ALBERTA MUNICIPAL BENCHMARKING INITIATIVE

Solid Waste Service Area
WHAT IS AMBI?

7 Alberta municipalities

- Grant from Alberta Municipal Affairs
- Collaboration to build a framework, develop benchmark definitions and allow comparison
- Develop an ongoing benchmarking process of 10 service areas
- A benchmark is an defined point of reference against which things can be measured and compared between municipalities
WHY BENCHMARKING

A benchmark is an established point of reference against which things can be measured and compared

- Helps to tell the municipal “performance story”
- Sound business practice
- Share knowledge and best practices
- Identifies opportunities for change
- Encourages continuous improvement
- Demonstrates transparency and value for money
- Supports results based accountability
Efficiency

• a measure of productivity: quantity
• often expressed in cost per unit

Effectiveness

• a measure of value or benefit of service: quality
• often expressed as percentage or rate
SOLID WASTE

Third of 10 service areas to be benchmarked
Collaboration to build a framework and allow comparison

**Solid Waste services is:**
- Collection of solid waste recyclables and garbage from residences
- Processing to separate recyclables
- Marketing of recyclables
- Disposal of end-of-life garbage
## SOLID WASTE

### Influencing factors (as of 2014)

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Airdrie</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>20%</td>
<td>$113</td>
<td></td>
<td>7,976</td>
<td>3,606</td>
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<tr>
<td>Banff</td>
<td></td>
<td>Y</td>
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<td>0%</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Canmore</td>
<td></td>
<td>Y</td>
<td></td>
<td>0%</td>
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<tr>
<td>Lethbridge</td>
<td></td>
<td>Y</td>
<td></td>
<td>50%</td>
<td>$21</td>
<td></td>
<td>24,554</td>
<td>110</td>
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<tr>
<td>Medicine Hat</td>
<td>Y</td>
<td>Y</td>
<td></td>
<td>59%</td>
<td>$52</td>
<td></td>
<td>13,680</td>
<td>3,213</td>
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<td>Okotoks</td>
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<td>Y</td>
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<td>28%</td>
<td>$60</td>
<td></td>
<td>4,227</td>
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<td>Red Deer</td>
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<td>Y</td>
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<td>70%</td>
<td>$65</td>
<td></td>
<td>18,228</td>
<td>7,491</td>
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<table>
<thead>
<tr>
<th>Municipality</th>
<th>Curbside Carts Garbage (#)</th>
<th>Curbside Carts Recyclables (#)</th>
<th>Communal Bins Garbage (#)</th>
<th>Communal Bins Recyclables (#)</th>
<th>Special Large Items (# / month)</th>
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<tbody>
<tr>
<td>Airdrie</td>
<td>0</td>
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<td>0</td>
<td>714</td>
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<td>Banff</td>
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<td>166</td>
<td>91</td>
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<td>Lethbridge</td>
<td>29,999</td>
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<td>51</td>
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<td>Medicine Hat</td>
<td>22,082</td>
<td>11,472</td>
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<td>476</td>
<td>530</td>
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2.2 TOTAL SOLID WASTE COSTS

Solid Waste System Total Cost 1 ($/tonne collected)

Median $212

$432

$174

$158
2.3 TOTAL SOLID WASTE COSTS

Total Solid Waste Cost ($/tonne collected)

- Red Deer
- Lethbridge
- Medicine Hat

Costs breakdown:
- Direct Costs
- Indirect Costs
- Overhead Costs
- Amortization Costs

2012:
- Red Deer: $158
- Lethbridge: $174
- Medicine Hat: $211

2013:
- Red Deer: Similar cost
- Lethbridge: Similar cost
- Medicine Hat: Similar cost

2014:
- Red Deer: Similar cost
- Lethbridge: Similar cost
- Medicine Hat: Similar cost

Note: The exact figures are not provided in the diagram, but the trend and the breakdown are indicated.
2.5 RECYCLABLES

Recyclables, Handling & Marketing Processing Total Cost ($/tonne recycled) - Efficiency

Recyclables, Handling & Marketing Processing Total Costs

Lethbridge  |  Red Deer  |  Banff  |  Medicine Hat  |  Canmore  |  Airdrie  |  Okotoks


Direct Costs ($)  |  Indirect Costs ($)  |  Overhead Costs ($)  |  Amortization Costs ($)

Median $316

$474

$95
2.6 GARBAGE HANDLING AND DISPOSAL

Garbage Handling and Disposal ($/tonne collected) - Efficiency

- Direct Costs
- Indirect Costs
- Overhead Costs
- Amortization Costs

Lethbridge 2012, 2013, 2014
Medicine Hat 2012, 2013, 2014
Okotoks 2012, 2013, 2014
Airdrie 2012, 2013, 2014
Canmore 2012, 2013, 2014
Banff 2012, 2013, 2014

Median $48
$135
$28

2012 2013 2014
2012 2013 2014
2012 2013 2014
2012 2013 2014
2012 2013 2014
2012 2013 2014
2012 2013 2014
2012 2013 2014

Garbage Handling and Disposal ($/tonne collected)
2.7 RESIDENTIAL SOLID WASTE TOTAL COSTS

Residential Solid Waste Total Costs ($/dwelling unit serviced) - Efficiency

- Direct Costs
- Indirect Costs
- Overhead Costs
- Amortization Costs

Median $249

$334

$154
2.7 RESIDENTIAL SOLID WASTE TOTAL COSTS

Residential Solid Waste Total Costs ($/dwelling unit serviced) - Efficiency
Residential Solid Waste Statistics (kg/capita) - Effectiveness

2.15 RESIDENTIAL SOLID WASTE STATISTICS
2.15 RESIDENTIAL SOLID WASTE STATISTICS

Residential Solid Waste Statistics (kg/capita) - Effectiveness

![Residential Solid Waste Statistics](image-url)
Lessons learned

• Distance to landfill has the largest impact on disposal cost per tonne.
  1. Lethbridge, Medicine Hat and Red Deer have local landfill sites
  2. Others operate a transfer station and then long haul waste to landfill site
• Tipping fees vary but have a lesser effect on direct costs compared to transportation
• New handling facilities and new recycling programs increase tonnes recycled
• Municipalities have various approaches to collecting commercial solid waste. For example:
  • Red Deer collects all commercial
  • Canmore and Okotoks, no commercial
  • Lethbridge and Medicine Hat, some commercial
• Lowest or below median for collection and garbage costs per tonne and per dwelling unit
• Median for total solid waste KG per capita
• Lethbridge provide additional services (Large Item Service, Electronics, Christmas Tree Collection, etc)
NEXT STEPS

• Complete other service area benchmark reports
• Review practices and seek efficiencies where possible