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Today's Panelists

Laura Johnson

Senior Project Professional

SCS Engineers

Michelle Leonard

Senior Vice President

SCS Engineers

Eric Meliton

Manager, Sustainability Office

Wilfrid Laurier University

Stick Around For….

Product demo with:

Michelle Dunn

Business Development Manager

Join the Discussion

From your toolbar:

Share your experience & opinions

Look for links to resources

Type direct questions for panelists

Laura Johnson

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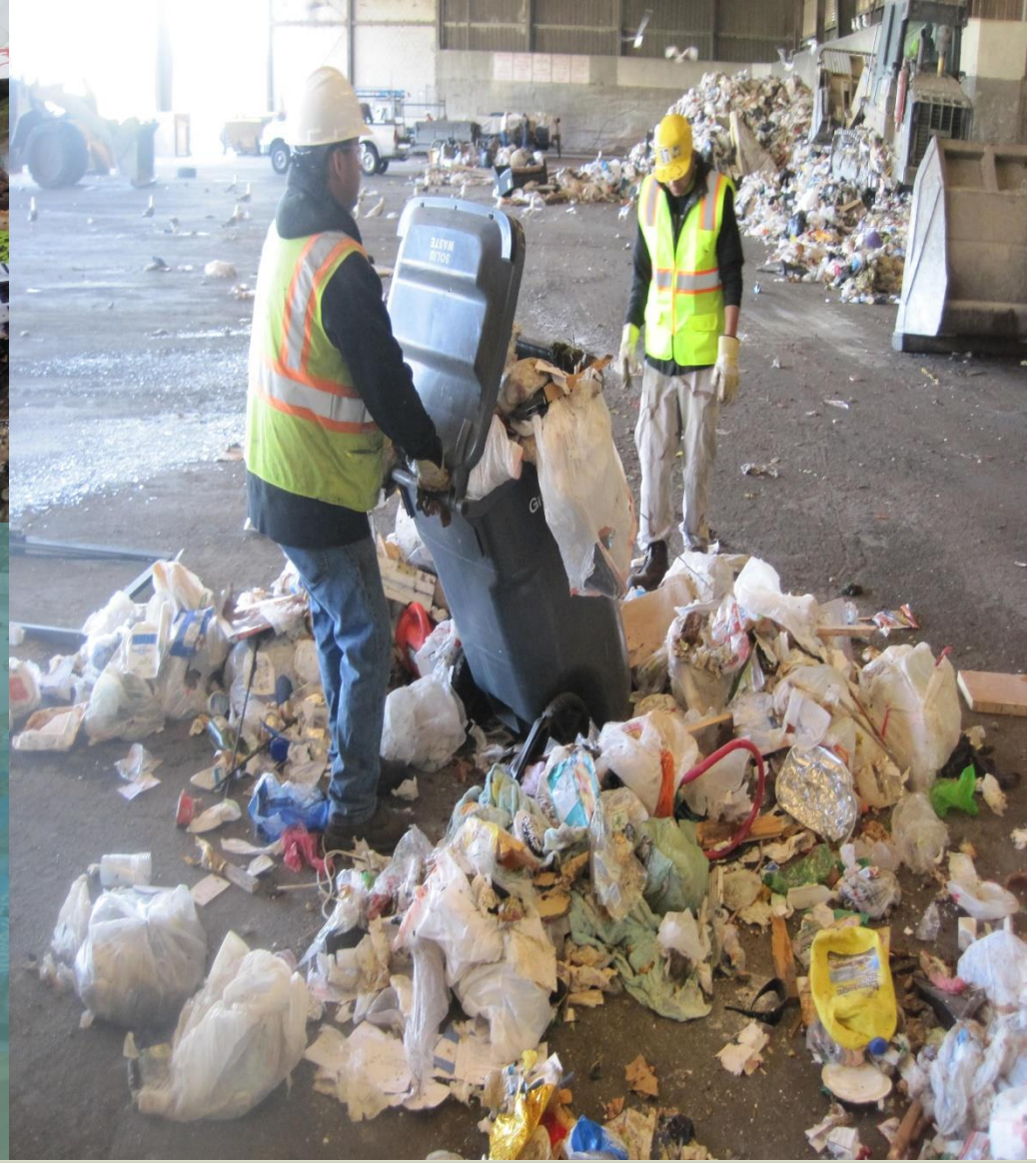


What Are You Wasting ?

Using Waste Audits for Program Planning and Design

Agenda

- Defining a Waste Audit
- Study Design
- Case Studies
- Outcomes and Benefits

Why Do a Waste Audit?

- Identify Disposal Trends, Target Materials and Generators
- Establish Program Performance Metrics
- Gauge Program Success
- Assess Diversion/Recoverability Opportunities
- Calculate Environmental Benefits
- Estimate Potential Revenue and Jobs
- Evaluate Energy Value
- Assist in Facility Design

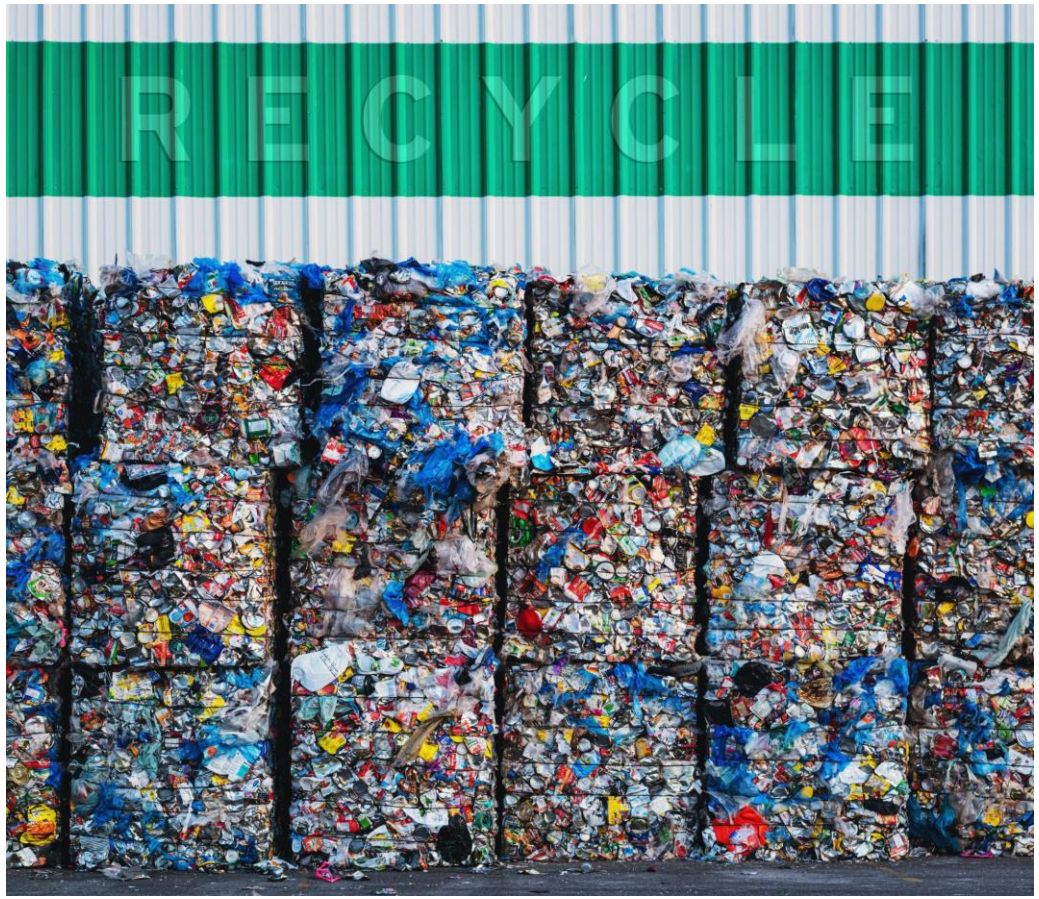
What is Involved in a Waste Audit?

- **Physical**
  - Sort materials into their individual categories and components, and then weigh them separately
- **Visual**
  - Estimate volume of material types and convert volumes to estimated weights

Key Considerations for Study Design

- Define Clear Study Objectives
  - Establish goals such as improving diversion rates, evaluating contamination, or meeting regulatory compliance.
- Select Waste Streams and Sectors
  - Choose relevant waste types and identify residential, commercial, and industrial sources for detailed analysis.
- Design Sampling and Site Selection
  - Pick representative facilities and develop statistically sound sampling plans covering seasonal and operational variations.
- Choose Methodology and Outputs
  - Select sorting and characterization methods aligned with study goals and expected results for actionable insights.

Iowa Statewide Study



- **Study Design and Sampling**

501 waste samples were collected from 10 diverse Iowa facilities to ensure statistical reliability and geographic representation.

- **Methodology and Sorting**

Standardized ASTM methods sorted waste into 84 categories, enabling detailed analysis of residential and ICI waste streams.

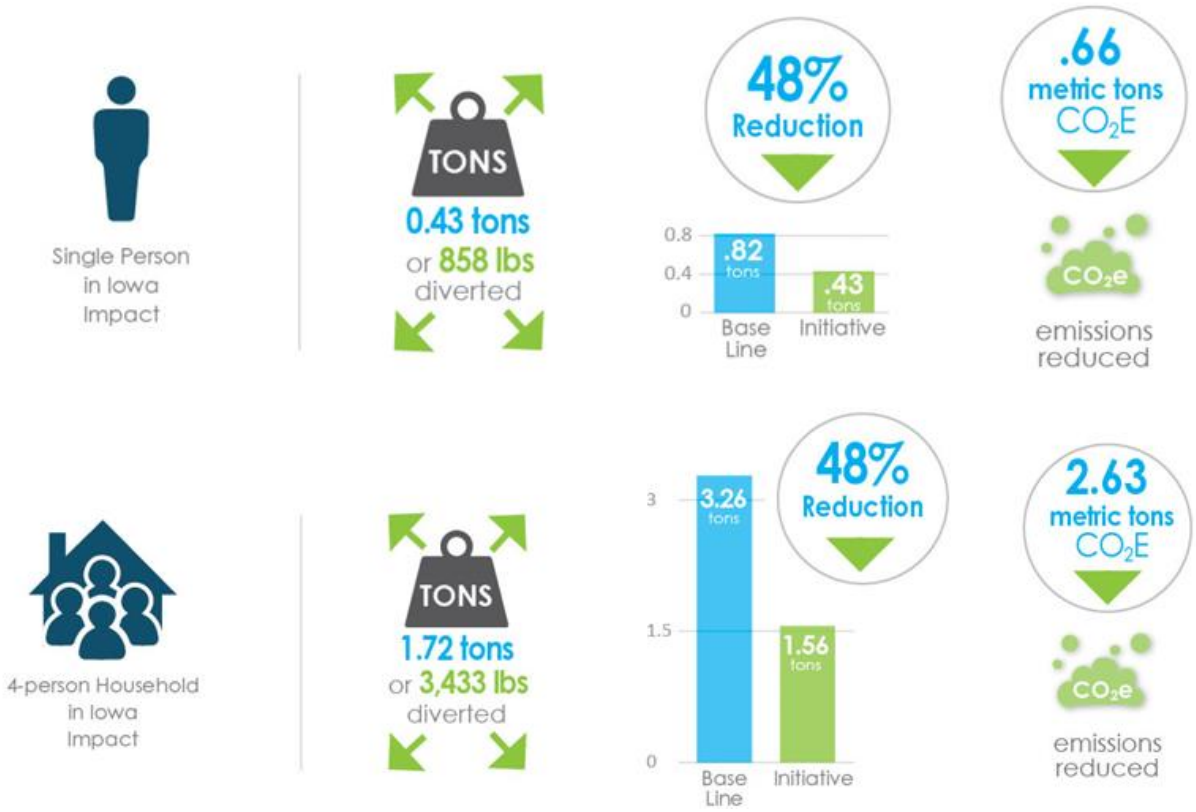
- **Key Waste Composition Findings**

Organics and Paper dominate at 21.6%, and 21.7% respectively, plastics 15.3%, with food waste as largest component at 19%.

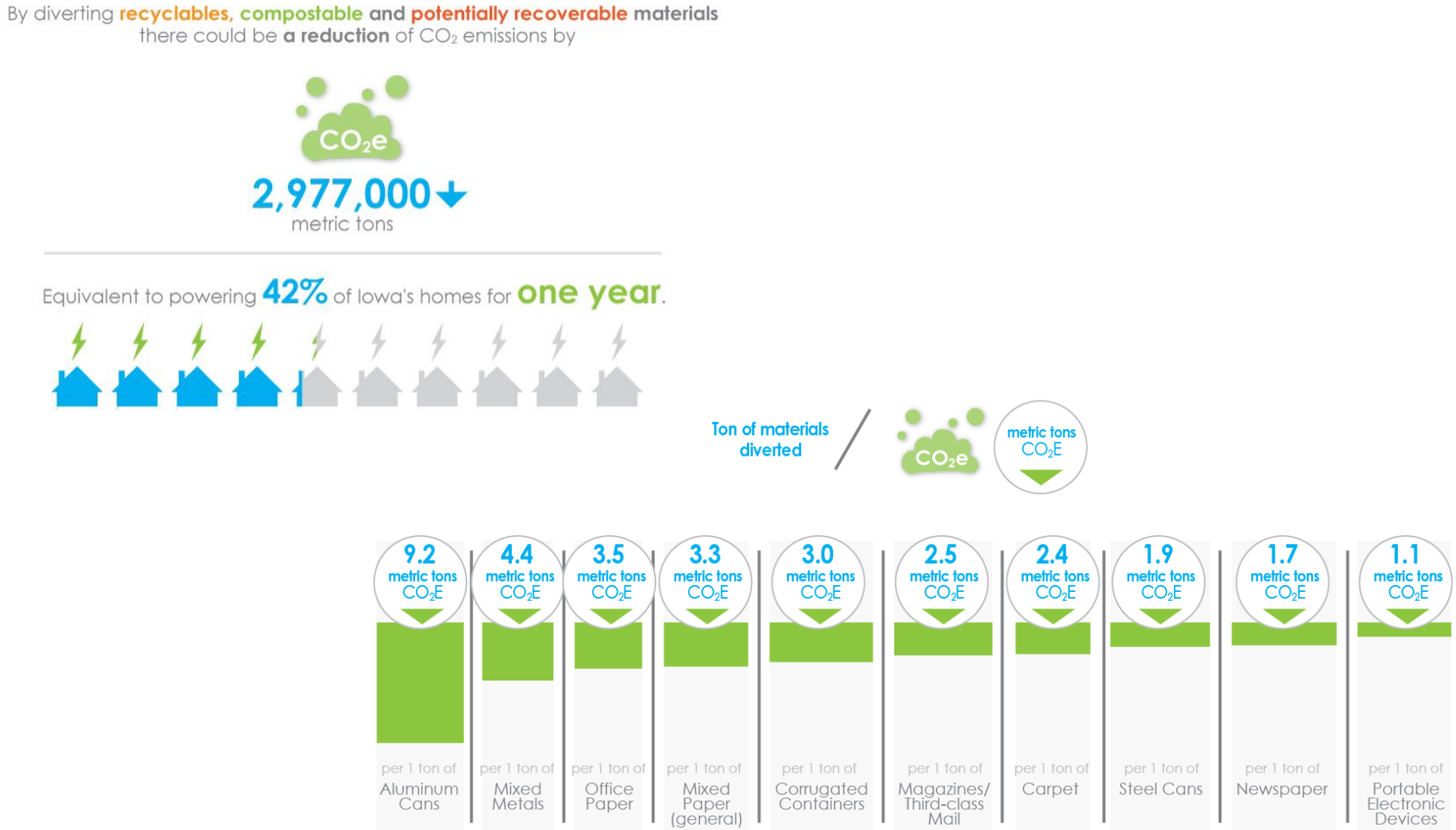
- **Economic and Environmental Benefits**

70% of waste is recoverable, offering $60 million annually in material value and potential for emissions reduction and job growth.

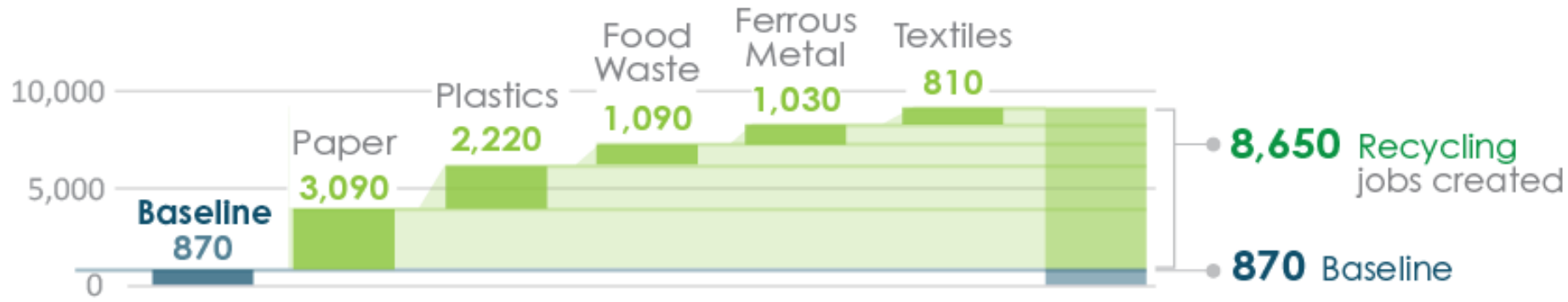
Quantify Environmental Benefits
2022 Iowa Study Results



Utilizing Data | Emission Equivalencies



Utilizing Data | Job Creation



California County

- Waste characterization
  - 38 Material categories
- Facility selection
  - Grouped by type

Key Findings:

- Organic waste most frequently encountered in landfill stream
- Residue, paper and metal are a significant portion of the waste stream
- ~ Two-thirds material could be diverted

Methodology

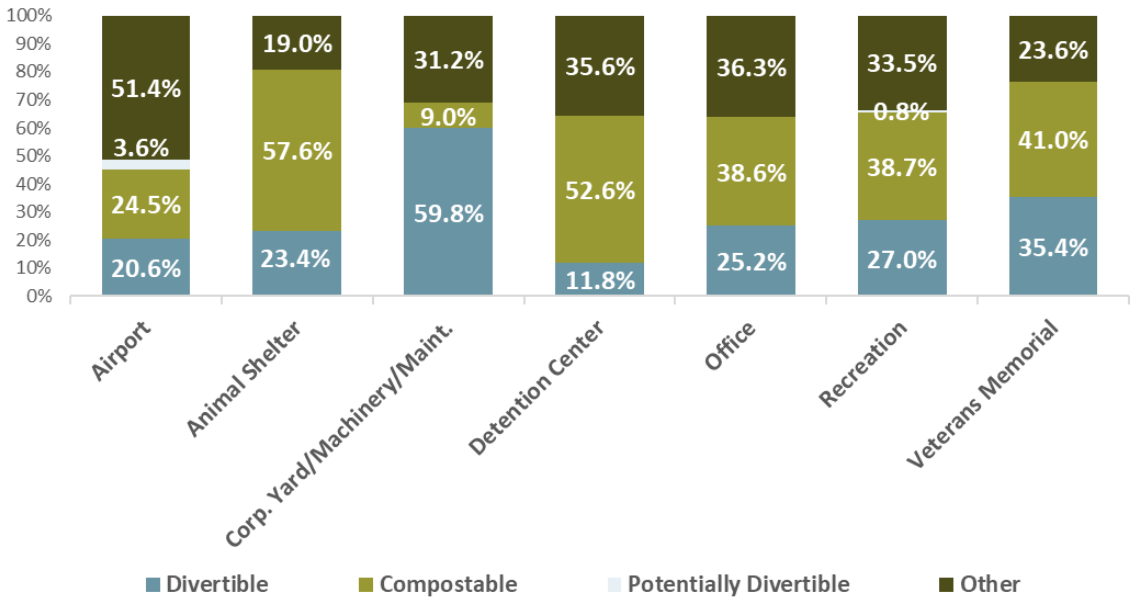
- Interview key personnel
  - Characterize existing waste systems
  - ID generation activities
- Visual Characterization
  - Recycle and organic streams
- Group Facilities by Type
  - Recreation
  - Office
  - Maintenance
- Waste Characterization
  - 200 lbs. or full contents of dumpster

Data Findings

Material Composition

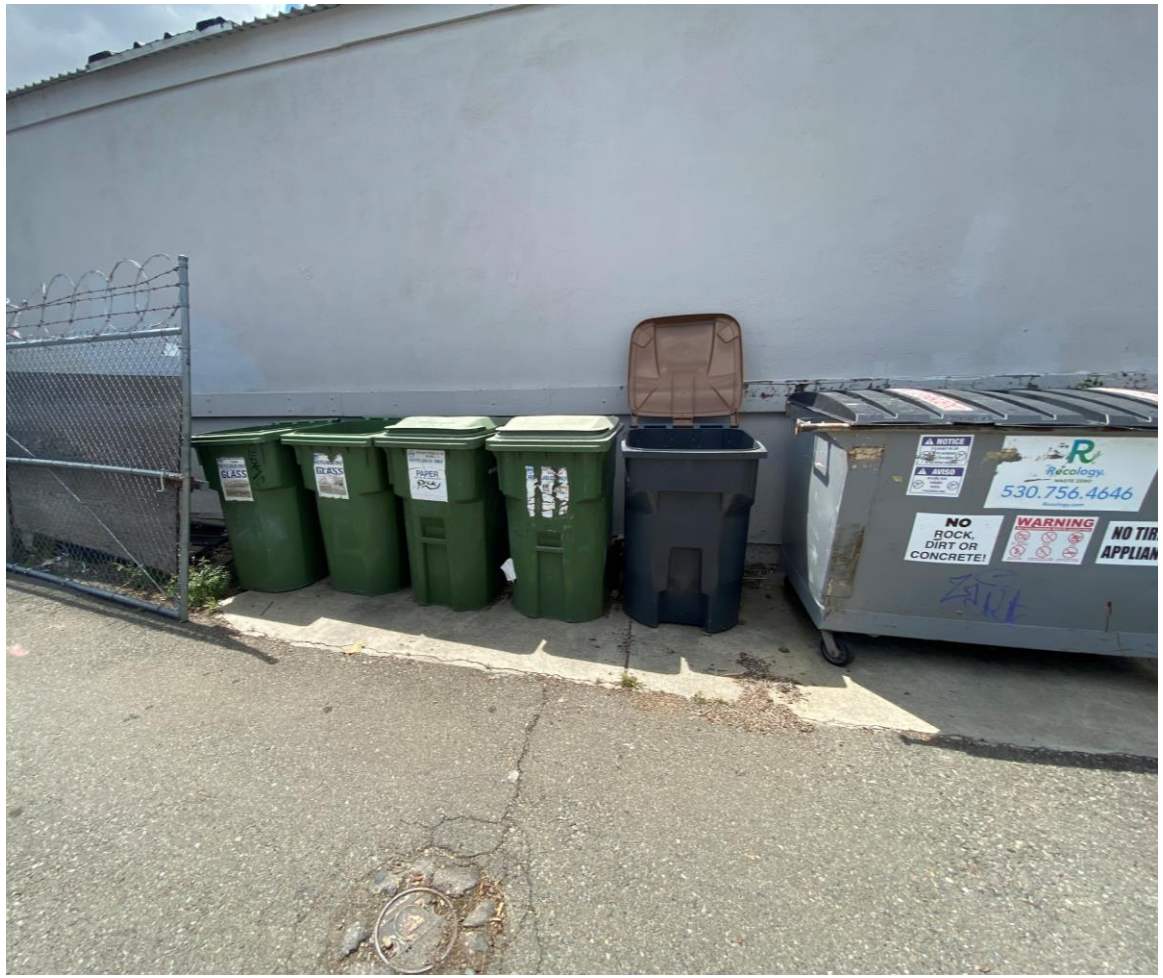
Category	Airport	Animal Shelter	Corp Yard/ Machinery/ Maintenance	Detention Center	Office	Recreation	Veterans Memorial
Paper	24.4%	9.6%	9.6%	23.6%	43.9%	12.5%	20.3%
Glass	2.5%	0.0%	0.5%	0.2%	1.8%	11.7%	4.9%
Metal	6.7%	2.4%	39.4%	0.5%	1.8%	5.2%	10.2%
Plastic	11.5%	0.4%	4.6%	3.3%	7.4%	5.0%	17.4%
Organics	6.7%	55.9%	4.9%	42.8%	19.9%	31.6%	26.0%
C&D Debris	10.0%	0.0%	14.6%	0.0%	0.2%	0.8%	0.8%
Textiles	0.9%	20.3%	2.2%	6.1%	1.1%	3.7%	0.4%
Hazardous Waste	1.6%	0.5%	13.1%	0.1%	3.6%	3.0%	2.5%
Residue	35.7%	11.0%	11.1%	23.4%	20.3%	26.5%	17.4%
Total	100%	100%	100%	100%	100%	100%	100%

Diversion Assessment

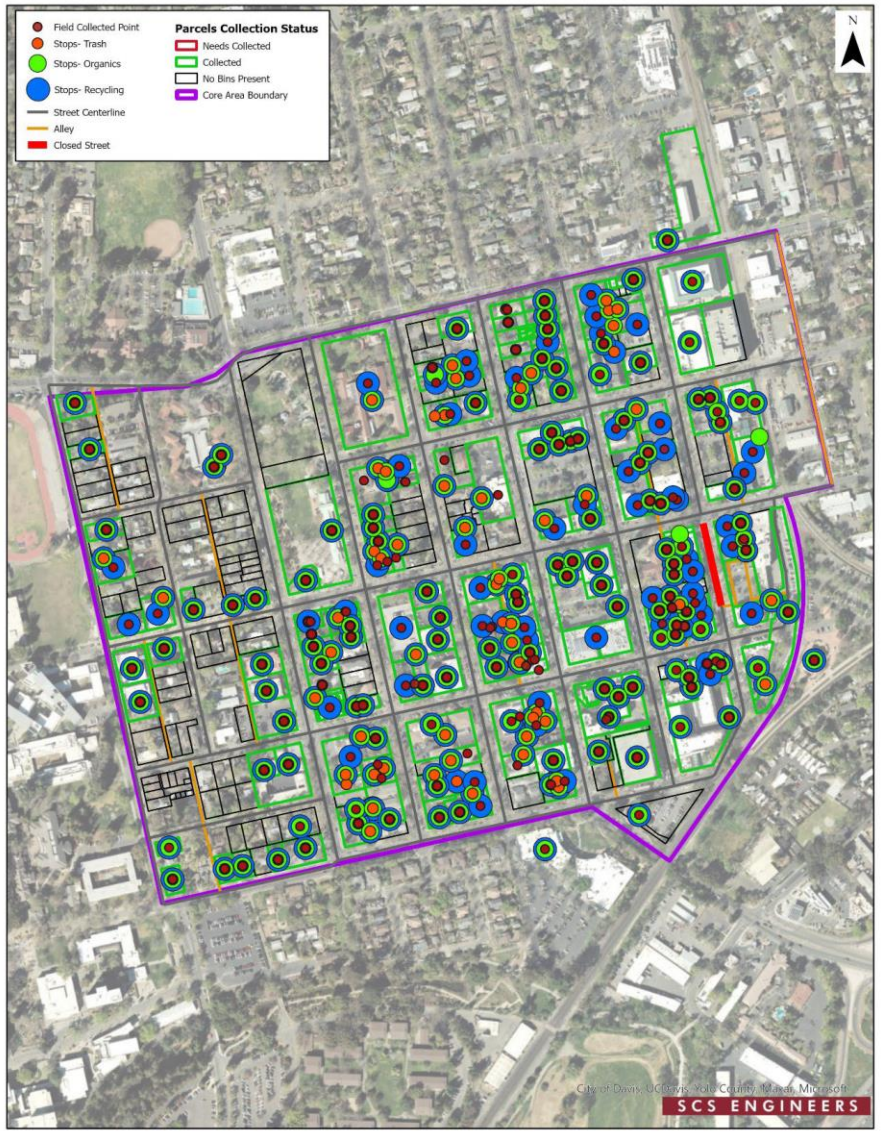


City of Davis, California

- **Comprehensive Waste Audit**
- The plan analyzes waste generation patterns through detailed inspections of 192 downtown businesses.
- **High Waste Generators**
- Fast food, movie theaters, coffee shops, and full-service restaurants produce the highest waste volumes weekly.
- **Recycling Potential**
- Cardboard and recyclable materials form a significant portion of waste, especially in grocery and retail sectors.
- **Data-Driven Decision Making**
- Detailed waste quantification supports improved efficiency and sustainability in waste management planning.



GIS Mapping


Field Collected Point
Stops- Trash
Stops- Organics
Stops- Recycling
Street Centerline
Alley
Closed Street
Parcels Collection Status
Needs Collected
Collected
No Bins Present
Core Area Boundary
N
SCS ENGINEERS

Implementation Plan

- **Enhanced Collection Services**
- Introducing seven day waste collection for restaurants reduces overflow and improves public space cleanliness.
- **Designated Recycling Bins**
- Requiring businesses to use cardboard recycling bins prevents stockpiling and improves waste handling safety.
- **Optimized Waste Containers**
- Replacing small carts with larger bins streamlines collection, reduces container numbers, and boosts efficiency.
- **Standardized Public Receptacles**
- Triple-stream public bins with trash, recycling, and organics improve sorting and accessibility across the city.

How Can You Use the Data?

- Behavioral Change
- Education and Outreach
- Policy Changes
- Business Involvement
- Economic and Job Market Impacts
- Enhanced Diversion Programs

Contact us

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Live Poll #1

What is your primary objective / purpose for doing a waste audit?

(Click only one)

- Establish baseline performance metrics / waste stream profile
- Data to address contamination
- Data to improve existing diversion programs
- Identify new diversion / collection stream opportunities
- Identify upstream waste prevention opportunities
- Other *(please share in the chat)*

Eric Meliton

Manager, Sustainability Office

Wilfrid Laurier University

LAURIER
WILFRID LAURIER UNIVERSITY

Waste Auditing: Leading Impactful Initiatives at Laurier

June 3, 2026

Eric Meliton - Manager, Sustainability Office

CONTENT OVERVIEW

01 INTRODUCTION

02 ZERO WASTE GOALS AT WLU

03 IMPACTFUL INITIATIVES

LAURIER
WILFRID LAURIER UNIVERSITY

INTRODUCTION

Wilfrid Laurier University

Overview

- Laurier is a mid-sized, multi-campus university with locations in Brantford, Kitchener, Milton, Waterloo, and Yellowknife
- Established in 1911
- Community of 19,000+ undergrad students, 2,000+ graduate students, 1,000+ faculty members, 1,300+ staff members, and 135,000+ alumni
- Comprehensive university offering undergraduate and graduate programs with faculties ranging from Arts to Music to Business to Science with 13+ national research chairs and 20+ different research centres

LAURIER
WILFRID LAURIER UNIVERSITY

Where did it all start?

2009 **Referendum**
Students voted to create a Sustainability Office

2010 **Sustainability Office Opens**
The office opens with one staff member

2012 **Launch of the First Action Plan**
Shortly after the office grew to two staff

2019 **We're Golden!**
Laurier receives its first STARS Gold Recognition

2023 **Continued Growth of Sustainability**
A new action plan, additional staff, and more

Sustainability Office: Vision and Mission

THE VISION

Transform Laurier into an institution that integrates sustainability practices into all areas of the university and to inspire, educate, and prepare students, faculty, and staff to engage others in the same practice.

THE MISSION

Create and foster a culture of sustainability by engaging, promoting, and coordinating sustainability efforts of all stakeholders and develop an environmentally proactive Laurier community.

What are the Office's main priorities?

Focus

on all three aspects of sustainability: social, environmental, and economic

Create

and advance partnerships in the university and the greater community to cultivate, form, and share sustainable programs

Achieve

a culture where sustainability is integrated into daily campus operations

Lead

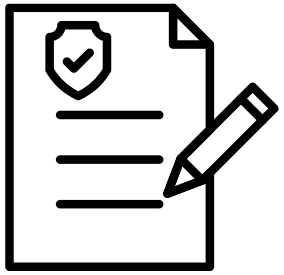
sustainability practices through student, staff and faculty engagement, projects, and programming

ZERO WASTE GOALS AT WLU

Wilfrid Laurier University

HOW DOES THE UNIVERSITY COMMIT TO SUSTAINABILITY?

4.13 Sustainability Policy



2023-28 Sustainability Action Plan

Future-Readiness in the Laurier Strategy

LAURIER
WILFRID LAURIER UNIVERSITY

Sustainability Policy 4.13

The University is committed to sustainability now and in the future and will strive to motivate the Members of the University Community through excellence in operations; academics; research, engagement; and investment.

01

SCOPE

- Multi-campus
- Awareness
- Operations
- Engagement

02

PURPOSE

- Enhance quality of social, economic, and environmental sustainability

03

PRINCIPLES

- Example principles: environmental stewardship, inclusion, and health and well-being

Sustainability Action Plan Overview

PILLAR 1: OPERATIONS

- **Goal 1 - Climate**
- **Goal 2 - Energy + Water**
- **Goal 3 + 4 - Transportation**
- **Goal 5 – Waste***
- **Goal 6 - Food and Dining**
- **Goal 7 - Grounds**
- **Goal 8 - Coordination + Planning**

PILLAR 2: ACADEMICS

- **Goal 9 - Curriculum**
- **Goal 10 - Research**

PILLAR 3: ENGAGEMENT

- **Goal 11 - Campus Engagement**

PILLAR 4: INVESTMENT

- **Goal 12 - Investment and Finance**

GOAL 5 | Waste

- Reduce overall amount of waste produced on campus by 5% and increase the waste diversion rate by 10%.

2025 Results

- **28 kg of landfill waste** was produced per person (staff, faculty, and students), a **decrease** of 30% (40 kg/per person) since 2009 (Waterloo).

Laurier's Sustainability Tracking, Assessment, and Rating System (STARS) Status

- For the second time, Laurier is a **STARS Gold institution** (November 2025)
- STARS is a transparent, self-reporting **framework** for colleges and universities to measure their sustainability performance
- **STARS is a program** of the Association for the Advancement of Sustainability in Higher Ed (AASHE)

Commitment to the SDGs

A New Hub for Highlighting Progress on the SDGs

[Launch of the Strategic Initiatives webpage on the SDGs.]

20

Laurier research centres focus on at least one SDG out of a total of 23 research centres.

15%

Times Higher Education (THE) Impact Rankings ranked Laurier in the top 15% of global universities (2024).

165

The number of initiatives at Laurier currently working on advancing at least one SDG.

LAURIER
WILFRID LAURIER UNIVERSITY

IMPACTFUL INITIATIVES

Wilfrid Laurier University

Waste Auditing: Impactful Initiatives

Provincial Reporting:

Evolution of Ontario regulatory reporting O.Reg 102-94 into impactful initiatives

- Pursued Waste Auditor Training for (2) FTE's through **Circular Innovation Council** membership
- Cost-savings measure has evolved into auditing four times per year at multiple campus portfolios
- Identifies short-term and long-term challenges and opportunities to improve waste diversion program offerings
- Allows Laurier to share best practices within institutional peers and sector proponents

Report Period: January 2025 through December 2025

Working together to recycle,

WILFRID LAURIER UNIVERSITY and Waste Management are reaching some amazing milestones.

We have saved:

2,244 mature trees
Enough to produce 27,799,667 sheets of newspaper

615 cubic yards of landfill space
Enough airspace to meet the disposal needs of 789 people

274,118 kW-hrs of electricity
Enough to power 26 homes for a full year

607 metric tons of CO2 equivalent
Preventing greenhouse gas emissions

1,047,068 gallons of water
Enough to meet the fresh water needs of 13,960 people for a year

Created on 06/01/2026

The recycling and waste data used in this report is based on actual customer data, historic WM studies, and EPA averages. For a more detailed analysis of your waste stream, talk to your WM rep about conducting a waste stream audit.

WM WASTE MANAGEMENT

THINK GREEN.®

Waste Auditing: Impactful Initiatives

Residence Services:
Enhancement to the annual student Move Out program at Brantford and Waterloo campuses

- Redirect students from throwing good condition items out into the garbage
- Provide quality items for students in the upcoming school year and community members who are in need
- Ensure that the main common areas and hallways are kept as clear as possible to ensure a safe and efficient move out
- Expansion of program to enlist students, staff, faculty volunteers to sort items collected

Waste Auditing: Impactful Initiatives

Freestore:

Establishing a space for students to obtain new and gently used items free of charge

- Designated spaces for students to pick-up new and gently used items free of charge
- Provide students of need with everyday essentials, dishes and glassware, small appliances and kitchenware, and a range of home décor items
- Encourage students to consider choosing a gently used item before purchasing something new
- Establish full-time programming locations at both Brantford and Waterloo campuses

Waste Auditing: Impactful Initiatives

2025 HIGHLIGHTS

11

Collection from 9 residence buildings in Waterloo and 2 residence buildings in Brantford

6 COLLECTION DAYS

366 lbs
went to the Waterloo Distro program at Martin Luther UC

1,343 lbs
of clothing items was picked up by Diabetes Canada volunteers

300+

Students received items from both Waterloo and Brantford Freestores

160+ Hours dedicated to collecting, sorting, and weighing items

3,000+ lbs went back into the Laurier community!

A GRAND TOTAL OF:

9,000+ pounds

was donated by first-year residence students living in on-campus residence buildings, along with Laurier staff, faculty, and alumni through our Freestores

Waste Auditing: Impactful Initiatives

Athletics:

Multi-phase sustainability programming pilot

- Pilot to digitize intramural sports registration and record keeping
- Pilot to identify sustainable food concession options
- Pilot to add more recycling and organics collection bins at Athletics Complex and during events
- Received a $10,000 USD SportsArt Campus Challenge to implement new pilots in 2026-27

Faculty of Science:

Pursuit of My Green Lab Certification Program

- Laurier labs have made considerable strides towards sustainable practices in the My Green Lab program
- Diversion and recycling of pipettes, gloves, glass alternatives, composting of paper towels
- Development of a Made in Laurier version including standard operating procedures and implementation across all faculty labs

On the Horizon: What's Next?

- **Implementation of the SportsArt Campus Challenge grant in 2026-27**
  - Athletics and Sustainability Office received $10,000 USD pilot grant
- **Pursuit of a Made in Laurier green lab certification program in 2026-27**
  - Utilize the My Green Lab framework to customize homegrown version
- **Development of a Zero Waste Strategy within the 2028-2033 Action Plan**
  - Establish a long-term strategy for impactful zero waste initiatives
- **Integrate zero waste initiatives across multiple departments and faculties**
  - Develop collaborative capacity with institutional leaders at each campus

Contact Us

Stay up to date on new initiatives and opportunities by subscribing to our campus newsletter

Website
www.wlu.ca/about/discover-laurier/sustainability/index.html

Social Media
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LAURIER
WILFRID LAURIER UNIVERSITY

Panel Q & A

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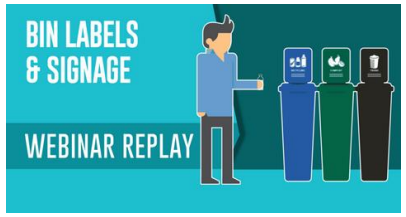
Green Thinking
WEBINAR SERIES

Today's Program Online

- Recording
- Presentation slides
- Resources

Link will be emailed in coming days

Archive of Past Programs



Full Archive:

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Coming Up Next:

Thank You to Our Panelists!

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<u>Post-Webinar Survey:</u>

- Prompt at end of program, or
- Look for Email tomorrow

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Product demo with:

Michelle Dunn

Business Development Manager