ILLINOIS SUSTAINABLE TECHNOLOGY CENTER
PRAIRIE RESEARCH INSTITUTE

ILLINOIS
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

On the path to Zero Waste at ISTC

What is Zero Waste?

"Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.

What is Zero Waste?

Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and not burn or bury them.

What is Zero Waste?

Implementing Zero Waste will eliminate all discharges to land, water or air that are a threat to planetary, human, animal or plant health."

As adopted by the Zero Waste International Alliance on August 12, 2009

What is Zero Waste?

The idea that there is no such place as

"AWAY"

Nature has no trash can.

How can we do that?

- Reduce
- Rethink / Redesign
- Reuse
- Repair
- Rot
- Recycle

Where do we start?

- Baseline waste stream characterization study
  - Building walkthrough
  - Document waste management system
  - Collect, sort, and categorize waste
  - Weigh and document waste
  - Examine data

Why?

- Buckshot vs. laser scope
- Know your waste
- Provides a metric to compare

Building walkthrough

- How is waste collected?
  - Container types & locations
  - Frequency
  - Responsible parties
- What waste is collected?
  - Are there any known hazards?

How is waste collected?

- Trash
  - (78) metal 7 gallon can in each office / lab
  - (8) metal 5 gallon can in each bathroom
  - (5) plastic 55 gallon can
  - (1) metal 8 yard dumpster (outside)
- Plastic bottles (#1 PETE / #2 HDPE)
  - (3) plastic 35 gallon can lined with blue bag
- Aluminum cans
  - (1) plastic 35 gallon can lined with blue bag

How is waste collected?

- Paper
  - (12) plastic 3.5 gallon can in offices
  - (7) plastic 23 gallon can dispersed
  - (2) plastic 55 gallon can
  - (2) plastic 93 gallon toter (outside)
- Broken glass
  - (14) cardboard 14.4 gallon container
  - (2) cardboard 2.3 gallon container

Sorting the waste

- Baseline period was 4 consecutive weeks
  - January 22nd 2013 through February 15th 2013
- Collected in a spare lab room
  - Active participation with building services worker
- Sorted daily
- Pre-labeled and weighed 5 gallon buckets
- Data recorded by hand into Excel

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DEPOSIT

Surprises found

- 9.5% of trash weight was nitrile gloves
- 3% of trash weight was trash bags
- Multiple 1/3 full roll toilet paper
- Multiple AA / AAA alkaline batteries

Baseline findings

- More than 50% of aluminum cans collected are disposed of in the trash
- 26% of paper is not recycled
- 43% of cardboard is not recycled
- 29.94% baseline waste diversion rate

Changes to the system

- Paper
  - (30) plastic 3.5 gallon paper bin
  - (7) plastic 23 gallon Slim-Jim container
- Plastic bottles / Aluminum cans
  - (2) plastic 35 gallon container
- Removed trash cans from individual offices
- Improved signage
- Mapping out container locations

Plastic Bottles & Aluminum Cans ONLY

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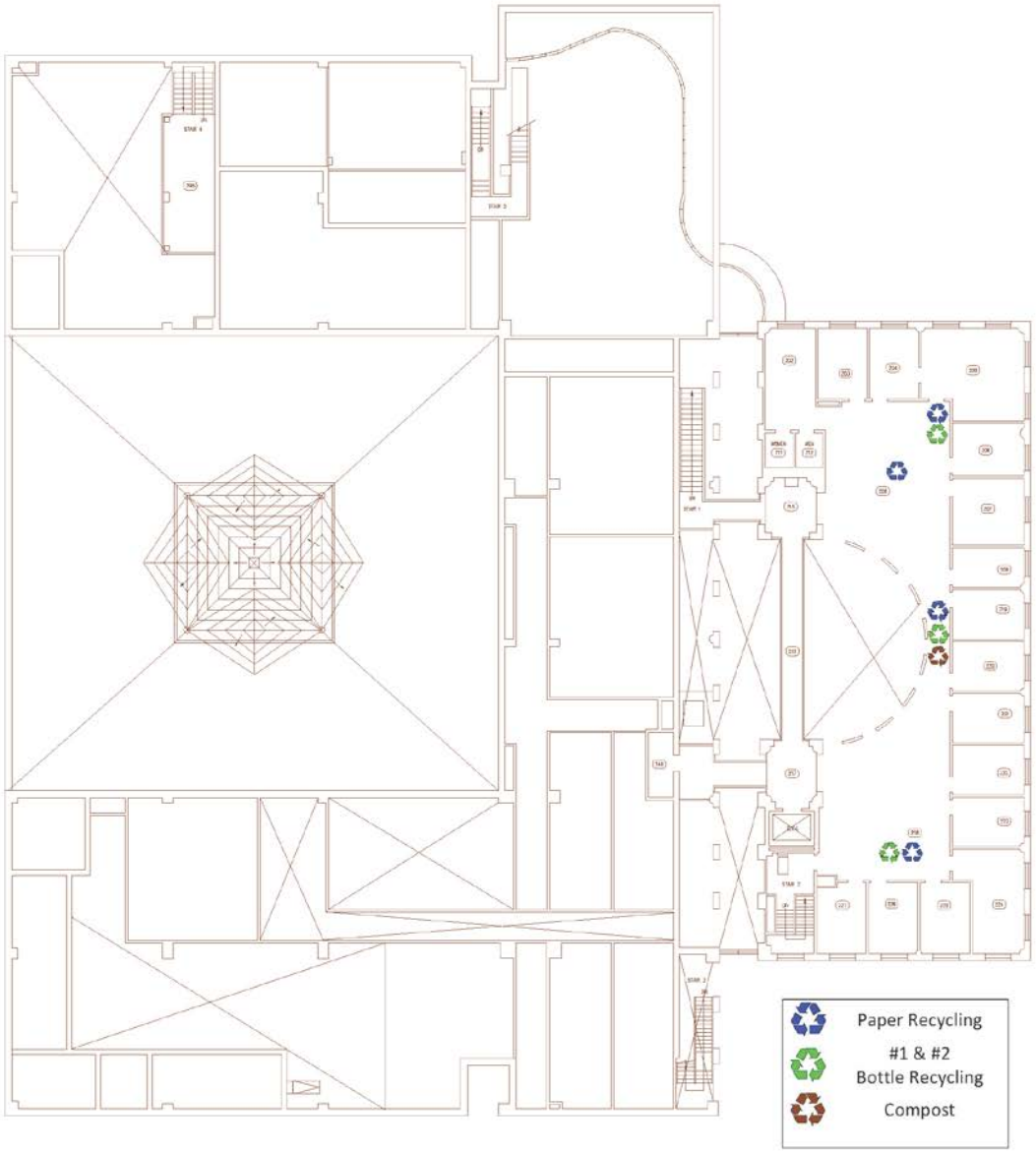

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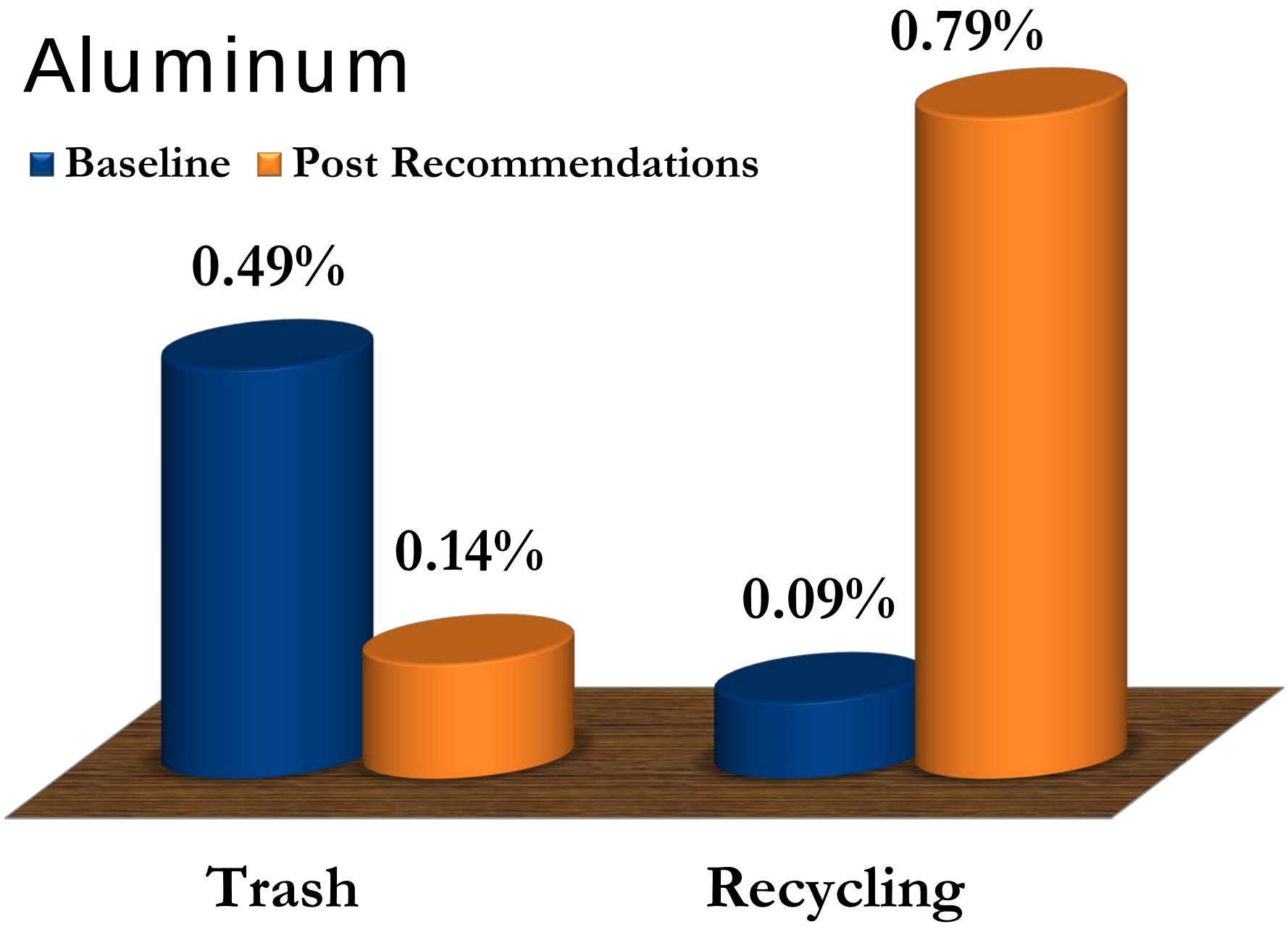
Results

- Our original goal was to obtain 45% waste diversion
- In just 6 months time our rate went from 29.94% to…

67.01%

Aluminum



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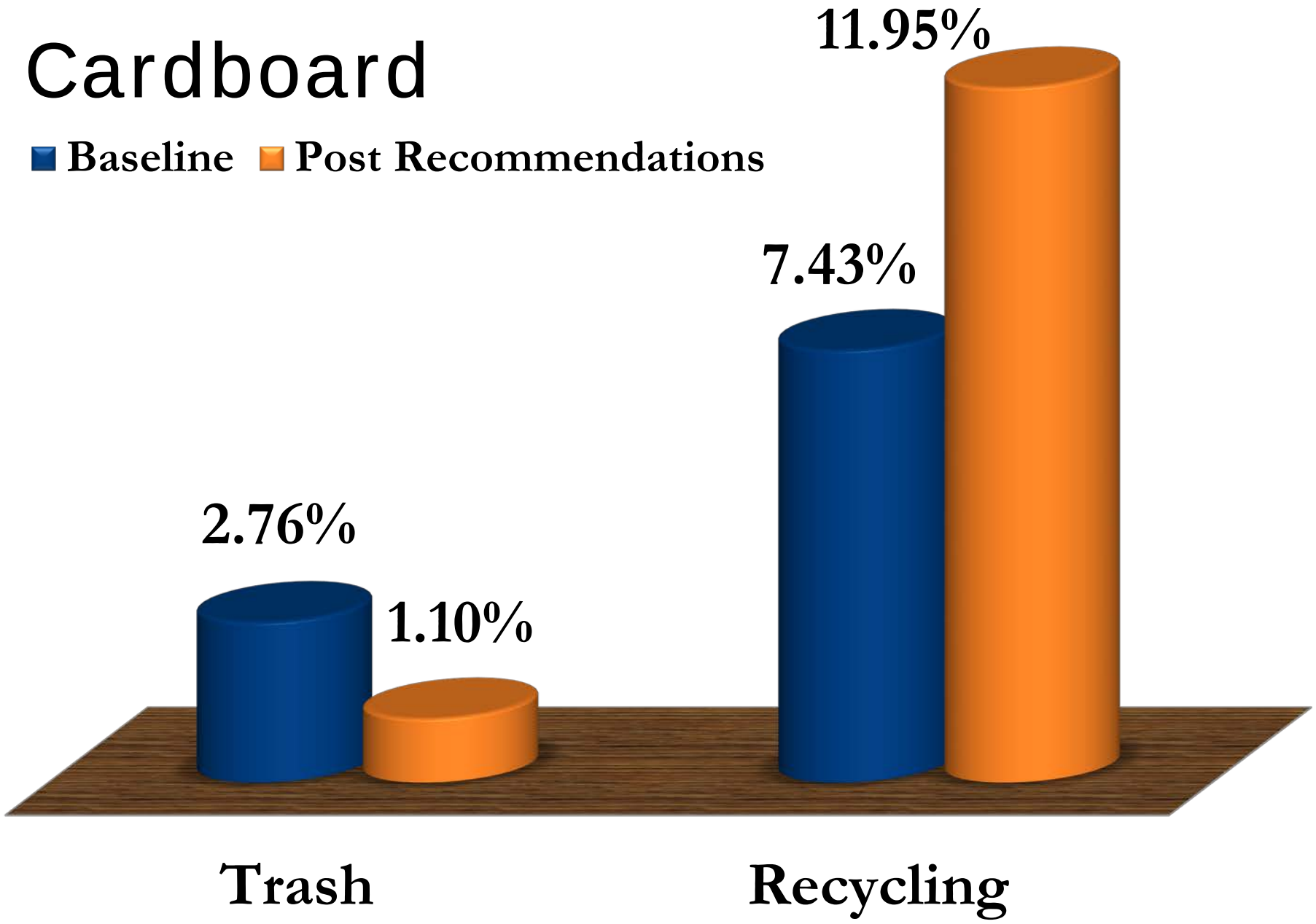
Cardboard



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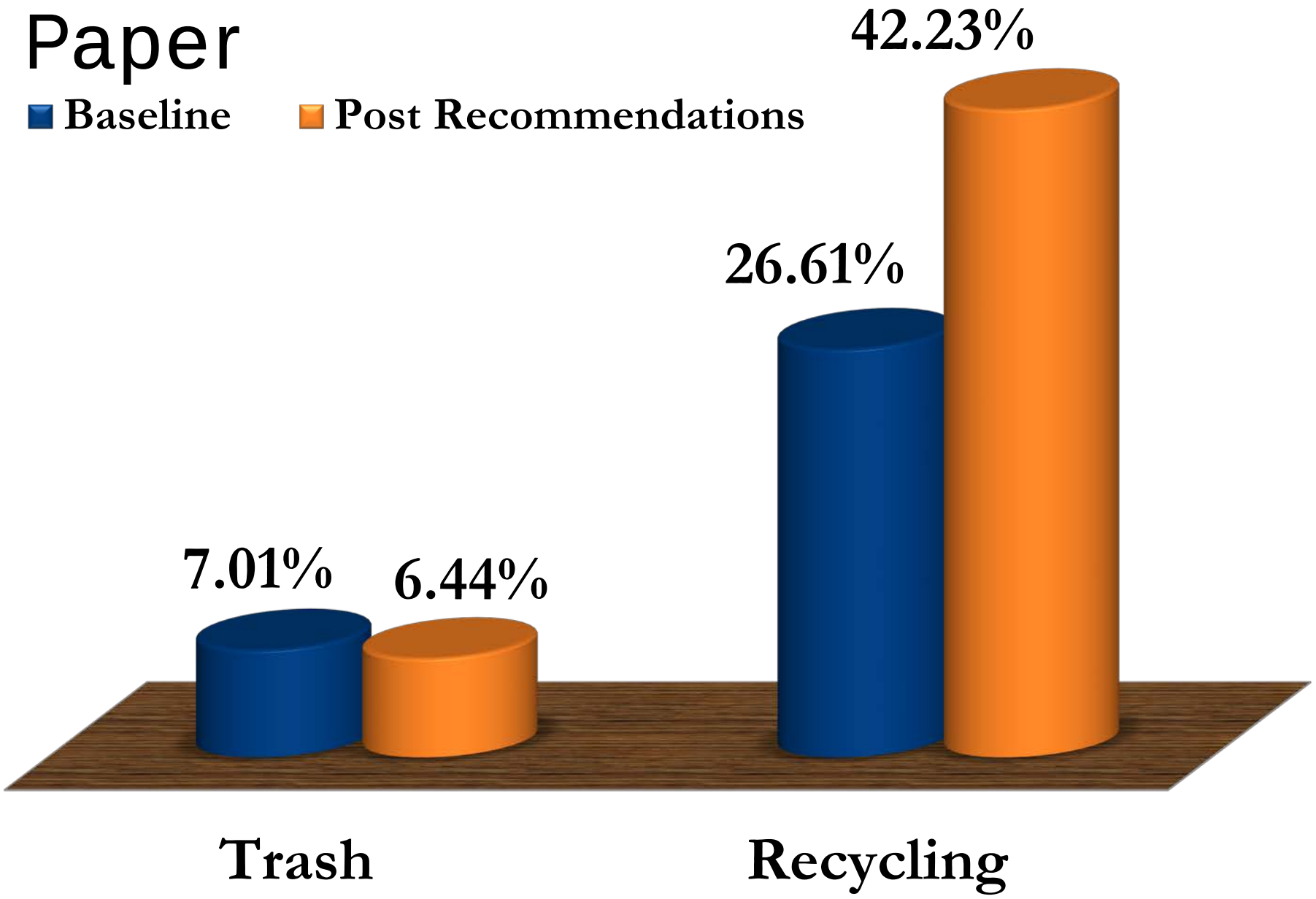
Paper



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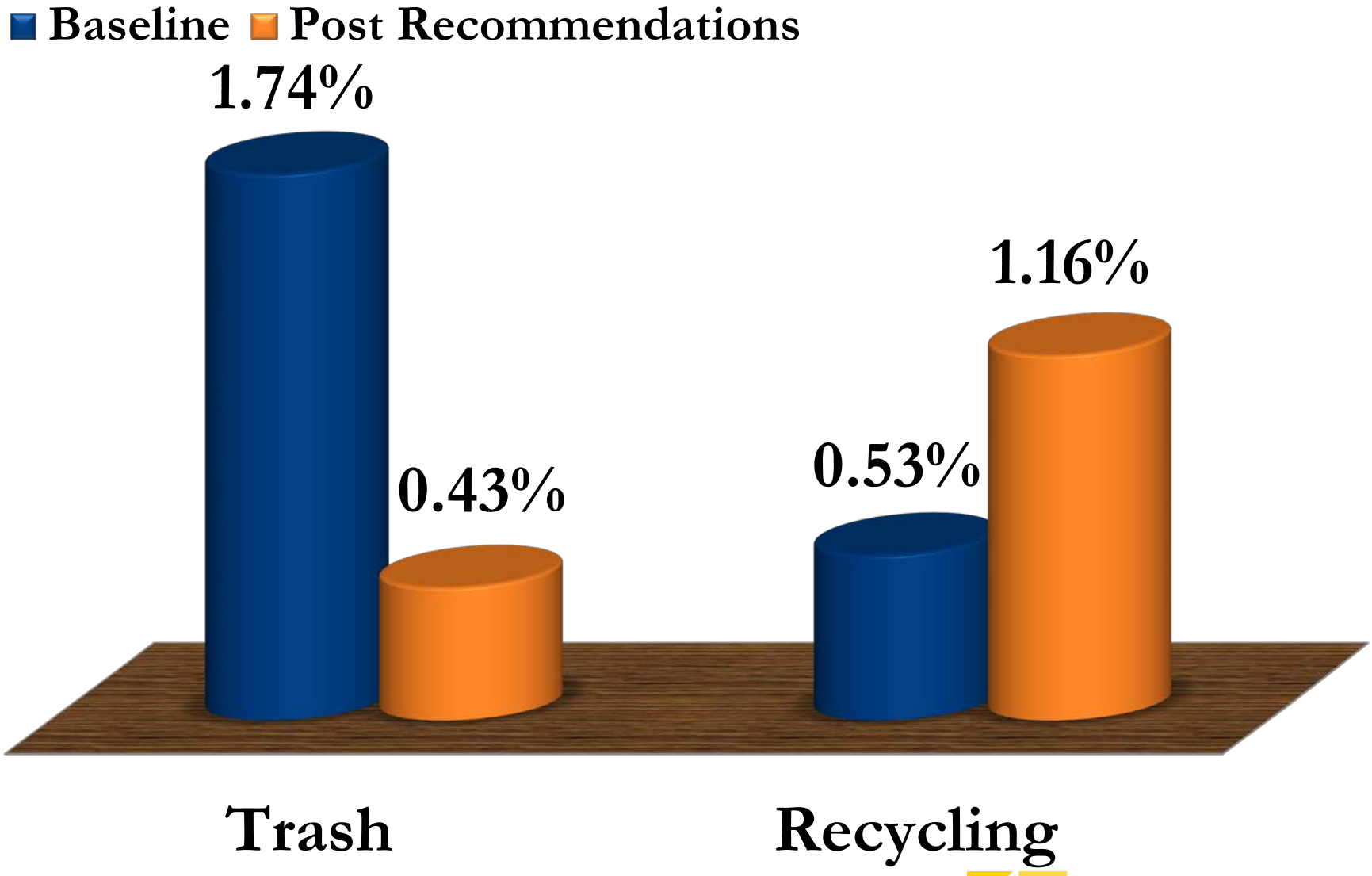
PETE (#1) / HDPE (#2)



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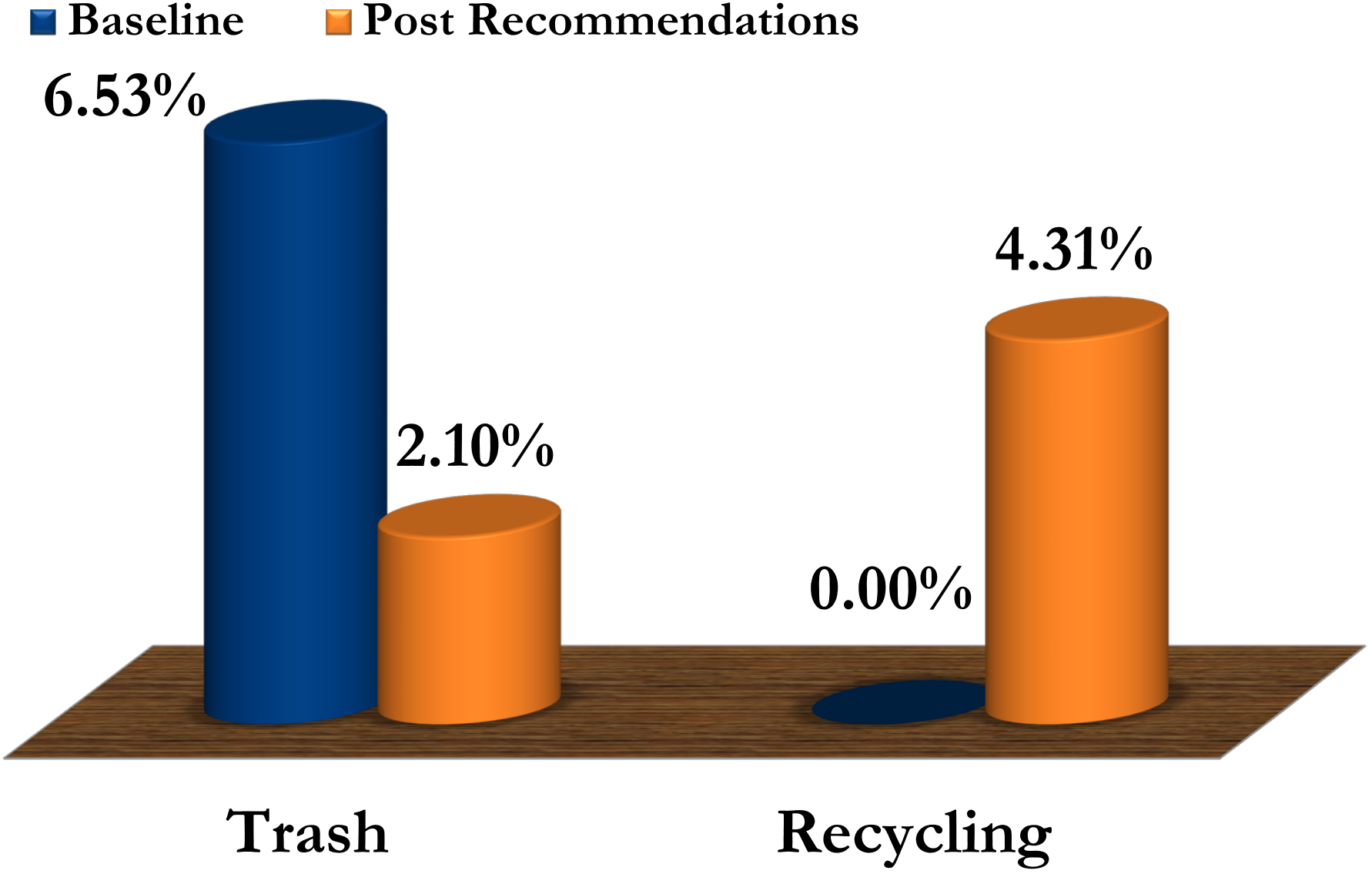
Nitrile Gloves



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Nitrile gloves

- ISTC partnered with Kimberly Clarke / TerraCycle
- Eliminated all other gloves
- Repurposed 14 trash cans for collection
- Painted cans color matched to the gloves

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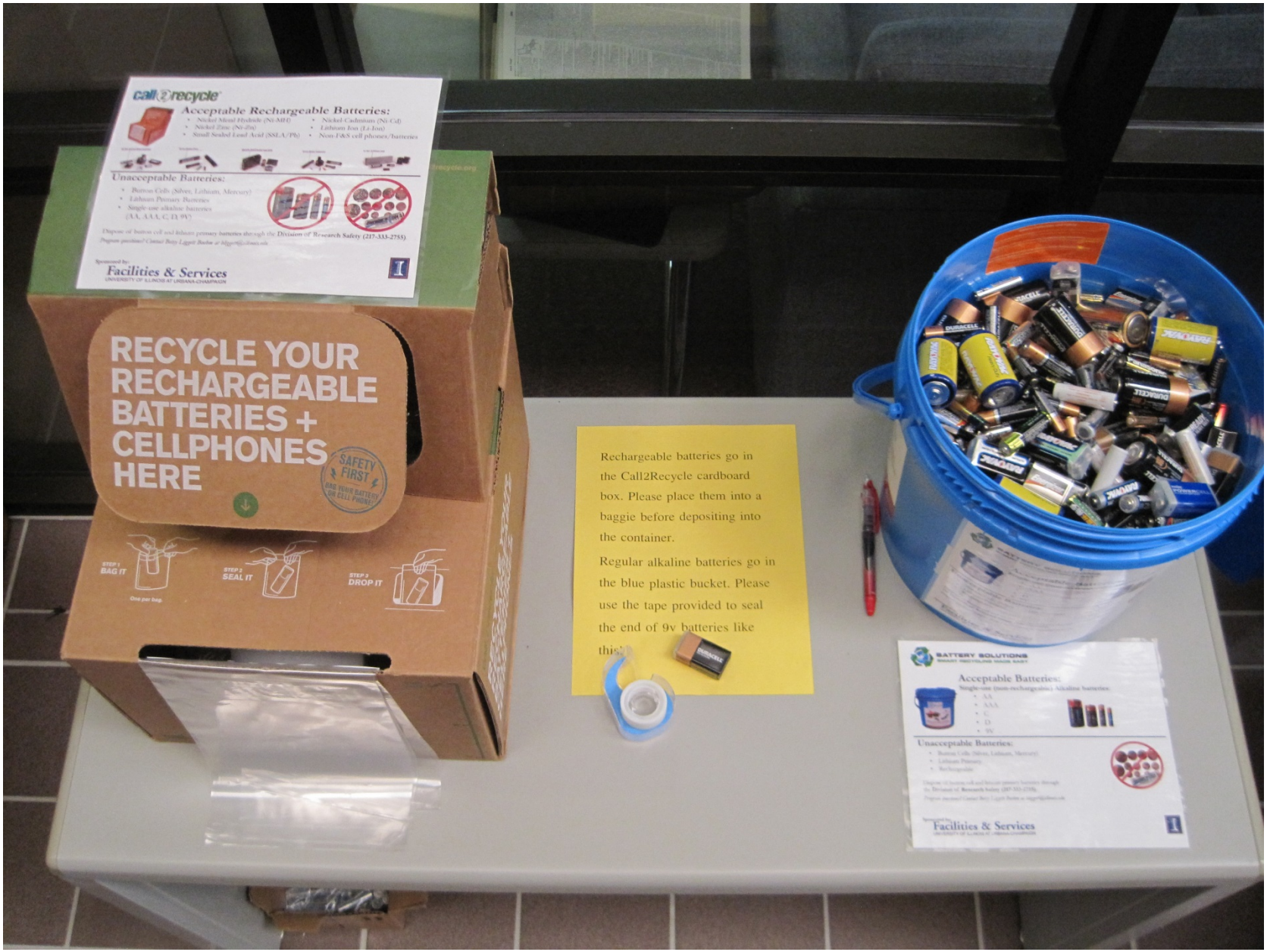
Battery recycling

- Call2Recycle
  - For rechargeable batteries only
  - Provided for free by EPR
- Battery Solutions
  - For alkaline batteries only
  - Provided by a grant through Facilities & Services



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Questions?

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US Zero Waste Business Council

http://www.uszwbc.org/

Zero Waste International Alliance

http://zwia.org/