



# Implementing Recycling @ Work in a University Setting



INDIANA UNIVERSITY  
PURDUE UNIVERSITY  
INDIANAPOLIS

# Welcome to IUPUI

## ▶ History

- ▶ 1891: Indiana University offered classes in Indianapolis for the first time
- ▶ 1968: Mayor Richard Lugar called for a “great state university in Indianapolis”
- ▶ 1969: Indiana University and Purdue University merged their many programs and schools to create Indiana University-Purdue University Indianapolis (IUPUI)
- ▶ 2011: Office of Sustainability founded
- ▶ 2013: Single stream recycling started

## ▶ By the Numbers

- ▶ 30,690 students (89% are in state)
- ▶ 146 countries represented in IUPUI student body
- ▶ 534 acres
- ▶ 3,839,445 square feet of Academic-Administrative space
- ▶ 3,336 tons of waste generated in 2015

## IUPUI Rankings

**Top 20**

BEST  
UNDERGRADUATE  
TEACHING AS RANKED  
BY *U.S. NEWS & WORLD  
REPORT*

[Get the details](#)

**Top 20**

BEST NON-  
HISTORICALLY BLACK  
COLLEGES &  
UNIVERSITIES FOR  
MINORITIES  
BY *DIVERSE: ISSUES IN  
HIGHER EDUCATION*

[See the rest](#)

**Top 20**

GRADUATE NURSING  
PROGRAMS AS  
RANKED BY *U.S. NEWS  
& WORLD REPORT*

[View the list](#)

# The Recycling Opportunity

University	Recycle Rate
*University of Cincinnati	65%
Boise State University	61%
*University of Louisville	56%
Ohio State University	47%
*University of Illinois-Chicago	46%
*University of Colorado	45%
*Temple University	44%
*University of New Mexico	35%
*Virginia Commonwealth University	35%
*University of Utah	33%
*Wayne State University	28%
*University of South Florida	25%



Coalition of  
Urban Serving Universities

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IUPUI	12%



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# The Recycling Opportunity

Location	Gross Waste Weight (lbs)	Recyclable Weight (lbs)	% Waste Recyclable
Cavanaugh Hall	198	134	67.7
University Library	239	97	40.6
Business/SPEA	126	103	81.8
Education & Social Work	178	86	48.3
Taylor Hall	67	44	65.7
<b>ALL LOCATIONS</b>	<b>808</b>	<b>464</b>	<b>57.4</b>

Gross Waste (lbs)	Bottles/cans (lbs)	Fiber (lbs)	Metals (lbs)	Recyclable Weight (lbs)	% Waste Recyclable
1400	575	305	35	915	65

The background features abstract, overlapping green geometric shapes in various shades, including light lime green, medium green, and dark forest green, creating a modern and eco-friendly aesthetic.

# The Recycling Solution: University Hall Desk-Side Recycling Program

Recycling @ Work in Application

# Location & Timing Matter

- ▶ Opened June 2015
- ▶ \$22.9 million, 5 story building
- ▶ Built to LEED Silver standards



Tenants for University Hall include:

- Office of Alumni Relations (first floor)
- IU Foundation (first floor)
- School of Social Work (second floor)
- Lilly Family School of Philanthropy (third floor)
- Vice Chancellor for Finance and Administration (fourth floor)
- Vice Chancellor for Student Affairs (fourth floor)
- Vice Chancellor for Office of Community Engagement (fourth floor)
- Vice Chancellor for Diversity, Equity and Inclusion (fourth floor)
- Division of Undergraduate Education (fourth floor)
- Office of Planning and Institutional Improvement (fourth floor)
- Office of the Executive Vice Chancellor (fifth floor)
- Office of Academic Affairs (fifth floor)
- Office of the Vice President and General Counsel (fifth floor)
- Office of the Chancellor (fifth floor)
- Office of the President (fifth floor)

# Keep America Beautiful: Recycling @ Work Research



**recycling**  
**AT WORK**



**Research to Inform Improved Recycling  
in the Workplace**  
April 2015

## Conditions

Offices were randomly assigned to one of four conditions, including an information only control. For each of the three intervention conditions, bin set-up only varied in the employee office or desk workspace, while all common areas received two large bins, one for recycling and one for trash.



convenient for employees.

**The first condition, *Equal-size***, gave each employee two equal-sized desk bins, one for recycling and one for trash. This condition was meant to recreate one of the more common office recycling set-ups and provide consistency across all offices and all employees in this condition. While the general idea of this condition (one bin of each type) is common, our research found that it was not consistently and uniformly implemented. Overall, having recycling and trash desk-side bins makes recycling



**The second condition, *Recycling Only***, provided the employee with a desk-side recycling bin, but **no** trash bin. This condition was meant to strongly draw attention to office recycling and make it convenient for the employee, while making it more difficult to dispose of trash. The theory was that if getting rid of trash was more difficult, employees would reconsider the materials they used in their office, opting for more recyclable items.



large amounts of trash. Again, this condition sought to draw attention and motivate employees to increase their recycling behavior.

**In the third condition, *Little Trash***, each employee got a desk-sized recycling bin with a small hanging trash bin. This condition sought to be the middle ground between the *Equal-size* and *Recycling Only*, drawing more attention to recycling through the differently sized bins, while still providing a place for small trash items (e.g., tissues, wrappers). Having both bins still makes recycling convenient, while the small trash bin does increase the difficulty of creating

# University Hall Desk-Side Recycling Program



# University Hall Desk-Side Recycling Program

## THEN

- ▶ Waste bin by your desk
- ▶ Waste bin emptied 3 times/week by custodial staff
- ▶ Request recycle bin
- ▶ Empty your own recycle bin into the common recycle bin

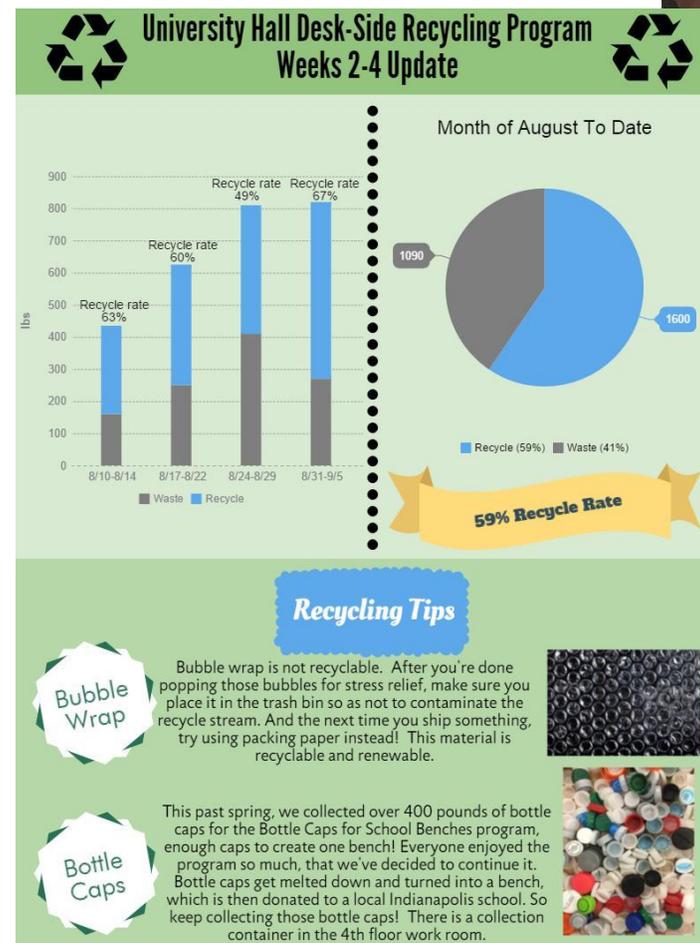
## NOW

- ▶ Recycle and waste bin by your desk
- ▶ Recycle bin will be emptied 3 times/week by custodial staff
- ▶ Empty your own waste bin into the common waste bin

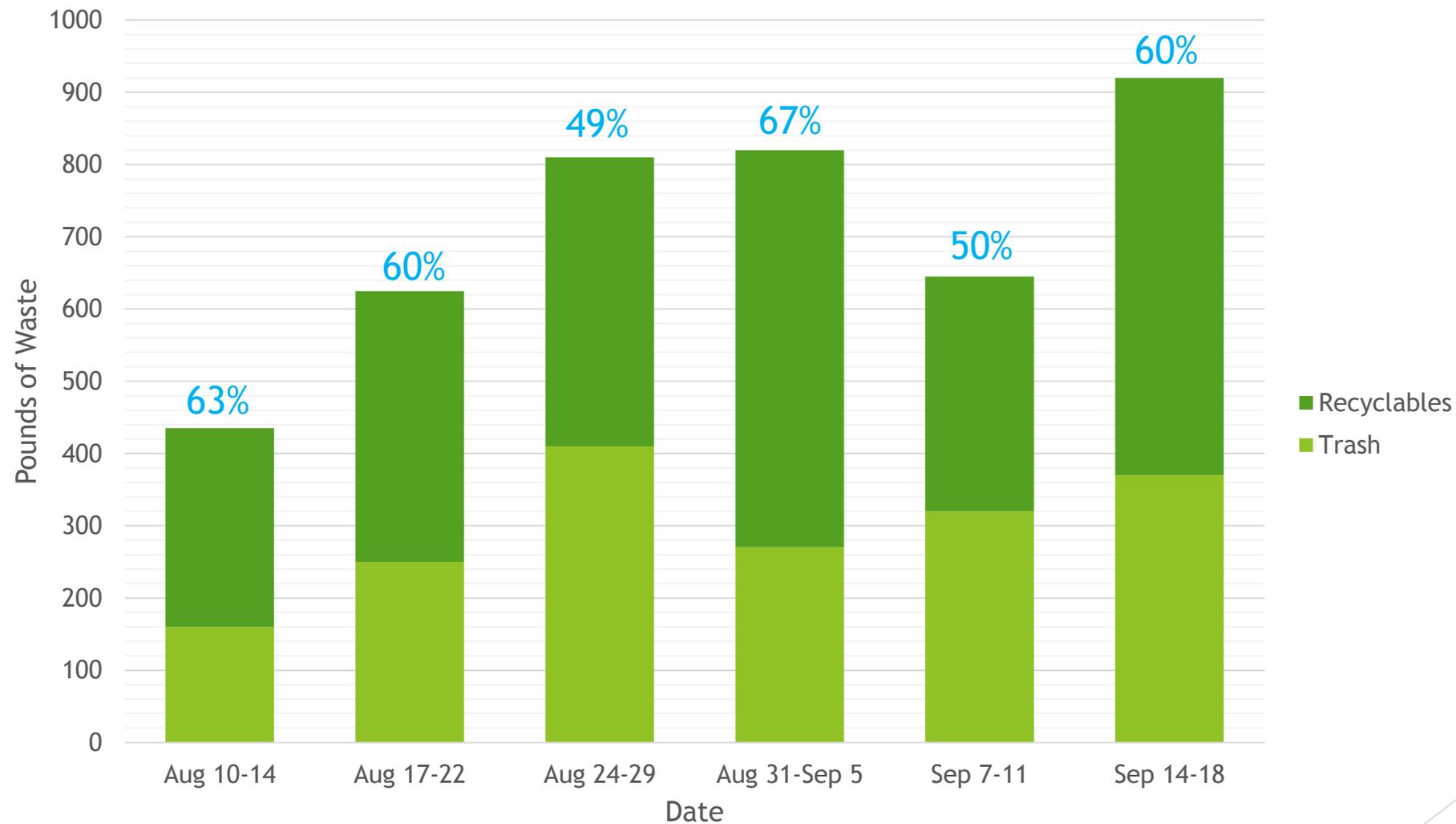


# Education & Engagement

- ▶ Before Launch
  - ▶ Pre-survey
  - ▶ Individual or office education sessions
    - ▶ What is recycling?
    - ▶ Why is it important?
    - ▶ What is or is not recyclable?
- ▶ During Launch
  - ▶ Informational sheets
  - ▶ Improved signage
- ▶ After Launch
  - ▶ Bi-weekly updates
    - ▶ Progress to date
    - ▶ Recycling Tips
  - ▶ Dumpster Dive
  - ▶ Post-survey

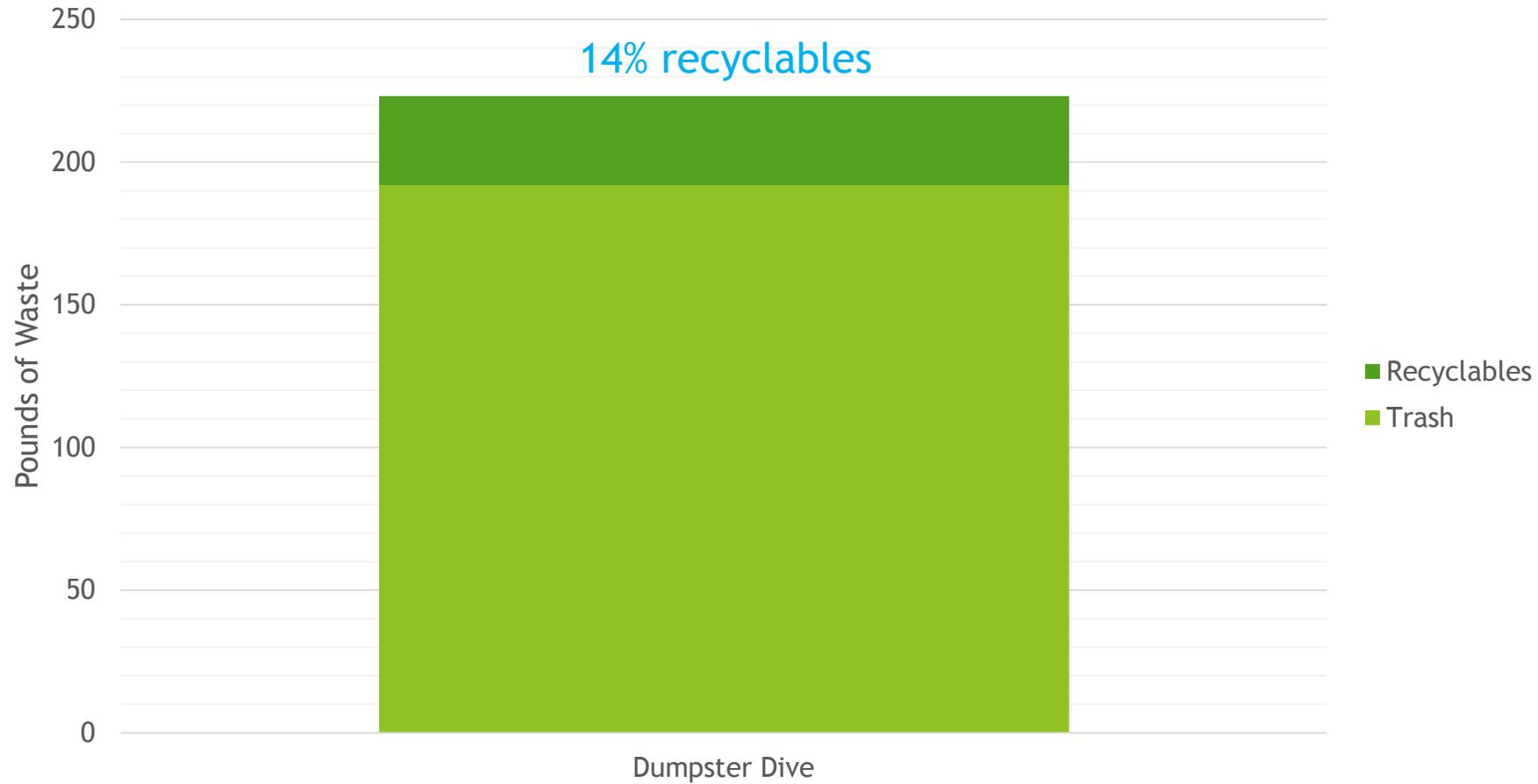


# Results - Recycling Performance



**Average recycle rate: 58%**

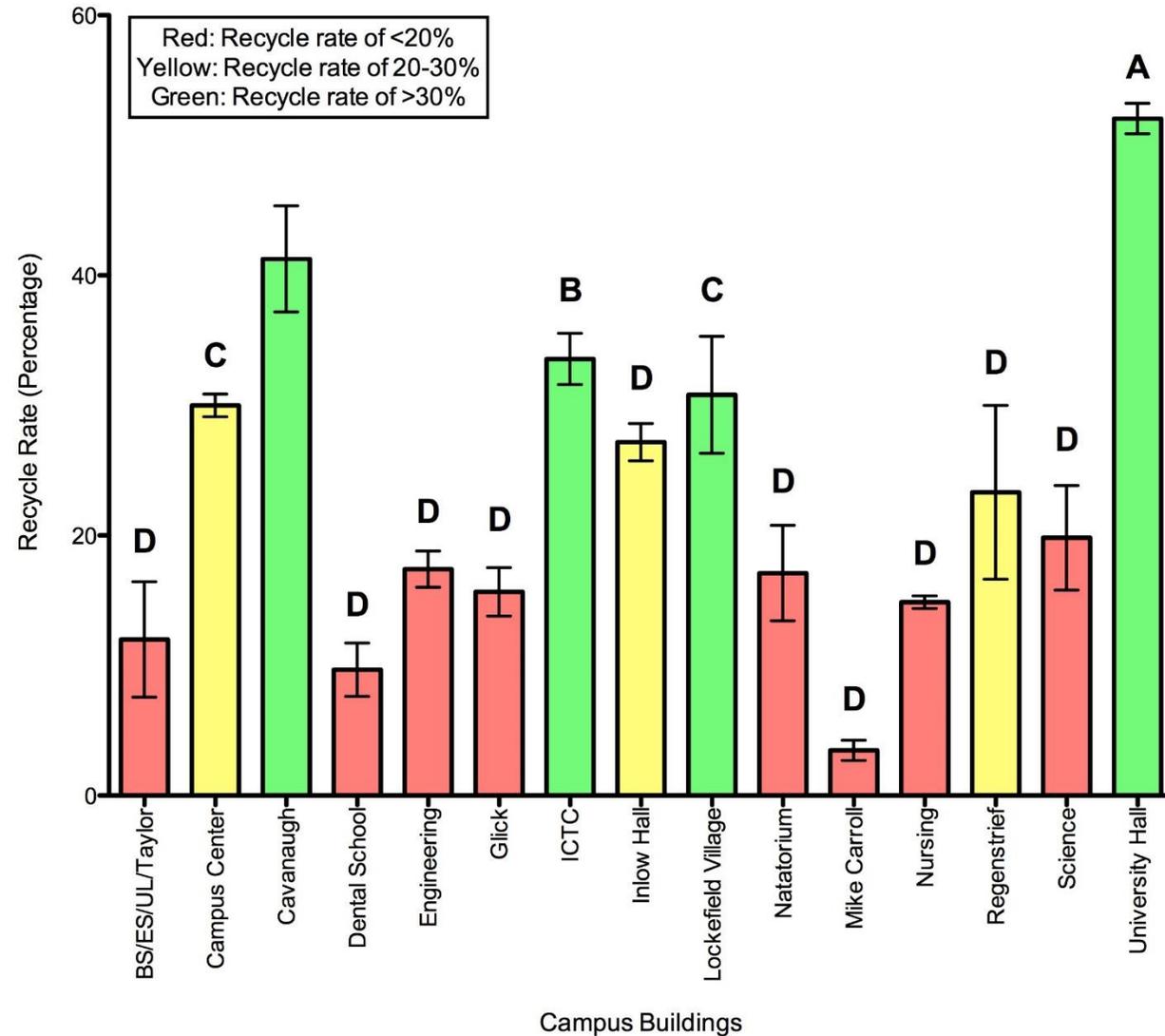
# Results - Dumpster Dive



Compare to 40-82% of recyclables found in trash

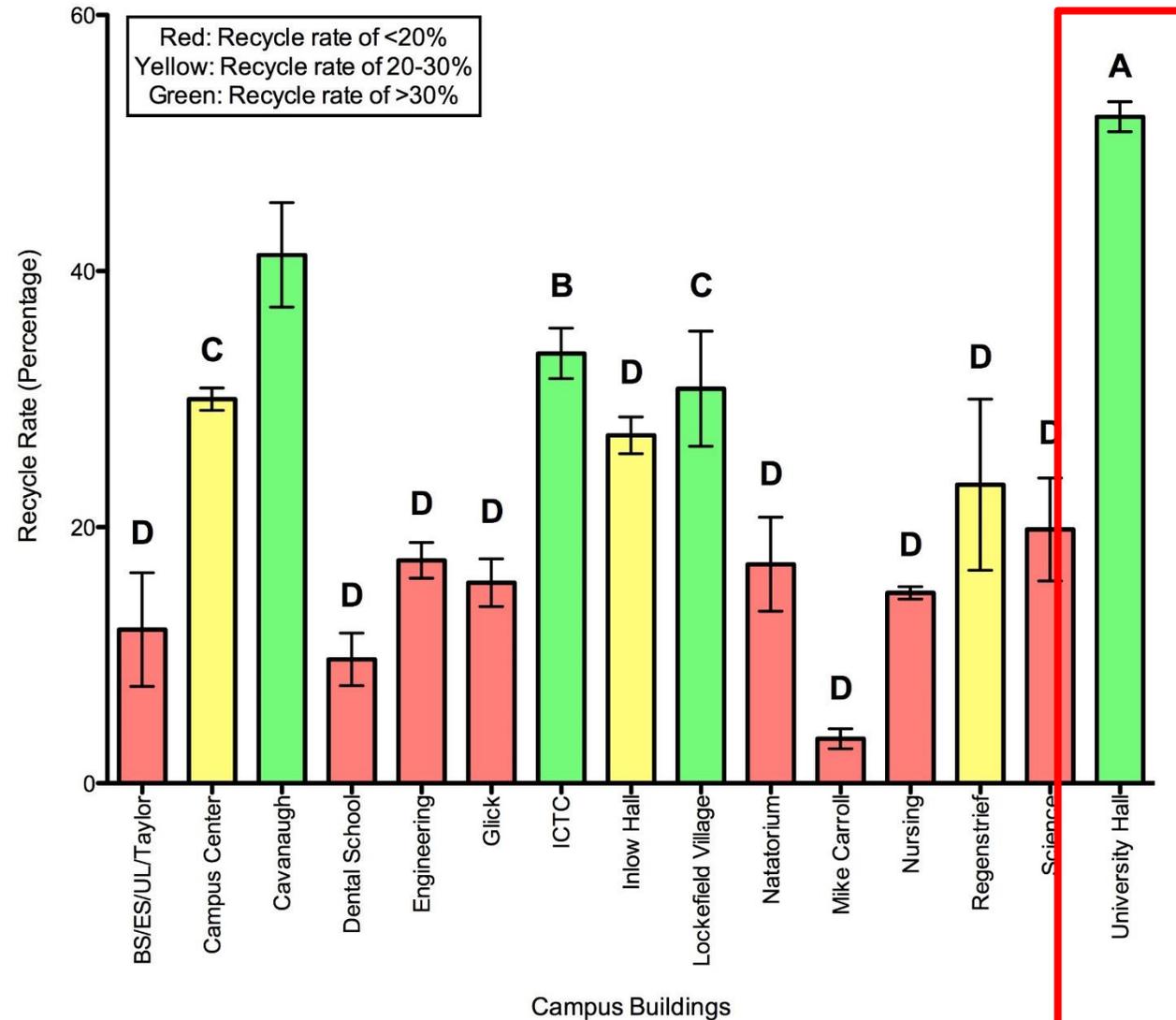
# Results - Recycling Performance In Comparison To Other Campus Buildings

Month	August	September	October	November	TOTAL
Trash (tons)	0.61	0.82	1.04	0.61	3.08
Recycle (tons)	0.66	0.95	0.99	0.71	3.31
Total waste (tons)	1.27	1.77	2.03	1.32	6.39
Recycle rate	52%	54%	49%	54%	52%



# Results - Recycling Performance In Comparison To Other Campus Buildings

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# Survey Results - Knowledge

## Recycling Survey

\* Required

### Knowledge - Office

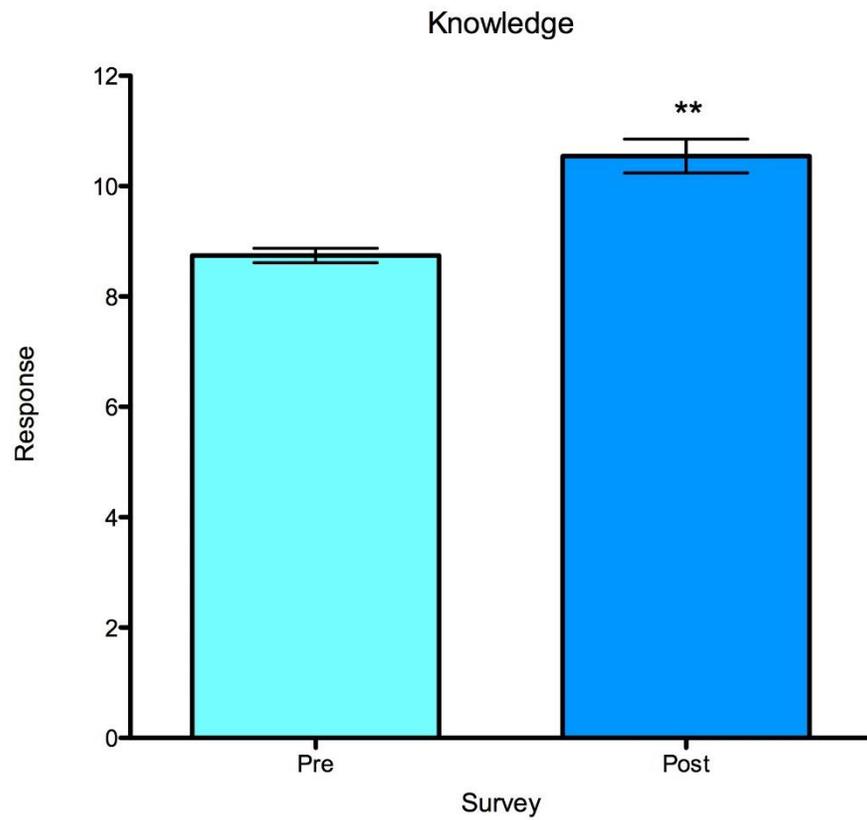
The next set of questions is about where specific types of items get placed within your general office suite.

For each of the items below, please indicate whether you think the item belongs in the waste or recycle bin.\*

Please do not look up the answers to these before answering.

	Waste Bin	Recycle Bin	Don't Know
Office Paper	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plastic Beverage Bottles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aluminum Beverage Cans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bubble Wrap	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plastic Eating Utensils	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Frozen Dinner Boxes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Paper Towels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food Scraps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Soup/Tin Cans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Used Paper Plates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Paper Coffee Cups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Styrofoam Coffee Cups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

# Survey Results - Knowledge

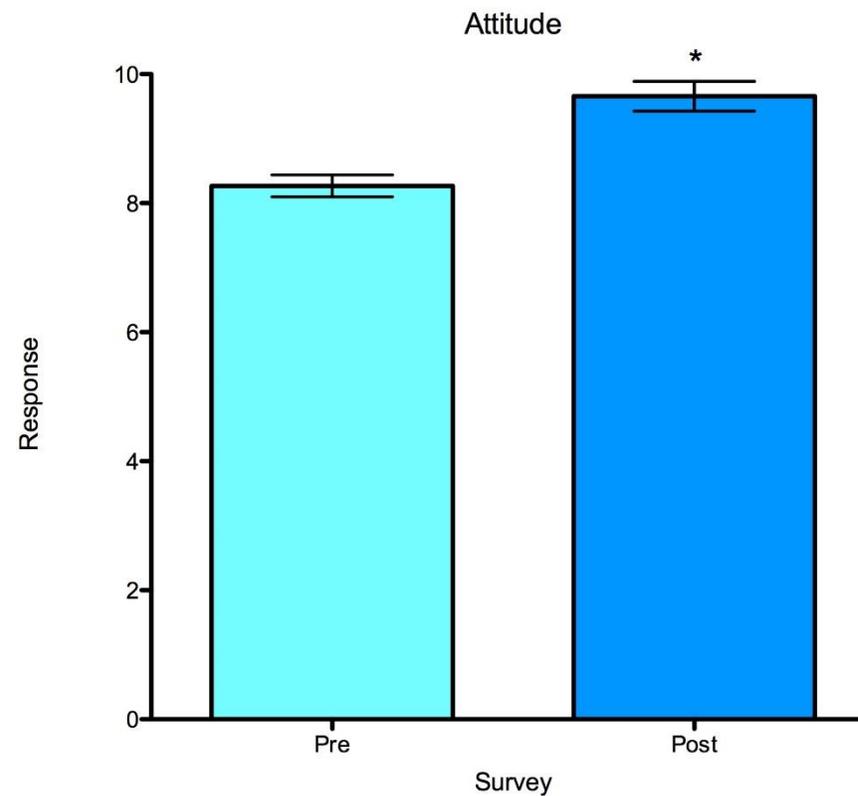


- ▶ Participant knowledge increased significantly ( $p=0.0014$ ) after the University Hall desk-side recycling program.



# Survey Results - Attitude

- ▶ Participant attitude increased significantly ( $p=0.0302$ ) after the University Hall desk-side recycling program.



# Survey Results - Behavior

## Recycling Survey

\* Required

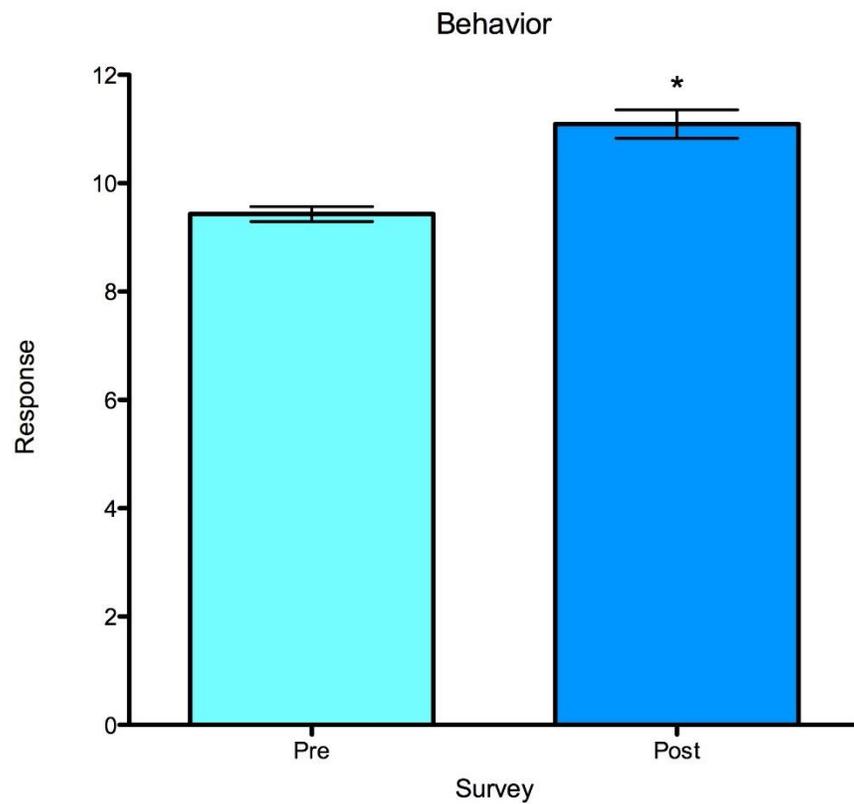
### Behavior - Office

This set of questions asks about where you place specific items while at your office.

Thinking about the last time you finished using each item while at your office, where did you put it? \*

	Recycle Bin	Waste Bin	Took Home	Don't Use	Other
Office Paper	<input type="radio"/>				
Plastic Beverage Cans	<input type="radio"/>				
Aluminum Beverage Cans	<input type="radio"/>				
Bubble Wrap	<input type="radio"/>				
Plastic Eating Utensils	<input type="radio"/>				
Frozen Dinner Boxes	<input type="radio"/>				
Paper Towels	<input type="radio"/>				
Food Scraps	<input type="radio"/>				
Soup/Tin Cans	<input type="radio"/>				
Used Paper Plates	<input type="radio"/>				
Paper Coffee Cups	<input type="radio"/>				
Styrofoam Coffee Cups	<input type="radio"/>				

# Survey Results - Behavior

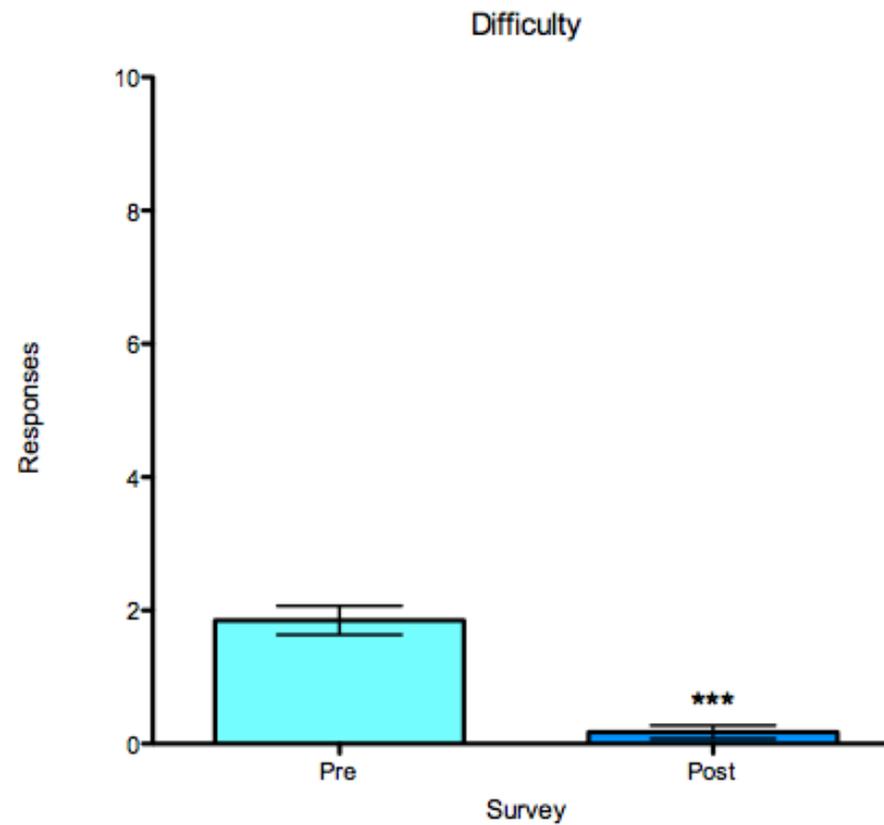


- ▶ Participant behavior significantly increased ( $p=0.05$ ) after the University Hall desk-side recycling program.



# Survey Results - Difficulty

- ▶ Participant perception of difficulty decreased significantly ( $p=0.0004$ ) after the University Hall desk-side recycling program.

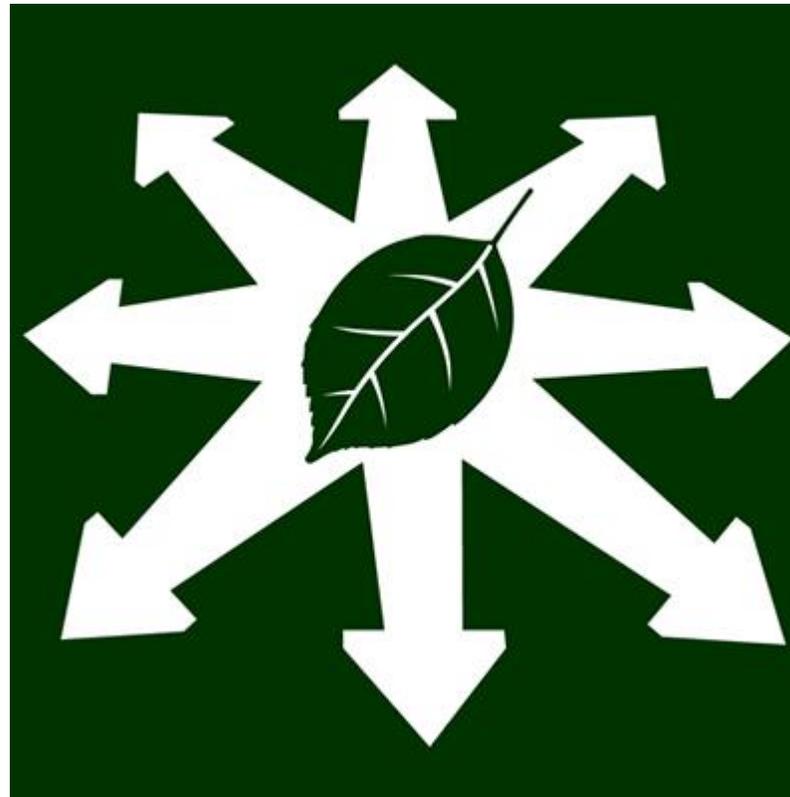


# Results - Written Feedback

- ▶ This program is very neat. I do think the photos of what can be recycled help lots. Congratulations on how you all have promoted it here in U Hall!
- ▶ I will say this program has also spurred me to start recycling at home too. We live far out in the country and don't have a convenient option for recycling so I called around to find out where a dumpster was that I could drop off my single stream recycling from home. Now we are doing this at home too. Thanks for the inspiration.
- ▶ After attending the informational session, I completely changed the way I looked at recycling and began recycling more.
- ▶ I really like the handy document with images of what to put in the bin and what not to put in the bin. I also think the visual reminder of a smaller waste bin and larger recycle bin is key.
- ▶ I like the whole idea of desk-side since we are at our desks, what better way to recycle than where we sit/stand/work all day long?

# Next Steps

- ▶ Continuous monitoring
- ▶ Continuous engagement
- ▶ Expansion
  - ▶ Sets of buildings have been identified
  - ▶ Moving is a good time to start new habits
  - ▶ Potential hurdle: Education at a larger scale



# Special Thanks

- ▶ IUPUI Campus Facility Services
  - ▶ Emily Wren, Associate Vice Chancellor
  - ▶ Jim Walsh, Building Operations Manager
  - ▶ Phil Warren, Recycling Manager
  - ▶ Paul Sebree, University Hall Building Manager
  - ▶ Jackie Jameson, Custodial Staff
- ▶ The Chancellor's Cabinet
- ▶ Calvin Davidson, Ray's Trash



# Thank you!

**Contact Information:**

Jessica Davis

Director, IUPUI Office of Sustainability

[davisjg@iupui.edu](mailto:davisjg@iupui.edu)