

U of A and KC Environmental Group Ltd.

# Keeping it GREEN and Gold

# Outline

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- Project Goal
- Project Work
- Waste Sort
- Review of Operations
- Waste Management Survey
- Project Results / Strategies

# Project Goal

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- U of A: a recognized leader among educational and research institutions - want to be a leader in environmental responsibility as well.
- ***Our goal is to become a more sustainable community by reducing waste generation overall and by diverting more recyclables from the waste stream into the recycling stream.***

# Project Objectives

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- Reduce amount of materials going to landfill
- Improve existing recycling programs
- Increase participation in existing recycling programs
- Identify and implement new recycling programs

# Project Work

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- Conducted Waste Sort
- Reviewed Existing Waste Management Programs
- Conducted Survey of U of A students and employees
- Developed Short and Long Term Waste Management Plan
- Implementation – five and ten year recommendations

# Waste Audit

- To quantify the amount and types of waste generated at the U of A
- To provide baseline data

| Representative Building                                               | Use Category                         |
|-----------------------------------------------------------------------|--------------------------------------|
| HUB Mall, Student's Union Building (SUB)                              | Eating Areas, Common Areas, Offices  |
| Tory, Engineering Teaching and Learning Complex, and University Hall  | Classrooms, Offices                  |
| Lister Hall                                                           | Living and Food Service Areas        |
| Medical Sciences, Biological Sciences and Dentistry/Pharmacy Building | Laboratories, Offices and Classrooms |

# Waste Audit



# Waste Audit





# Waste Audit



# Waste Audit



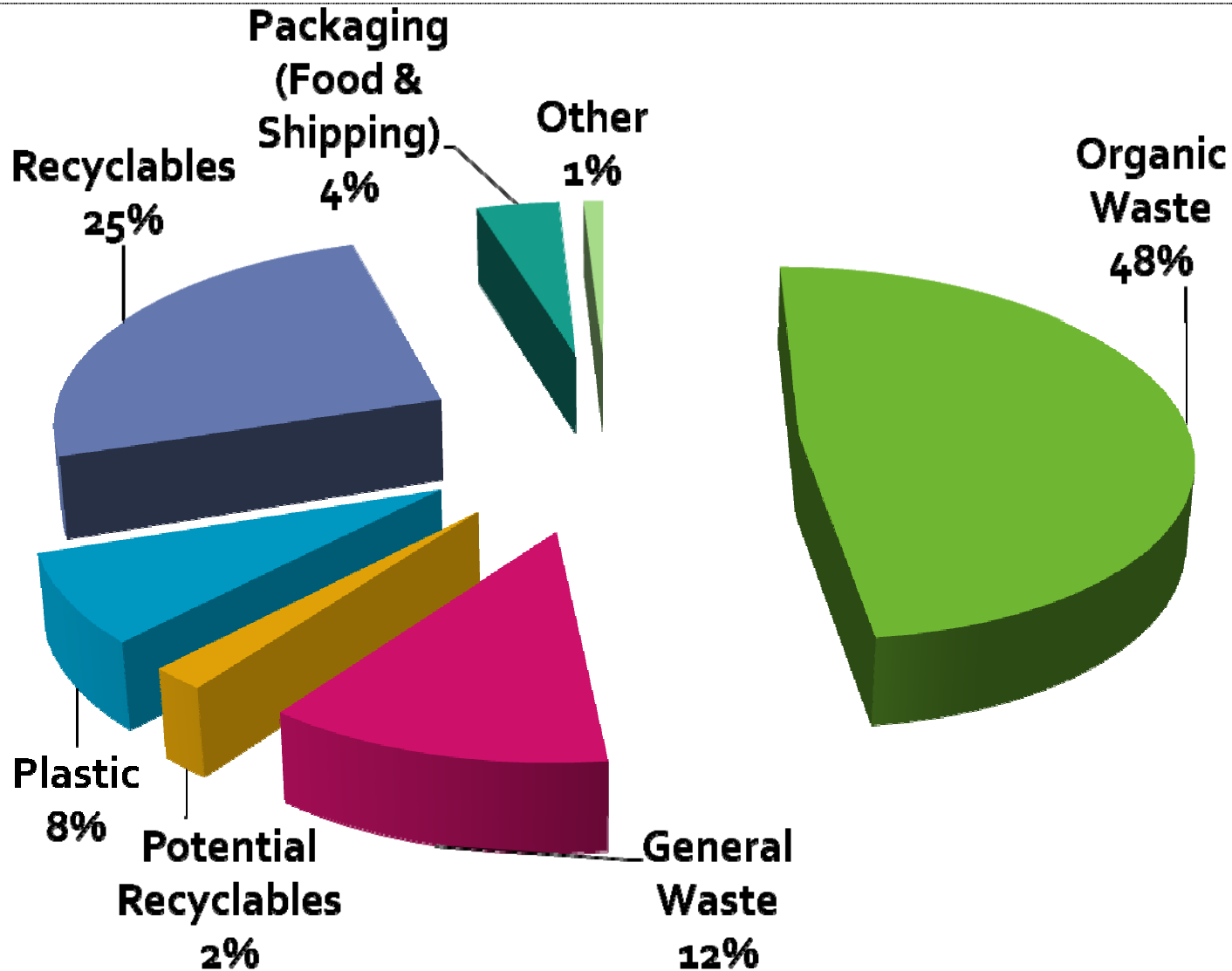
# Waste Audit



# Waste Audit



# Waste Composition



# Waste Audit Results

- Current Waste to Landfill Rate: 4,000 tonnes/year
- Target Diversion Rate: 30% (increase to 40% by year three)

To achieve significant diversion focus on largest waste components

- Expand Organic Waste Program:
  - Include food waste and related paper products, paper towel, tissue and animal bedding
- Improve Capture Rate on Current Recyclable Programs:
  - Focus on beverage containers and mixed fibre
  - Implement ongoing education program
- Expand Current Recycling Program:
  - Include all grades of plastic, add glass and tin

# Review of Existing Programs

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- Waste Collection
- Recycling Programs
  - Beverage Containers
  - Mixed Fibre
  - Metal
  - Used Oil and Oil Filters
  - Shredding and Recycling of Confidential Docs
  - Kitchen Grease
  - Automotive Batteries and Tires
  - Household Batteries
  - Electronic Waste

# Review of Existing Programs

- Composting Programs
  - Yard waste composted at the U of A Farm
- Other Programs:
  - Construction & Demolition Waste source separation
  - Surplus Items Program (furniture, recreation equipment, etc.)
  - Hazardous Waste Disposal and Recycling



# Review of Existing Programs

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- Students' Union Coordinated Programs
  - Ink jet printer cartridge recycle/reuse
  - Reusable plates and cutlery program
  - Bicycle rental for commuters
  - Reusable beverage container promotion
  - Left over food provided to students in need (Food Coop Program)

# Review of Existing Programs

- Tour of campus
- Random interviews of staff and students
- Interviews with key personnel
  
- Discussions with other institutions
- Review of industry
- Desktop research

# Review of Existing Programs

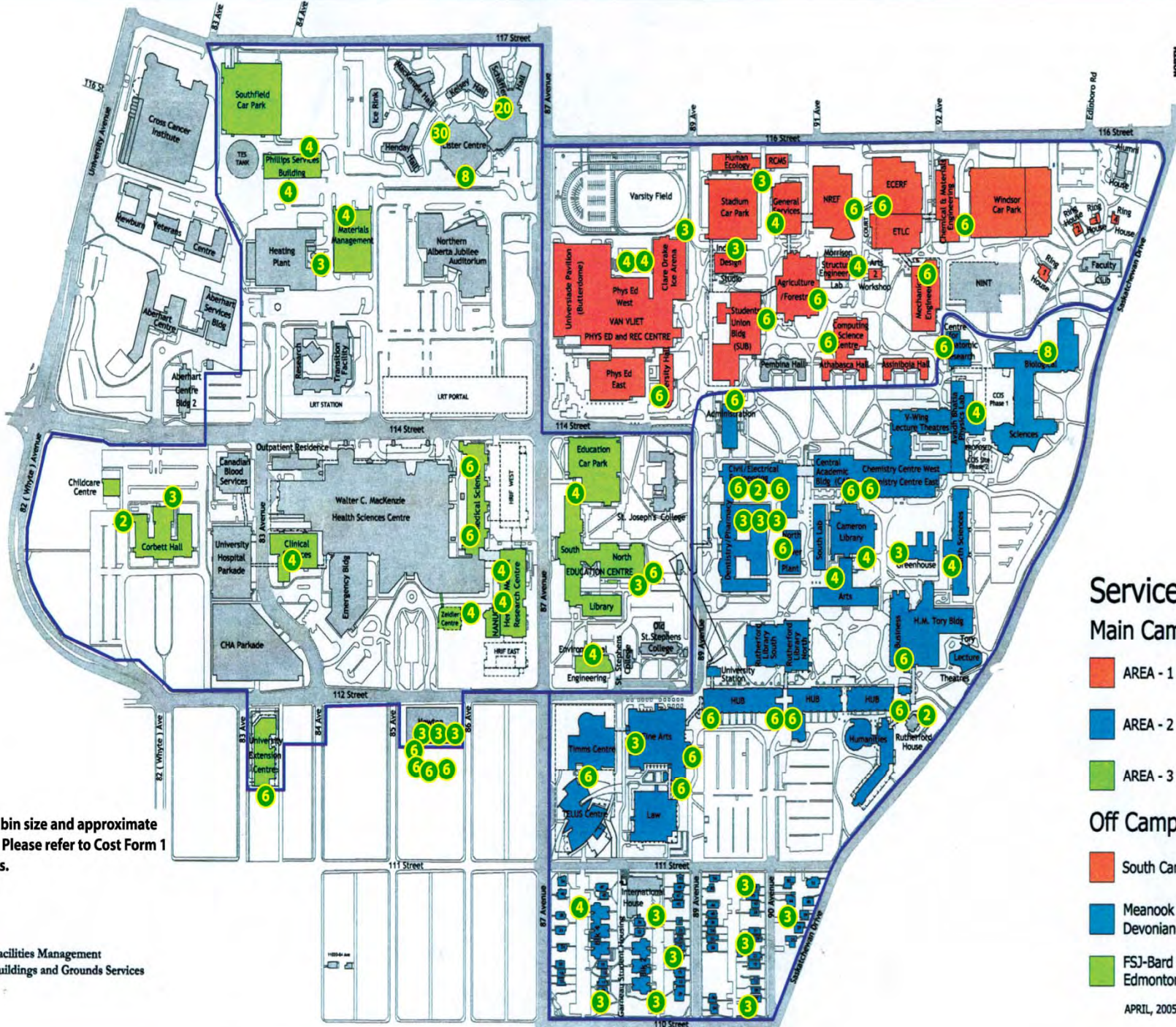
## Common Themes:

- SIMPLIFY
- STANDARDIZE
- CENTRALIZE & COOPERATE
- EDUCATE
- ADVERTISE (Brag a little)
- EXPAND
- MONITOR

# Review of Existing Programs

Current inventory of outdoor garbage bins:

- Front-load and roll-off bins of various size
  - Ranged from 2 yard to 40 yard
  - Numerous smaller bins with frequent collection
  - Odour issues and space constraints
  - End goal is to decrease garbage collection and increase collection of recyclable materials



**4** Refers to bin size and approximate location. Please refer to Cost Form 1 for details.

## Service Areas Main Campus

- AREA - 1
- AREA - 2
- AREA - 3

## Off Campus

- South Campus
- Meanook Station
- Devonian Botanic Garden
- FSJ-Bard -Acoustic Research
- Edmonton Research Station

# Review of Existing Programs

Current inventory of indoor collection bins:

- Mixed Fibre: 730                      Target: 1,200
- Beverage: 340                        Target: 600
- Waste: 780                            Target: 780
- Glass / Light Metals and Plastic: 450

# Waste Survey

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- Cover Letter providing background info
- Questionnaire (31 questions)
- distributed via e-mail to students, employees and professors
- Respondents happy to be able to have input

# Waste Survey



UNIVERSITY OF  
**ALBERTA**

Facilities Management  
4<sup>th</sup> floor, General Services Bldg  
Edmonton, Alberta, T6G 2H1

## WASTE SURVEY

For each of the following services currently offered, please indicate how often you use the service (**when you are at the University**):

**Never** = approx. 0% of the time

**Seldom** = approx. 25% of the time

**Always** = approx. 100% of the time

**Some** = approx. 50% of the time

**Often** = approx. 75% of the time

**NA** = not applicable

### WHEN I AM AT THE UNIVERSITY ...

1. I recycle paper:

- Never       Seldom       Some  
 Often       Always       NA

2. I recycle beverage containers (bottles, cans, Tetra packs):

- Never       Seldom       Some  
 Often       Always       NA

3. I recycle glass:

- Never       Seldom       Some  
 Often       Always       NA

4. I recycle plastic:

- Never       Seldom       Some  
 Often       Always       NA

5. I use the recycling bins in the hallways:

- Never       Seldom       Some  
 Often       Always       NA

6. I use the recycling bins in the cafeterias:

- Never       Seldom       Some  
 Often       Always       NA

7. I use the recycling bins in the classrooms:

- Never       Seldom       Some  
 Often       Always       NA

8. I use the recycling bins in the offices:

- Never       Seldom       Some  
 Often       Always       NA

9. I use the recycling bins located outside of the buildings on the U of A campus:

- Never       Seldom       Some  
 Often       Always       NA

10. I take my recyclables home to recycle them at home:

- Never       Seldom       Some  
 Often       Always       NA

11. I bring my own reusable mug when buying drinks on campus:

- Never       Seldom       Some  
 Often       Always       NA

12. I make double sided copies:

- Never       Seldom       Some  
 Often       Always       NA

13. I recycle cardboard:

- Never       Seldom       Some  
 Often       Always       NA

14. I recycle ink and toner cartridges:

- Never       Seldom       Some  
 Often       Always       NA



# Waste Survey Results

- Over 60% of respondents indicated U of A should set target of 50-70% diversion rate
- 66% of respondents indicated they would be willing to pay a “Green Fee” of \$10 - \$15 /yr to support an expanded waste management and recycling program
- Confirmed U of A in good position to expand current waste management program and increase diversion

# Waste Strategy

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- Continual Program Monitoring
  - To evaluate and measure program success and identify areas requiring improvement
  - Waste Weigh-In Program
- Standardized Collection System
  - Standard bin colours, simple labelling, more bins

# Expanded Organics Collection

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- Organic Waste Collection Pilot
  - Initiated pilot program with Aramark
  - Collected organics from Lister Hall and CAB
  - Compostable food containers and cutlery
  - Planned expansion for Fall Semester

# Waste Strategy

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- Funding Opportunities
  - To investigate the potential around the “Green Fund” and possible government funds
- Education and Awareness
  - Orientation days, Campus Papers, ECOS
- Source Reduction
  - Pallets, Styrofoam packaging, Formal Green Procurement Policy

# Waste Strategy

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- Turf Management Program
  - Use compost on green space
  - Closed loop system
- Pesticide Management Program
  - Implemented in 2007