market conditions.	
	Go-Man Metal Recycling Ltd. 1345 Lorne St. @ 359-0056	For ferrous metals (i.e.) steel, scrap iron, price ranges from \$30 - \$60 per tonne.	
	Inland Steel Products Inc. 315 1st Ave E. @ 721-6677	Prices for other items such as radiators and batteries also fluctuate according to current market conditions.	
	Northern Metals Ltd. 1201 South Railway St. @ 757-4300	Many firms offer free pickup depending on quality and quantity of metal	
	Recycle Regina 100 Dewdney Ave. @ 586-6866		
	Recycle Systems 2837 Saskatchewan Drive @ 352-7174		
	Recyclers Regina @ 525-3292	Free pickup	
Wheat City Metals 2881 Pasqua St. N. @ 775-3611			
Paper Fibre	Cosmopolitan Recycling Regina Inc. 1500 1st Ave @ 347-2737	Newspaper OCC	Donation Donation
	Crown Shred & Recycling 332 Industrial Drive @ 545-5454	Telephone Books Milk Cartons Mixed Office  Magazines Newspaper OCC Ledger, Colour Ledger, White	\$22/tonne \$44/tonne \$55/tonne (unsorted) \$88/tonne \$121/tonne \$154/tonne \$242/tonne \$374/tonne

Recyclable Material	Contact	Current Price
Paper Fibre (continued)	<i>Recycle Regina</i> 1500 First Ave. @ 586.6866	Milk Cartons Pick up Newspaper Pick up OCC Pick up
	<i>Regina Big Blue Bin Recycling Depots</i> @ 777-7000 Broadway Shopping Centre Cathedral Area at the Sportplex Golden Mile Centre 3115 Lakeshore Mall Normanview Mall Northgate Mall PetroCanada at 3115 Woodhams Drive Rosemont Shopping Centre Sherwood Mall Southland Mall Superstore Victoria Square	Boxboard Drop-off Cardboard Drop-off Fine/writing paper Drop-off Magazines Drop-off Milk Cartons Drop-off Newspapers/flyers Drop-off Phone books Drop-off
Rubble	<i>City of Regina Public Works Landfill</i> @ 777-7000	\$18.85 per tonne, if following quality requirements met: acceptable waste materials from excavation, demolition and construction activities

# REGINA MINI MAP AND RECYCLING DEPOTS HERE

