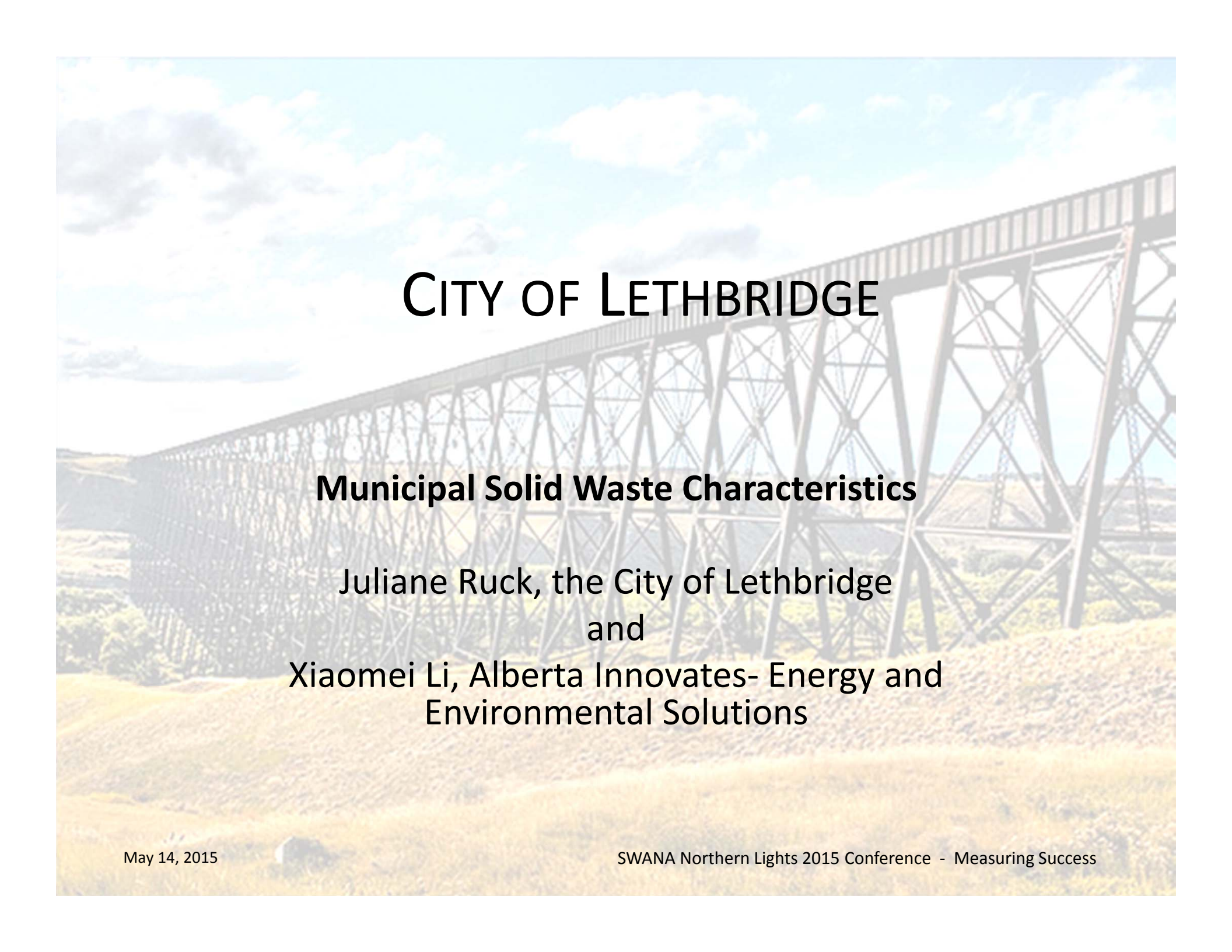


The background of the slide is a photograph of a large, long steel truss bridge spanning a deep valley. The bridge has a complex lattice of steel beams and supports. The valley below is filled with dry, yellowish-brown grass and some sparse vegetation. The sky above is blue with scattered white clouds. The text is overlaid on this image.

CITY OF LETHBRIDGE

Municipal Solid Waste Characteristics

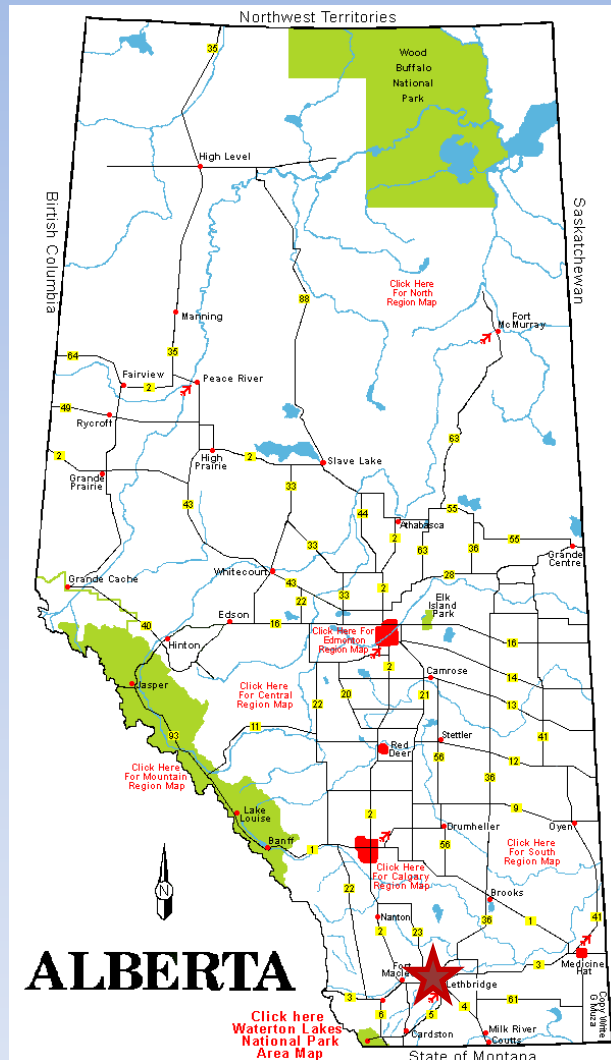
Juliane Ruck, the City of Lethbridge
and
Xiaomei Li, Alberta Innovates- Energy and
Environmental Solutions



CITY OF
Lethbridge

2

LETHBRIDGE



May 14, 2015

SWANA Northern Lights 2015 Measuring Success Conference



CITY OF
Lethbridge

3

HISTORY



1940's



1990's



1980's



2013

May 14, 2015

SWANA Northern Lights 2015 Measuring Success Conference



DO WE HAVE WHAT IT TAKES?



Residential



Commercial



Multi-Family



PROGRAM OBJECTIVES

- Are customers compliant with waste by-law
- Is our education effective?
- What goes into the bin?





PROGRAM PILOT





CITY OF
Leithbridge

8

PROGRAM PILOT



May 14, 2015



CITY OF
Leithbridge

SWANA Northern Lights 2015 Measuring Success Conference



PROGRAM PILOT





PROGRAM EVOLUTION





COMPLIANCE WITH WASTE BY-LAW





COMPLIANCE WITH WASTE BY-LAW





COMPLIANCE WITH WASTE BY-LAW





COMPLIANCE WITH WASTE BY-LAW





EFFECTIVENESS OF EDUCATION





EFFECTIVENESS OF EDUCATION





EFFECTIVENESS OF EDUCATION



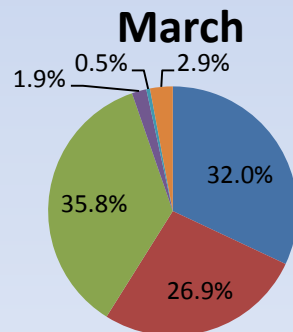
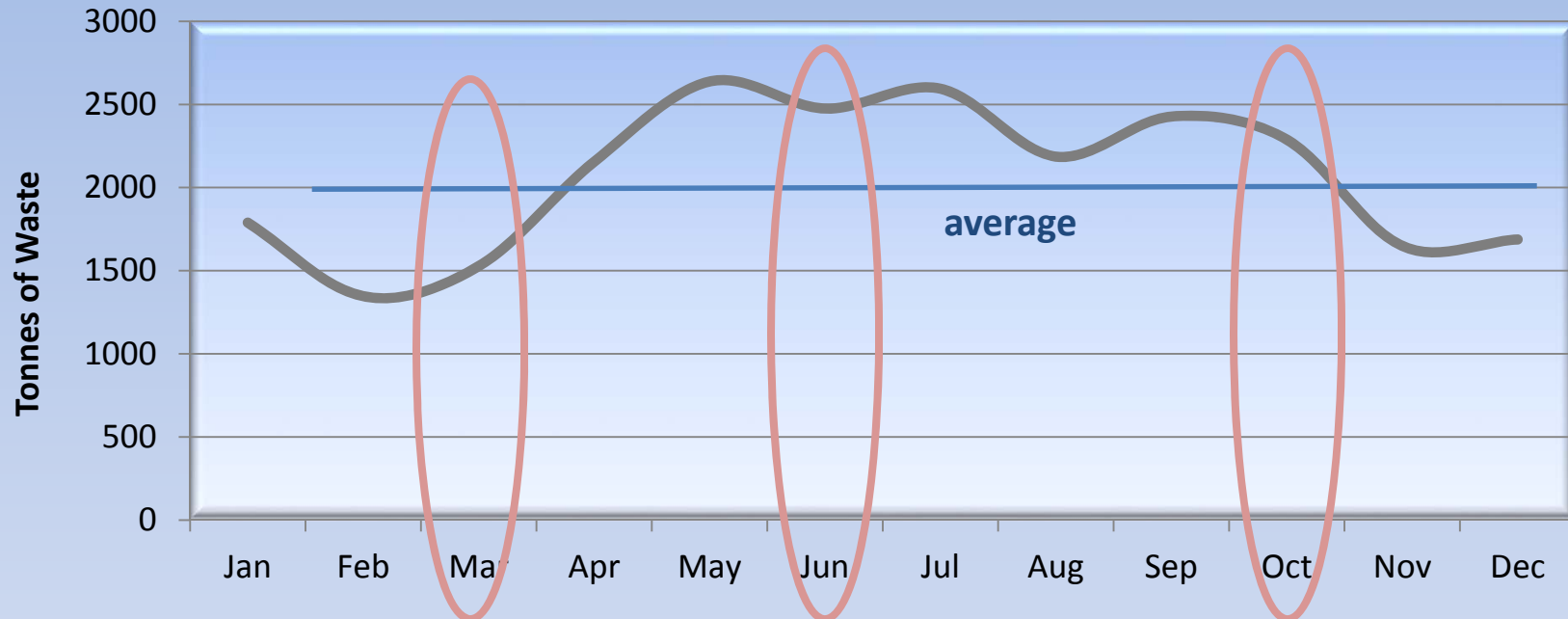


EFFECTIVENESS OF EDUCATION

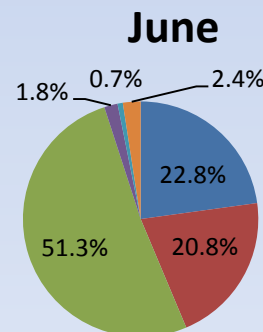




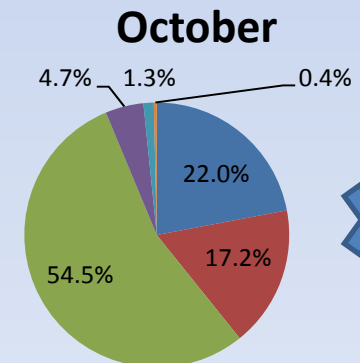
RESIDENTIAL GARBAGE COMPOSITION



× 5



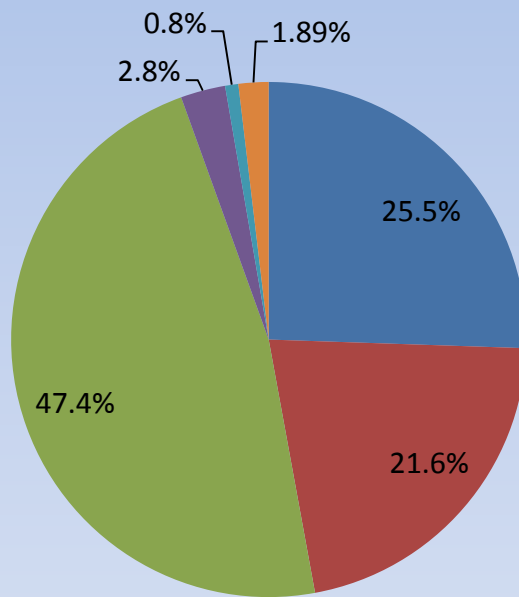
× 4



× 3

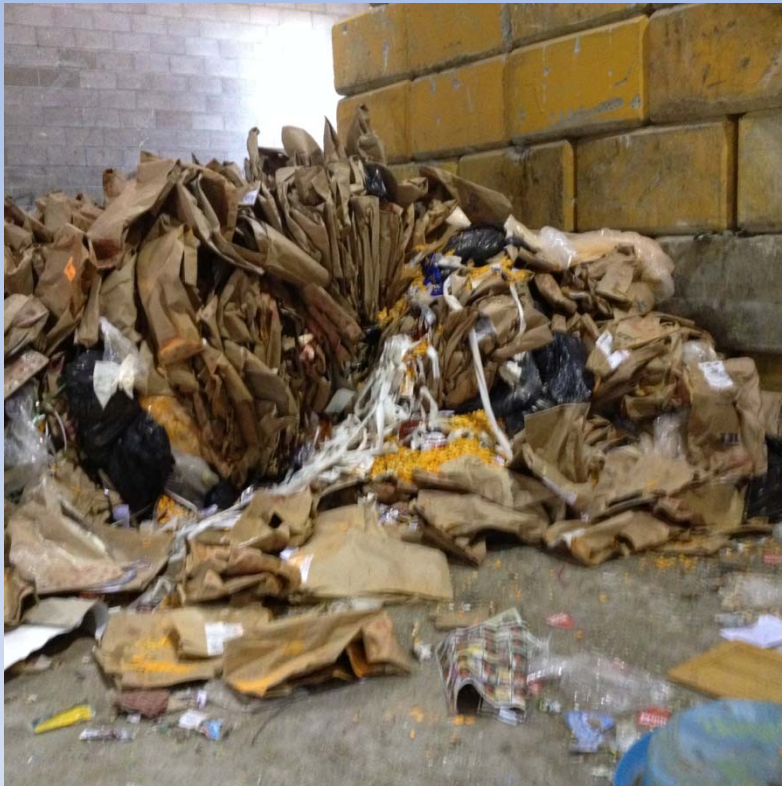


RESIDENTIAL GARBAGE COMPOSITION





COMMERCIAL GARBAGE COMPOSITION



Major Chain Grocery Store



Ice Rink and School



Health Care and Social Housing



COMMERCIAL GARBAGE COMPOSITION

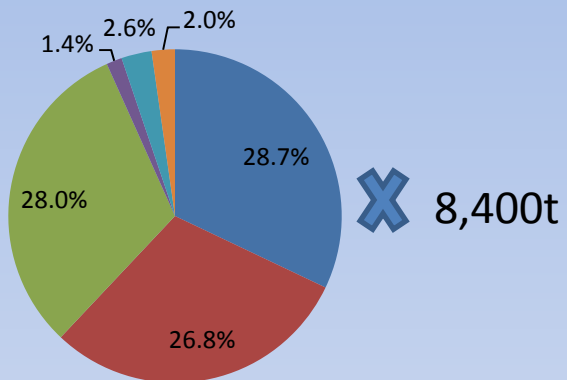


- Industrial
- Construction
- Retail
- Office
- Institutional
- Healthcare & Social Assistance
- Accommodation & Food
- Other

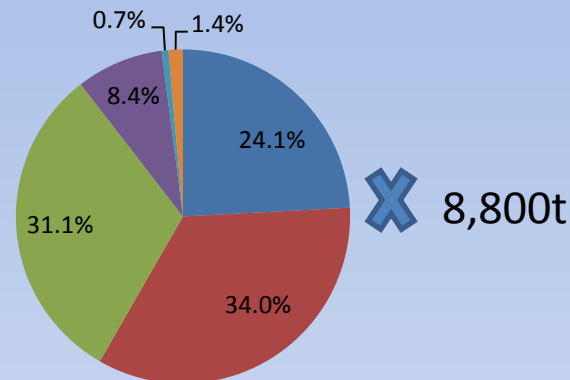


COMMERCIAL GARBAGE COMPOSITION

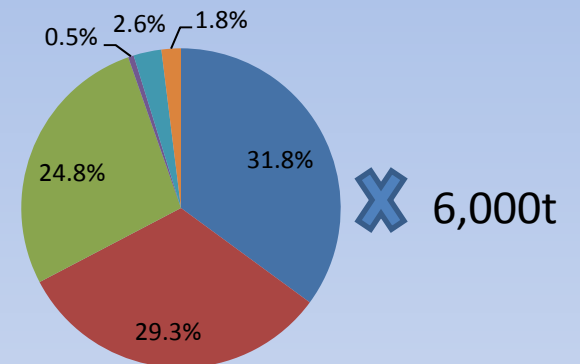
Health & Social Services



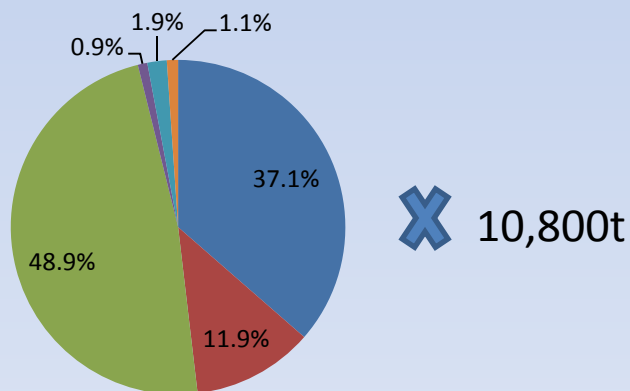
Institutional



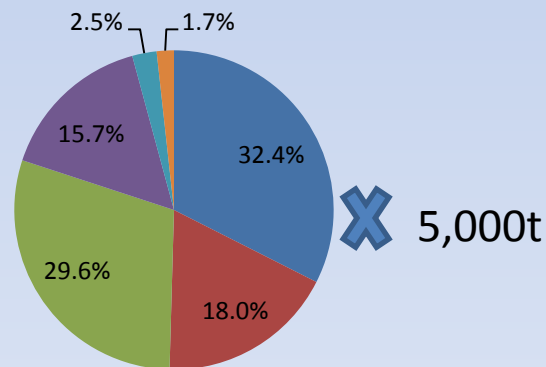
Office



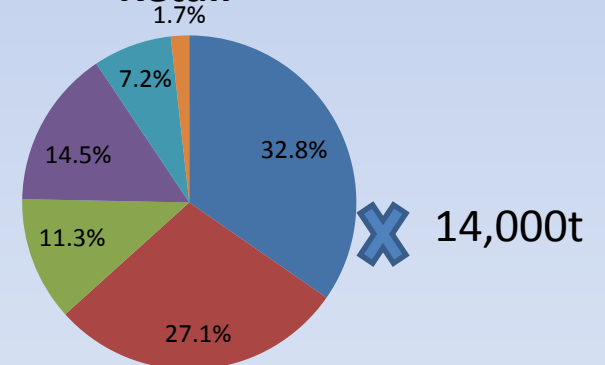
Food & Accommodation



Other



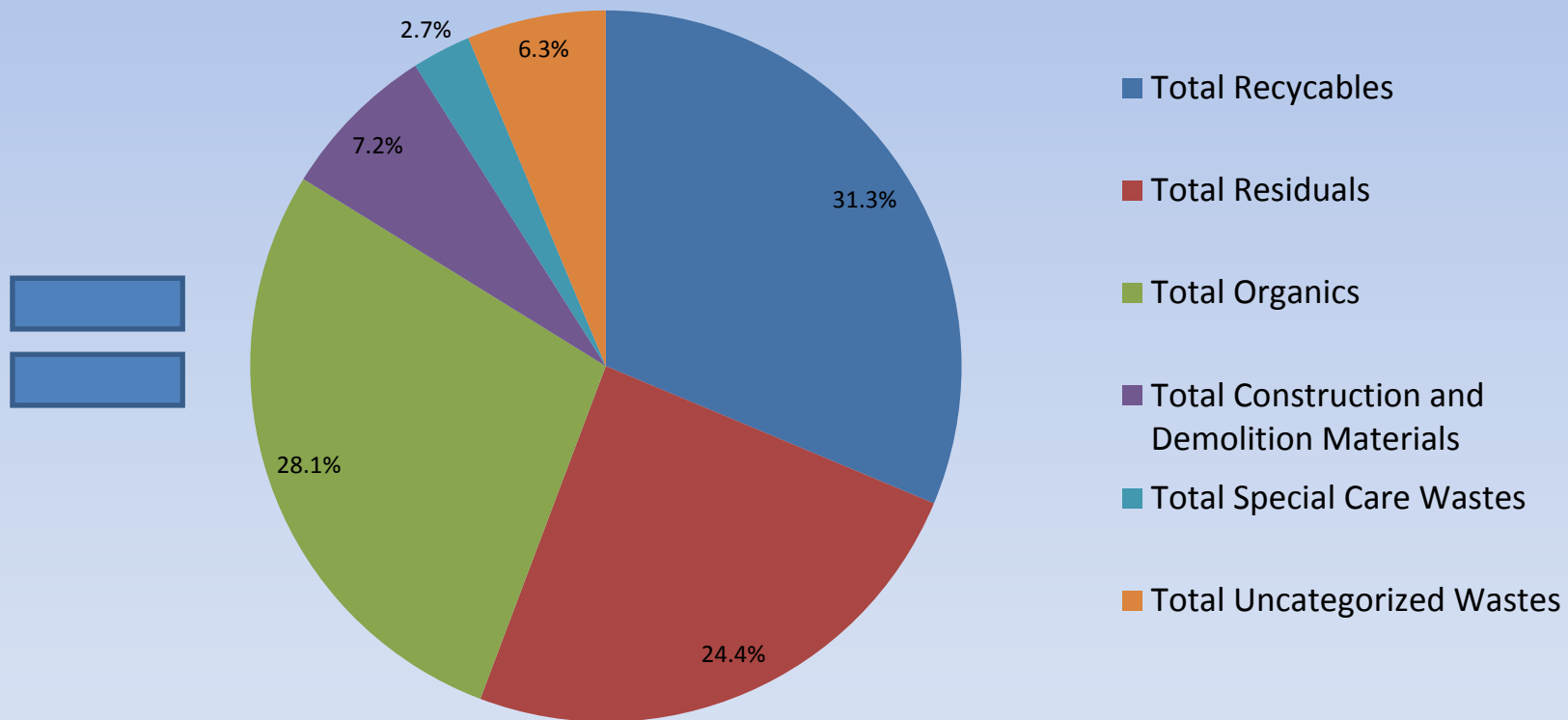
Retail





COMMERCIAL GARBAGE COMPOSITION

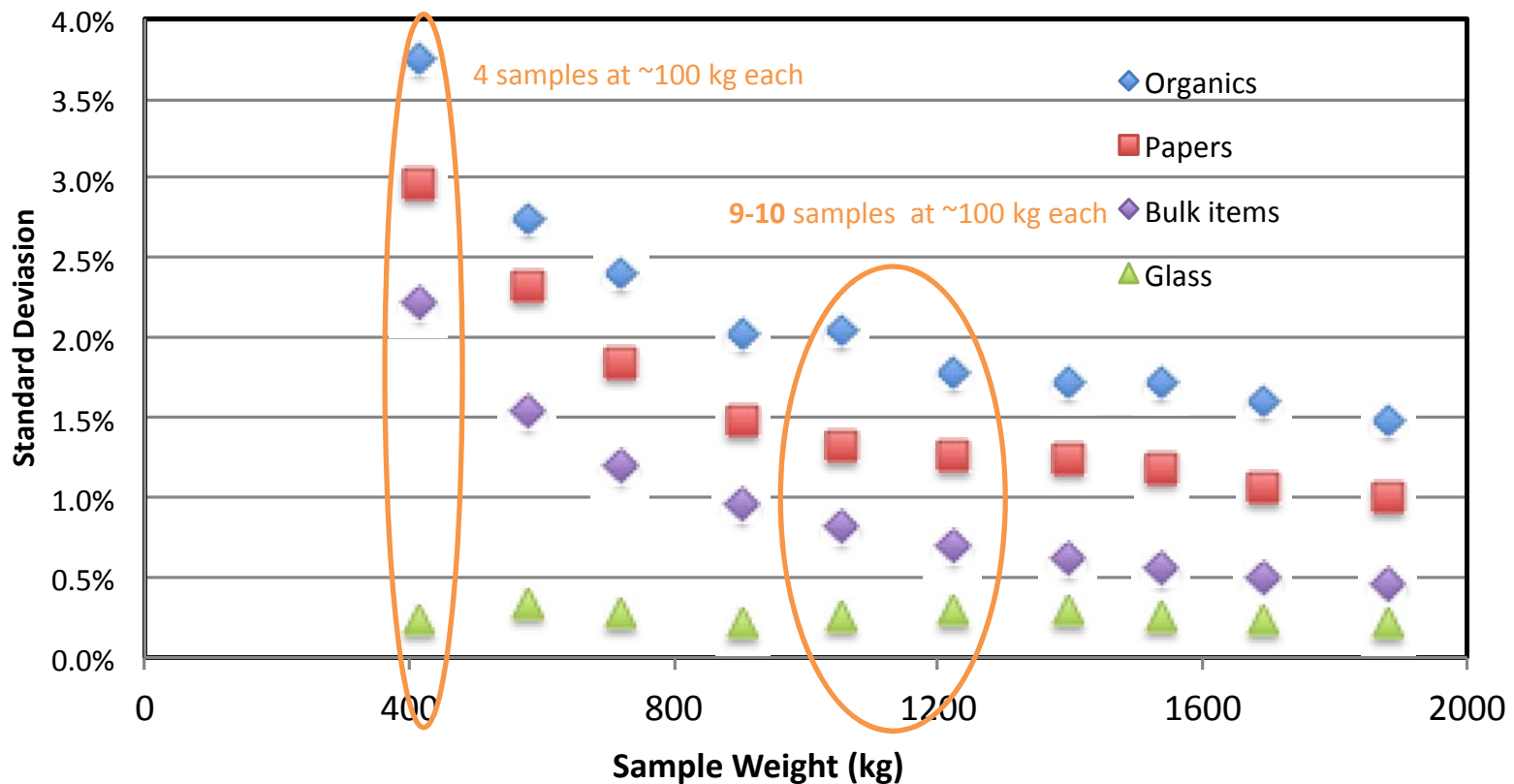
Waste Categories - Audit ICI 2011





HOW TO DO AN AUDIT?

Sample size and sample weight





RECOMMENDATIONS

Staff



SUMMARY

- Waste audit data will help you to understand what you are dealing with in your waste
- Waste audits are easy and cost effectively to do internally (~\$300/ sample)
- 10 samples at 100 kg per audit are sufficient
- 3-4 audits per year to account for seasonal variability
- Do audits every 2-3 years if no significant program changes occurred
- City of Lethbridge has good data

SOURCES

- **White Paper** - <http://www.albertatechfutures.ca/>
- **CCME Recommended Waste Characterization Methodology, 1999**
- Ontario Ministry of Environment 1991. Procedures for the Assessment of Solid Waste Residential and Commercial, Volume III of the Ontario Waste Composition Study, July;
- Provincial Waste Characterization Framework, Alberta, October 2005
- California Integrated Waste Management Board 1998. CIWMB Uniform Waste Disposal Characterization Method.

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juliane.ruck@lethbridge.ca