Alberta Municipal Benchmarking Initiative

City of Airdrie
Community & Opportunity

Town of Banff

City of Lethbridge

Okotoks
Historic Past, Sustainable Future

Town of Canmore

cochrane
How the West is Now

The City of Red Deer

Medicine Hat
The Gas City

city of Wetaskiwin

WHAT IS AMBI?

Collaboration to build a framework and allow comparison moving forward

- 9 Alberta municipalities
- Grant from Alberta Municipal Affairs
- Develop an ongoing benchmarking process

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
- Encourages continuous improvement
- Demonstrates transparency and value for money
- Supports results-based accountability

TWO DIMENSIONS

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

Solid Waste Collection and Disposal

- the collection, processing, and disposal of **residential** garbage, organics, and recyclables.
- Landfill Operations out of scope
- Composting Operations out of scope
- Commercial Collections out of scope

SOLID WASTE BENCHMARKS

16 benchmarks measured

- 13 efficiency measures
- 3 effectiveness measure

SOLID WASTE

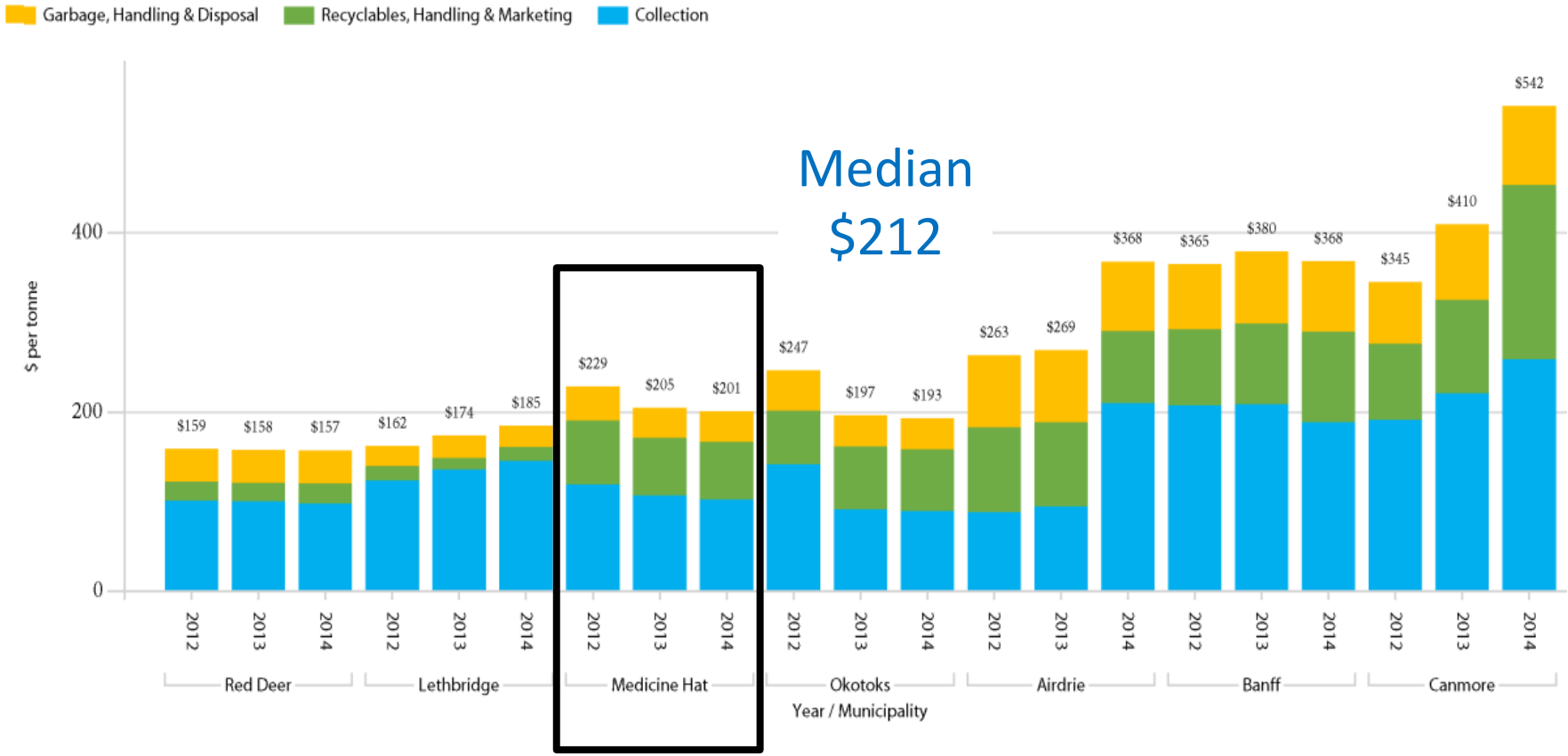
Influencing factors

Municipality	Municipal Waste Limits	Subscription Based Collection	Collection System Automated	Collection System Manual	Contract All Solid Waste Services	Collection from Rear Lanes (%)	Diversion Goal Set	Tipping Fees ($/tonne)
Airdrie	Y			Y	Y	20%		$113
Banff			Y			0%		$35
Canmore			Y			0%	Y	$35
Lethbridge			Y			50%		$21
Medicine Hat	Y	Y	Y			59%		$52
Okotoks	Y	Y	Y			28%	Y	$60
Red Deer	Y			Y	Y	70%	Y	$65

2.2 TOTAL SOLID WASTE COSTS 1 ($/TONNE)

Residential Solid Waste Total Costs 1 ($/tonne collected) – Efficiency

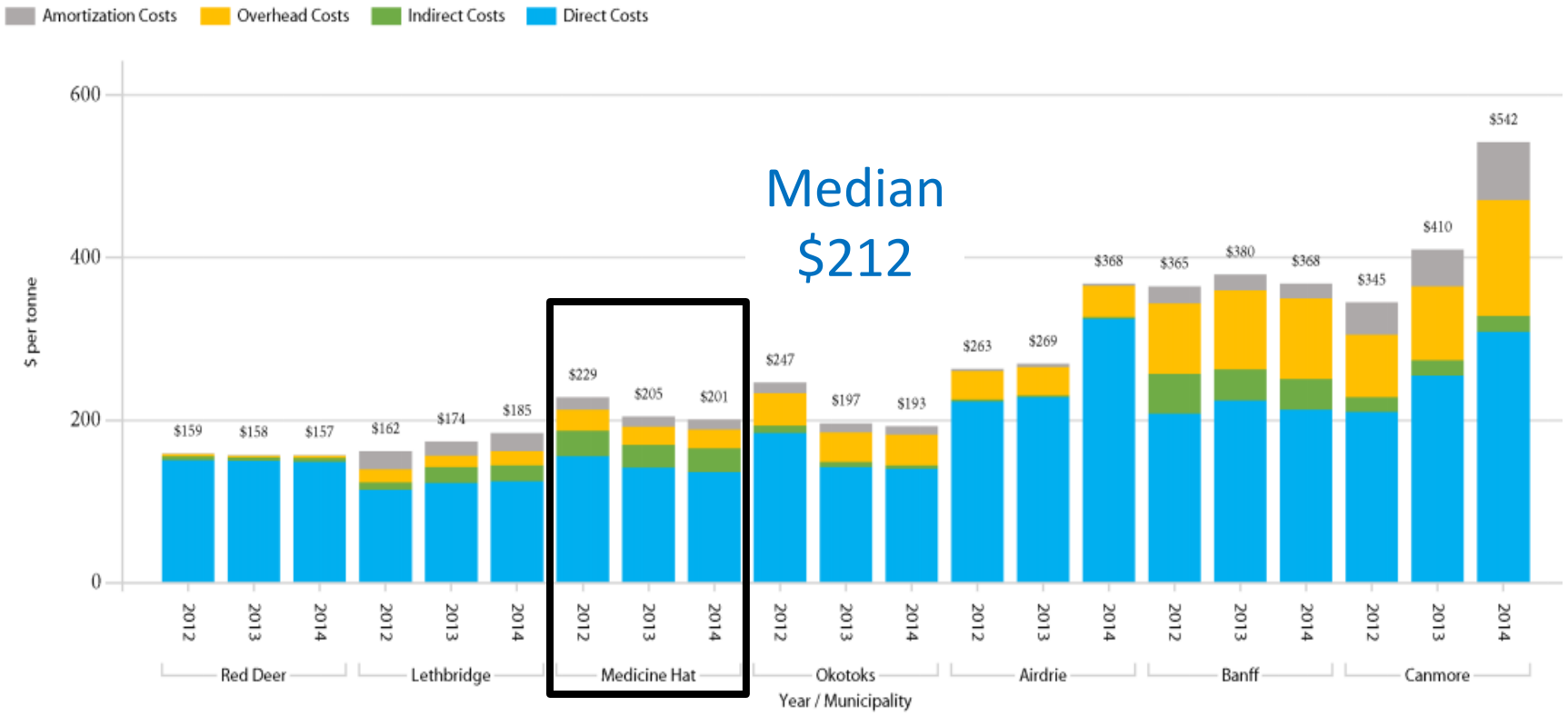
This chart shows the total cost of collecting residential waste, diversion of recyclables for further processing into useful products, and disposal of garbage to a landfill per tonne of residential waste collected.



2.3 TOTAL SOLID WASTE COSTS 2 ($/TONNE)

Residential Solid Waste Total Costs 2 ($/tonne collected) – Efficiency

This chart shows the total cost of collecting residential waste, diversion of recyclables from the waste stream for further processing into useful products, and disposal of garbage to a landfill per tonne; direct costs are those for day-to-day operation of the service, indirect are for management of the service, overhead is a calculated allocation of total overhead to this service, amortization is the depreciation cost of all assets used to deliver the service.



2.2 TOTAL SOLID WASTE COSTS ($/TONNE)

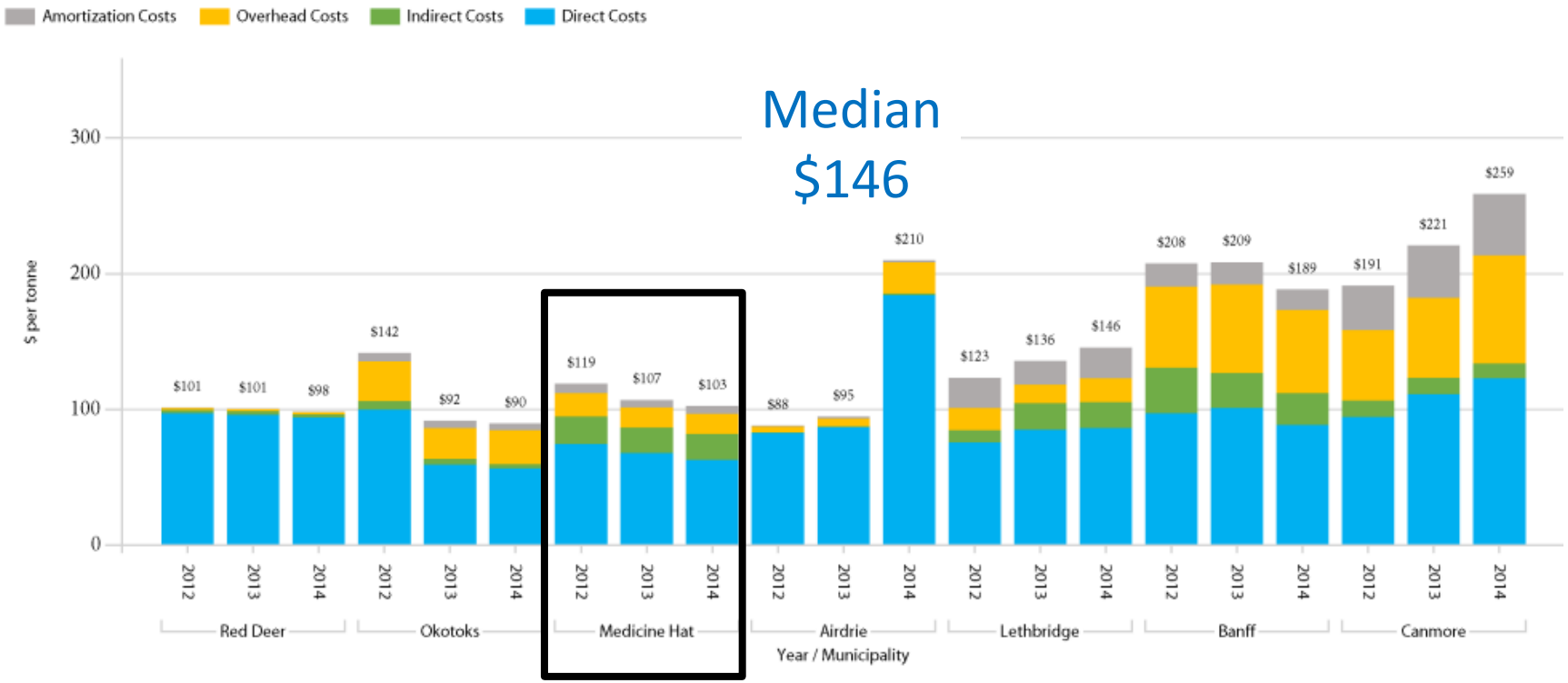
Medicine Hat's Story

- Average Total Costs below median of $212/tonne
- Highly variable accounting structure between municipalities—**opportunity for collaboration**
- Varying level of services impact costs.
- Comparable communities:
    - Lethbridge and Red Deer comparable in several areas.
    - Ownership of landfill impacts reported waste.
    - Red Deer contract includes all collection up to 6 yd^3

2.4 SOLID WASTE COLLECTION COSTS

2,4 Collection Costs ($/tonne collected) – Efficiency

This chart shows the total cost of collecting recyclables and garbage per tonne collected by cost type; direct, indirect, overhead and amortization. Curbside collection at the residence is used in all municipalities except Banff and Canmore. Collection of recyclables varies from curbside single stream (co-mingled with garbage) to curbside separated by customers to separated by customers then dropped off at recycling bins.



2.4 SOLID WASTE COLLECTION

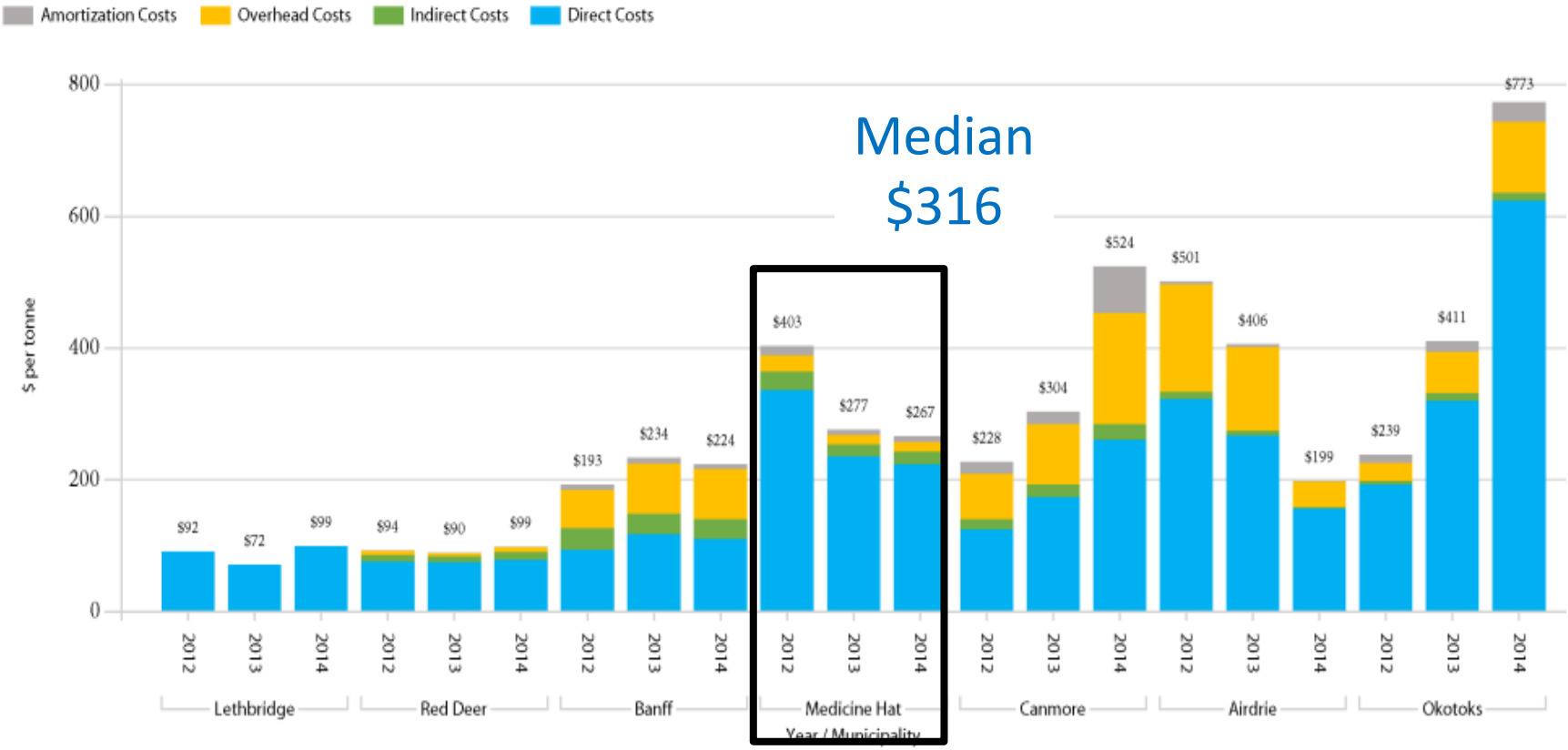
Medicine Hat's Story

- Average Collection Costs below median of $146/tonne
- Collection costs influenced by service levels and consumer behavior
    - Curbside automated vs manual
    - Communal bins vs curbside pick-up
    - Per capita waste generation.
- **Note**– cost per tonne is lower if residents generate more waste.

2.5 SOLID WASTE RECYCLING

2,5 Recyclables Handling and Marketing Cost ($/tonne recycled) – Efficiency

This chart shows the cost of diverting recyclables from the waste stream per tonne recycled by cost type; direct, indirect, overhead and amortization. Diversion can be started at curbside by having residents separate their recyclables from the garbage or leaving them co-mingled for separation in a waste processing facility.



2.5 SOLID WASTE RECYCLING

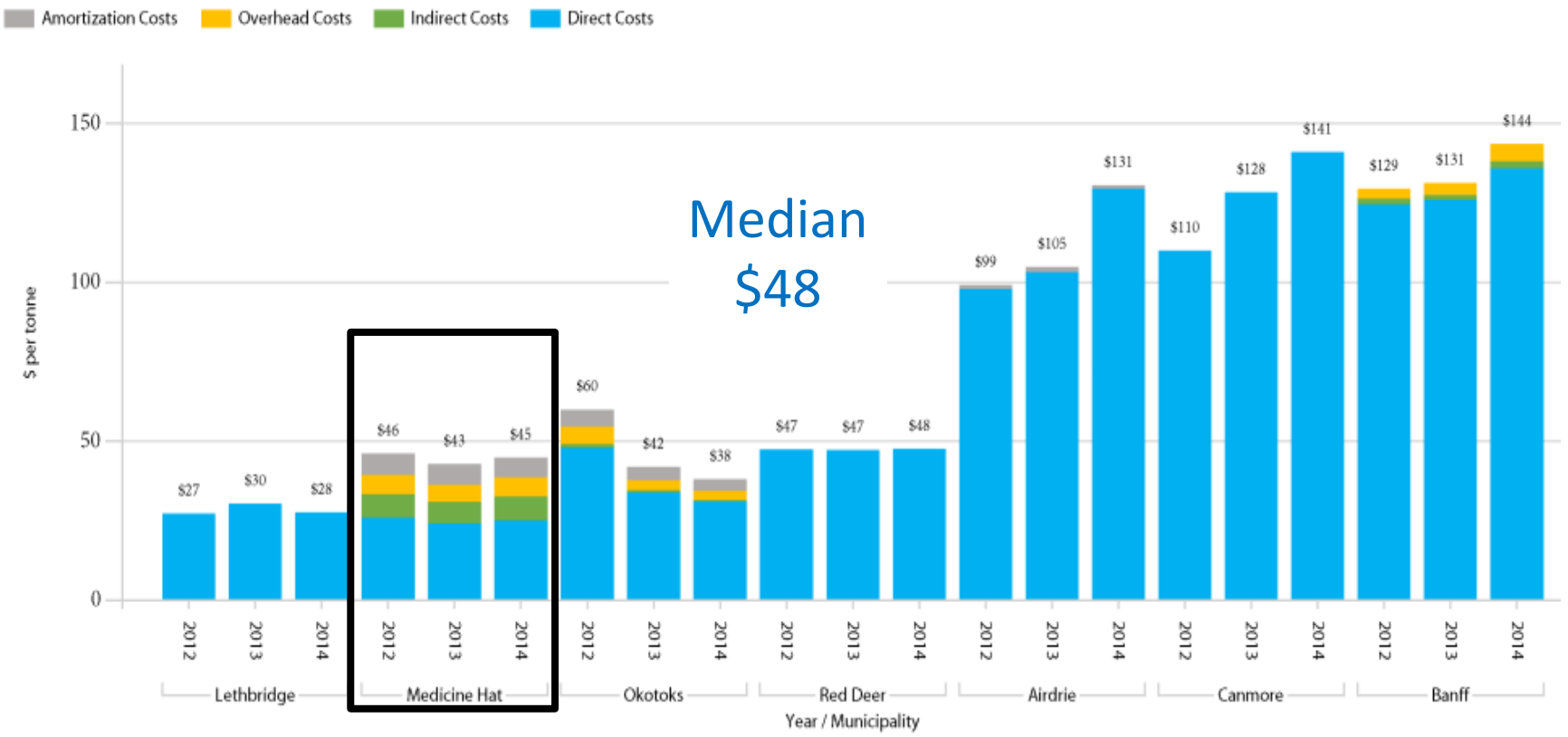
Medicine Hat's Story

- Average Recycling Costs below median of $316/tonne
- Higher levels of recycling increases costs to Collection Operations but reduce costs to Landfill Operations.
- **Note**– commodity rates influence total costs

2.6 SOLID WASTE HANDLING AND DISPOSAL

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

This chart shows the cost of handling garbage (end-of-life waste) and disposal by transportation to a landfill plus tipping fees per tonne of garbage collected by cost type; direct, indirect, overhead and amortization.



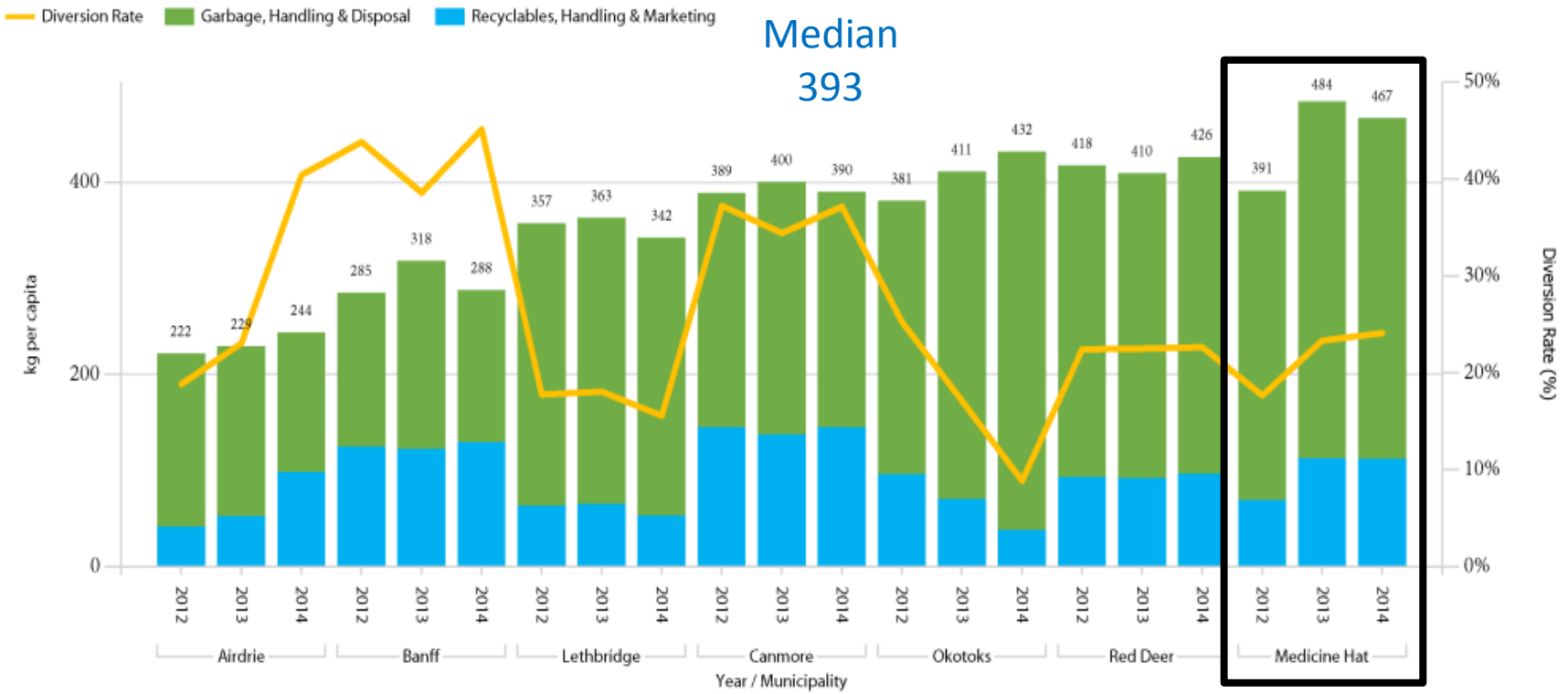
2.6 SOLID WASTE HANDLING AND DISPOSAL

Medicine Hat's Story

- Average Disposal Costs below median of $48/tonne
  - landfill tipping fees for Collection Operations
- Increased fees will increase cost.
  - Offset through savings in Landfill airspace.
- Proximity to the landfill reduces hauling costs.
- Future curbside recycling will reduce this cost.
  - Increased disposal costs will increase diversion rates.

2.15 RESIDENTIAL SOLID WASTE STATISTICS (KG/CAPITA)

2.15 This chart shows what portion of the total solid waste collected is recycled and what portion is garbage disposed to a landfill in kilograms per capita. The diversion rate is the ratio (percentage) of weight recycled to total weight collected.



2.15 RESIDENTIAL SOLID WASTE STATISTICS (KG/CAPITA)

Medicine Hat's Story

- Broad diversity within the small sample group.
- 2013 flood impacted the 2013 and 2014 tonnage.
- Variances in how waste data is collected and reported.
    - Sourced from StatsCan
- Airdrie has lowest kg/capita:
    - 3 Bag Limit and $3 per extra bag.
- Report states more research needed.

CONCLUSIONS AND NEXT STEPS

- Medicine Hat provides high quality services while maintaining a **total cost structure below median.**
- Review practices and seek efficiencies where possible - **continuous improvement**
- Highly variable accounting structure between municipalities - **opportunity for collaboration**
- Continues to have total combined utility bill **cost competitive** to other municipalities within Alberta

CONCLUSIONS AND NEXT STEPS

- 2012 – 2022 Waste Management Strategy
  - **Metrics evolving**
- New curbside recycling in 2018
  - **increased diversion**.
- Contracting processing and collection of recyclables
  - manages costs
  - reduces debt (>$12M on Capital)
  - reduces fleet (>$600K)