

Penn State Waste Stream Management Task Force

**Survey of Waste Reduction and Materials Management Practices
at Penn State Commonwealth Campuses:**

Summary Report

by

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¹ Summary of campus waste management updates presented at Regional Sustainability Forums in May 2019, compiled by Danielle Malpeli. Added as Appendix D in June 2019.

1. Introduction

In support of the Waste Stream Management Task Force's charge of creating goals and/or principals to guide University decisions related to solid waste management, an online survey was developed to gather information about current practices at the Commonwealth campuses. The survey was intended help taskforce members better understand the complexities and individual challenges of managing waste across the University system.

Prior to developing the survey, initial efforts to research waste management practices at the Commonwealth campuses led to the conclusion that there is currently no central source for much of this information. Therefore, a secondary purpose for administering the survey was to collect information on waste management practices in a standardized format that could potentially serve as a baseline for future inquires.

The survey was developed by Nathan Elser in consultation with Phil Melnick, Lydia Vandenberg, and Dr. Judd Michael. Topics addressed in the survey included waste collection and transportation, recycling streams and accepted materials, composting, common practices for reducing waste, barriers to and opportunities for reducing waste, and the University's role in supporting waste reduction efforts at the Commonwealth campuses. The online survey was administered to the Director of Business Services at each campus in mid-August, 2018. Respondents representing 20 of the Penn State Commonwealth campuses completed the survey.

Key findings include:

- About half ($n=11$) of campuses employ single stream recycling for collecting standard recyclables in common areas (six use multi-stream, three use dual stream).
- 70% ($n=14$) of campuses report having Custodial services/Housekeeping collect solid waste from individual trash receptacles located in private offices and rooms. Six campuses report having faculty/staff sort and dispose of their own waste in separate receptacles located in common areas of buildings.
- Only one campus reported having a formal collection program for organic/compostable materials (ex. food scraps, kitchen waste, paper napkins, landscaping debris, animal bedding, etc.) available to campus users (i.e., students, staff, faculty, visitors).
 - Five campuses did report having such programs available to campus operations (ex. grounds maintenance, food services, event planning). Of these, four indicated they compost landscaping debris and three indicated they compost back of the house kitchen waste.
- The most frequently cited barrier to advancing waste reduction efforts on campus was financial and/or human resources constraints ($n = 8$, accounting for approximately 50% of responses).
- Among those campuses providing a response, about 60% noted Housing and/or Food Services as an area of opportunity for waste reduction ($n = 8$).

2. Survey Methodology

The identified target population for the survey was the Director of Business Service or equivalent title at each campus (see Appendix 1 for respondent list). The initial survey invitation was emailed early morning on Friday, August 10th (sent from PSU_WasteTaskForce@qualtrics-survey.com) with a requested completion date of Friday, August 24th. A follow-up email was then sent Thursday, August 16th, to those who hadn't yet responded (from my personal address, nce5000@psu.edu). A third email reminder was sent on Thursday, August 23rd (from Lydia Vandenberg, lbv10@psu.edu). Representatives of 18 campuses completed the survey by the requested deadline. Final attempts to reach the contacts of the remaining campuses were made the following week. Ultimately respondents from 20 of the 22 campuses completed the online survey¹.

The survey structure included nine blocks of items representing different topics/item types. The core of the survey consisted of ten multiple choice items and six open-ended items. Each block also included a text box allowing for notes or comments relating to the respective topic. The survey was expected to require 10-15 minutes to complete, though some respondents took considerably more time as they provided more in-depth responses to the open-ended items.

Respondent Campuses

Abington
Altoona
Beaver
Berks
Brandywine
Dickinson School of Law
DuBois
Erie
Fayette
Great Valley
Greater Allegheny
Harrisburg
Hazleton
Lehigh Valley
Mont Alto
Schuylkill
Shenango
Wilkes-Barre
Worthington Scranton
York

3. Results

3.1 Collection and Hauling of Solid Wastes

All campuses report utilizing private companies for transporting solid waste away from campus (as opposed to county/municipal haulers). At least a third of responding campuses noted contracting Waste Management for these services. Since the survey did not include any items that explicitly asked what company manages waste transport, it is very likely that the proportion of campuses contracting with Waste Management is much higher. As noted in the comments below, some campuses (ex., Fayette) may have only one or two providers to choose from for waste hauling services.

Most campuses report having custodial services manage the collection of all solid waste in both the common areas and office spaces of buildings on campus ($n=14$, 70%). Six campuses reported having faculty/staff separate and/or dispose of their own recyclables in receptacles located in common areas of buildings.

¹ Non-responding campuses were Hershey College of Medicine and New Kensington (see Appendix A for more information).

About half of the responding campuses report using single stream recycling for collecting standard recyclables ($n=11$, 55%). Three campuses reported using dual stream, where paper/cardboard products are separated from plastics, glass, and metals (15%). The remaining six campuses reported using multiple streams that further separate different types of materials (30%). It is worth noting that of the six campuses in which faculty/staff separate their own recyclable materials, five utilize single stream recycling.

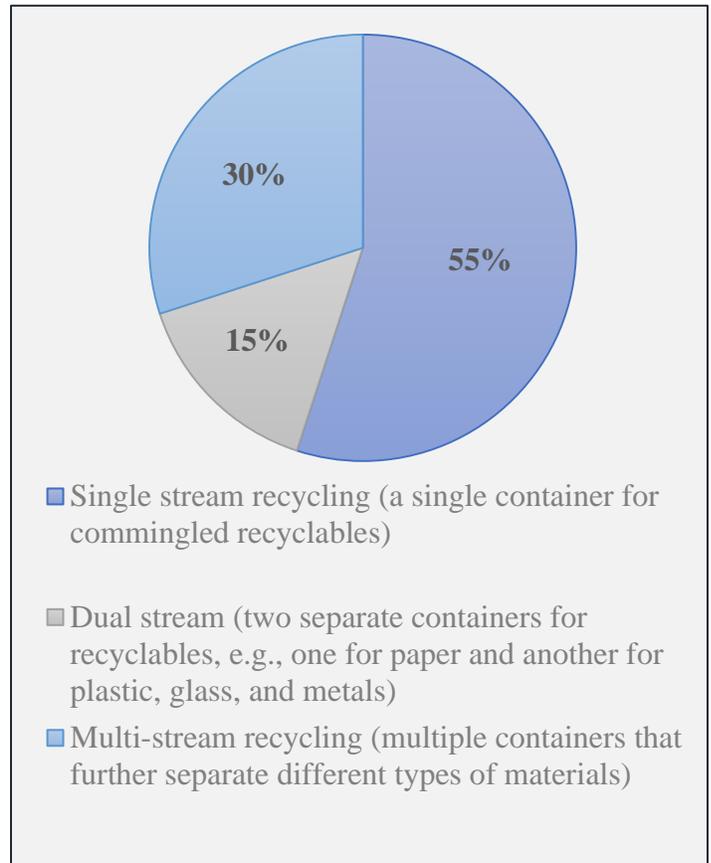
Which of the following methods does your campus primarily employ for collecting standard recyclables (i.e., paper, plastic, glass, metals) in common areas?

Campus ^a	Recycling Method
Harrisburg	Multi-stream *
Erie	Single stream *
Abington	Single stream
Altoona	Dual stream
Berks	Single stream *
Brandywine	Multi-stream
Worthington Scranton	Single stream *
York	Single stream
Lehigh Valley	Single stream
Mont Alto	Single stream
Hazleton	Single stream
Schuylkill	Single stream
Beaver	Dual stream
Fayette	Multi-stream
DuBois	Multi-stream
Greater Allegheny	Dual stream
Shenango	Multi-stream
Wilkes-Barre	Single stream *
Great Valley	Single stream *
Dickinson School of Law	Multi-stream

^a Campus list organized from largest to smallest, based on total enrollments in Fall 2017

* Campuses known to contract with Waste Management

Yellow background: Denotes campuses where faculty/staff separate and/or dispose of own recyclables



Comments Related to Waste Hauling and Recycling

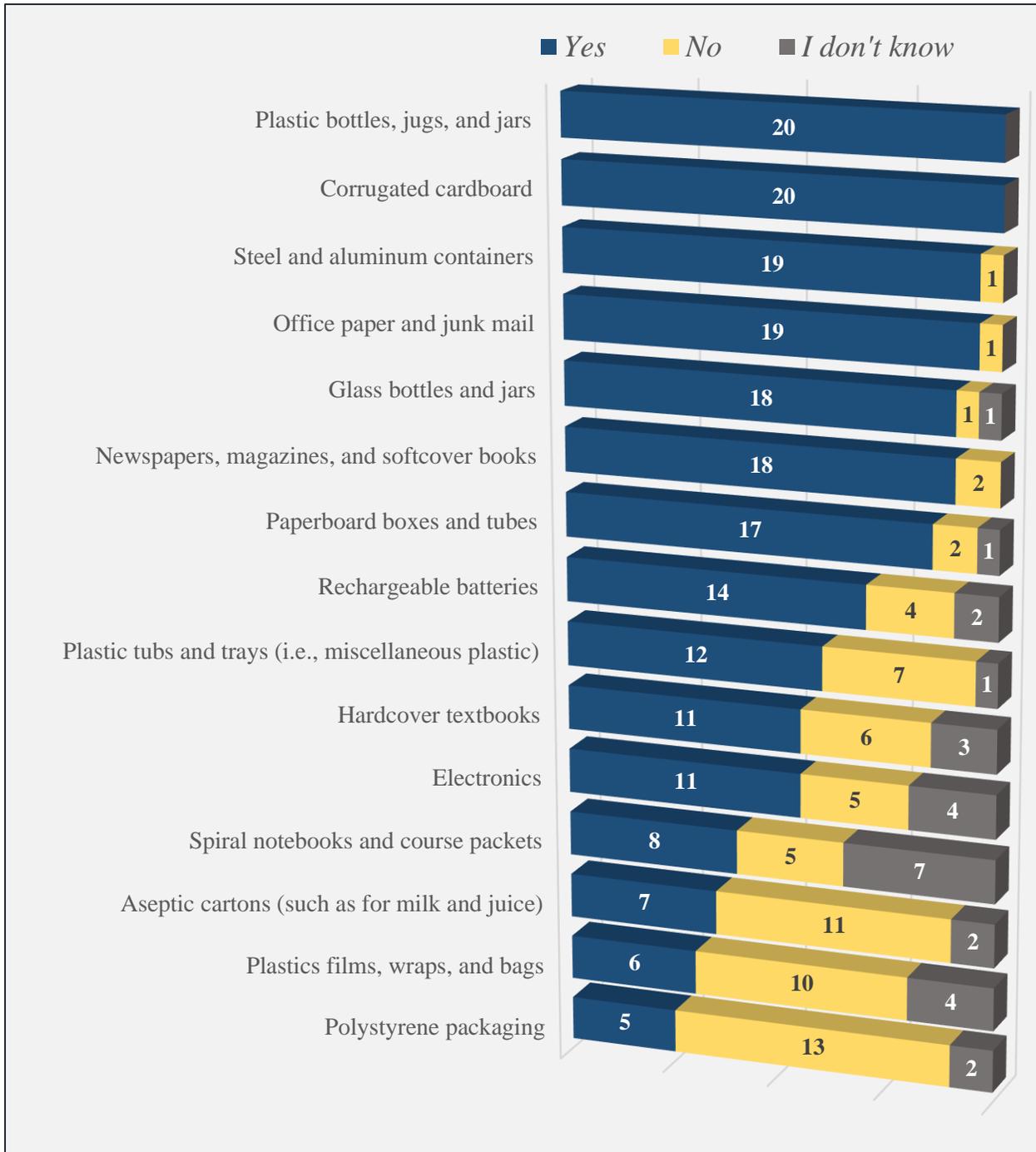
“Advance Disposal serves the campus and is the only hauler for North Union Township residents; Goodwill provides recycling bins on the campus to collect glass, cardboard, plastic, aluminum. They empty containers bi-weekly. There is no charge for this service.” – *Jason Bush, Fayette*

“Recycling with Waste Management has migrated to the big 4 which eliminates paper and non corrugated cardboard, thus reducing the number of streams and increasing our tonnage for trash.” – *Chuck Garber, Harrisburg*

3.2 Materials Collected for Recycling

Respondents were asked about the availability of recycling on their campuses for 15 commonly recycled materials. The chart below presents results from these items, with materials listed by frequency of “yes” responses. The table on the following page provides the full responses from each campus for all materials, as well as related comments.

Which of the following commonly recycled materials are widely collected on your campus?



Campus ^a	Recyclable Materials Categories (see key below)														
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Harrisburg ¹	Blue	Blue	Blue	Yellow	Blue	Yellow	Yellow	Blue	Yellow	Yellow	Blue	Yellow	Yellow	Yellow	Yellow
Erie ²	Blue	Blue	Blue	Yellow	Yellow	Blue	Blue	Blue	Yellow	Blue	Blue	Yellow	Blue	Blue	Yellow
Abington	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Altoona	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Berks	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Brandywine	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Worthington Scranton ³	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
York	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Lehigh Valley ⁴	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Mont Alto	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Hazleton ⁵	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Schuylkill	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Beaver	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Fayette ⁶	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
DuBois	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Greater Allegheny	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Shenango	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Wilkes-Barre	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Great Valley ⁷	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Dickinson School of Law	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
% Yes	100	100	95	95	90	90	85	70	60	55	55	40	35	30	25

^a Campus list organized from largest to smallest, based on total enrollments in Fall 2017

Blue Cells = Yes		Yellow Cells = No		Gray Cells = I don't know	
A Plastic bottles, jugs, and jars	F Newspapers, magazines, and softcover books	K Electronics			
B Corrugated cardboard	G Paperboard boxes and tubes	L Spiral Notebooks and course packets			
C Steel and aluminum containers	H Rechargeable batteries	M Aseptic cartons (such as for milk and juice)			
D Office paper and junk mail	I Plastic tubs and trays (i.e., misc. plastic)	N Plastics films, wraps, and bags			
E Glass bottles and jars	J Hardcover textbooks	O Polystyrene packaging			

Comments Related to Materials Collected for Recycling (numbers refer to campus response in table above)

- 1 “This represents the most recent changes implemented by Waste Management” – *Chuck Garber, Harrisburg*
- 2 “Office paper is collected, junk mail is not. Electronics are collected once yearly and shipped to University Park for recycling. Spiral notebooks can be collected if the plastic spiral is removed. Departments are directed to send their own rechargeable batteries to be recycled” – *Randy Geering, Erie*
- 3 “Our textbooks are taken by the truckload to a local recycler at no cost or reimbursement to the campus. Remaining items are hauled by Waste Management.” – *Gene Grogan, Worthington Scranton*
- 4 “Electronics are sent to Surplus and Salvage” – *Helene Miksitz, Lehigh Valley*
- 5 “Does not include Housing and Food Services” – *Michael Morrison, Hazleton*
- 6 “Batteries are processed thru EH&S Hazardous Waste” – *Jason Bush, Fayette*
- 7 “We recycle batteries, but not through Waste Management. We offer once a year recycling on campus for electronics, etc., but again not through Waste Management” – *Maria Zuccato, Great Valley*

3.3 Composting

Participants were also asked about the availability of composting programs for campus users (i.e., students, staff, faculty, visitors) and campus operations (ex. grounds maintenance, food services, event planning). These items asked about the existence of a “formal collection program” for organic waste. This wording was chosen so that informal, small-scale composting efforts, such as what might occur among a small group of employees in a particular department or unit, would be excluded².

Only Penn State Shenango reported having a formal collection program for organic waste available to campus users (*i.e.*, students, staff, faculty, visitors). Five campuses (Shenango, Harrisburg, Erie, Schuylkill, and Abington) reported having formal collection programs available to campus operations. Of those campuses, all but Shenango reported widely collecting landscaping debris for composting. Shenango, Erie, and Abington reported collecting back of the house kitchen waste (see table below). All but Abington indicated having a composting operation located on campus property.³

² Penn State Beaver reported having a very small-scale pilot composting program organized by the campus green team (see comments on following page).

³ Penn State Worthington Scranton commented that landscaping debris are deposited in a wooded area of campus, though did not report having a formal collection program or composting operation on campus (see comments on following page).

Campus	Does your campus have a formal collection program for organic/compostable materials (ex. food scraps, kitchen waste, paper napkins, landscaping debris, animal bedding, etc.) available to:		Which of the following materials generated from campus operations are widely collected for composting?			Is there a composting operation located on your campus?
	Campus users ^a	Campus operations ^b	Landscaping debris	Back of the house kitchen waste	Animal bedding and/or manure	
Shenango	Yes	Yes		X		Yes
Harrisburg	No	Yes	X			Yes
Erie	No	Yes	X	X		Yes
Schuykill	No	Yes	X			Yes
Abington	<i>nr</i>	Yes	X	X		No
Altoona	No	No	<p style="text-align: center;"><u>Comments Related to Composting</u></p> <p>“It is a small operation run by Greener Behrend with cooperation from Food Service and Maintenance” - <i>Randy Geering, Erie</i></p> <p>“Campus yard waste, brush, leaves, etc., are deposited at lower end of campus in a wooded area” - <i>Gene Grogan, Worthington Scranton</i></p> <p>“We began a very small organic compost as a trial run primarily organized by our green team. Our sustainability coordinator is now looking into a larger compost in conjunction with Housing and Food Services” - <i>Adam Rathbun, Beaver</i></p> <p>“Not enough volume to warrant collection of these materials” - <i>Jason Bush, Fayette</i></p>			
Berks	No	No				
Brandywine	No	No				
Worthington Scranton	No	No				
York	No	No				
Lehigh Valley	No	No				
Mont Alto	No	No				
Hazleton	No	No				
Beaver	No	No				
Fayette	No	No				
DuBois	No	No				
Greater Allegheny	No	No				
Wilkes-Barre	No	No				
Great Valley	No	No				
Dickinson School of Law	No	No				

^a i.e., students, staff, faculty, visitors; ^b ex. grounds maintenance, food services, event planning; *nr* = no response

3.4 Waste Diversion

Participants were asked if their campus measures the amount of waste diverted from landfill (i.e., materials recycled, composted, donated). Only two of the 20 responding campuses (10%) reported tracking waste diversion metrics: Worthington Scranton, which reported that its most recent landfill diversion rate was 12%; and Berks, which reported its most recent rate at 15%. Two other campuses noted that their waste haulers have this information available (see comments below)⁴.

Comments Related to Measures of Waste Diversion
“The campus does not measure this, but our provider does” – <i>Anne Miller, Mont Alto</i>
“The above % does not include textbook tonnage nor scrap metal taken to recyclers, nor yard waste. This amount represents solid vs. single stream recyclable materials” - <i>Gene Grogan, Worthington Scranton</i>
“We measure this only for construction projects through OPP” – <i>Maria Zuccato, Great Valley</i>
“Waste Management is our trash/recycling hauler and has that information which they can provide” - <i>Randy Geering, Erie</i>
“Goodwill does not provide this data to my knowledge” – <i>Jason Bush, Fayette</i>

3.5 Waste Reduction Practices

The final section of multiple choice items focused on best practices for reducing solid waste in higher education institutions. These practices were identified through review of applicable literature, sustainability websites of leading universities, as well as institutional reports submitted to the Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking, Assessment & Rating System (Stars) Program. Institutional reports reviewed were selected based on institutional characteristics and institutional performance on “Waste Management and Diversion” criteria.⁵

For each practice, respondents were asked if their campus:

- a) has already or intends to implement it
- b) is currently considering implementing it
- c) has considered but decided against implementing

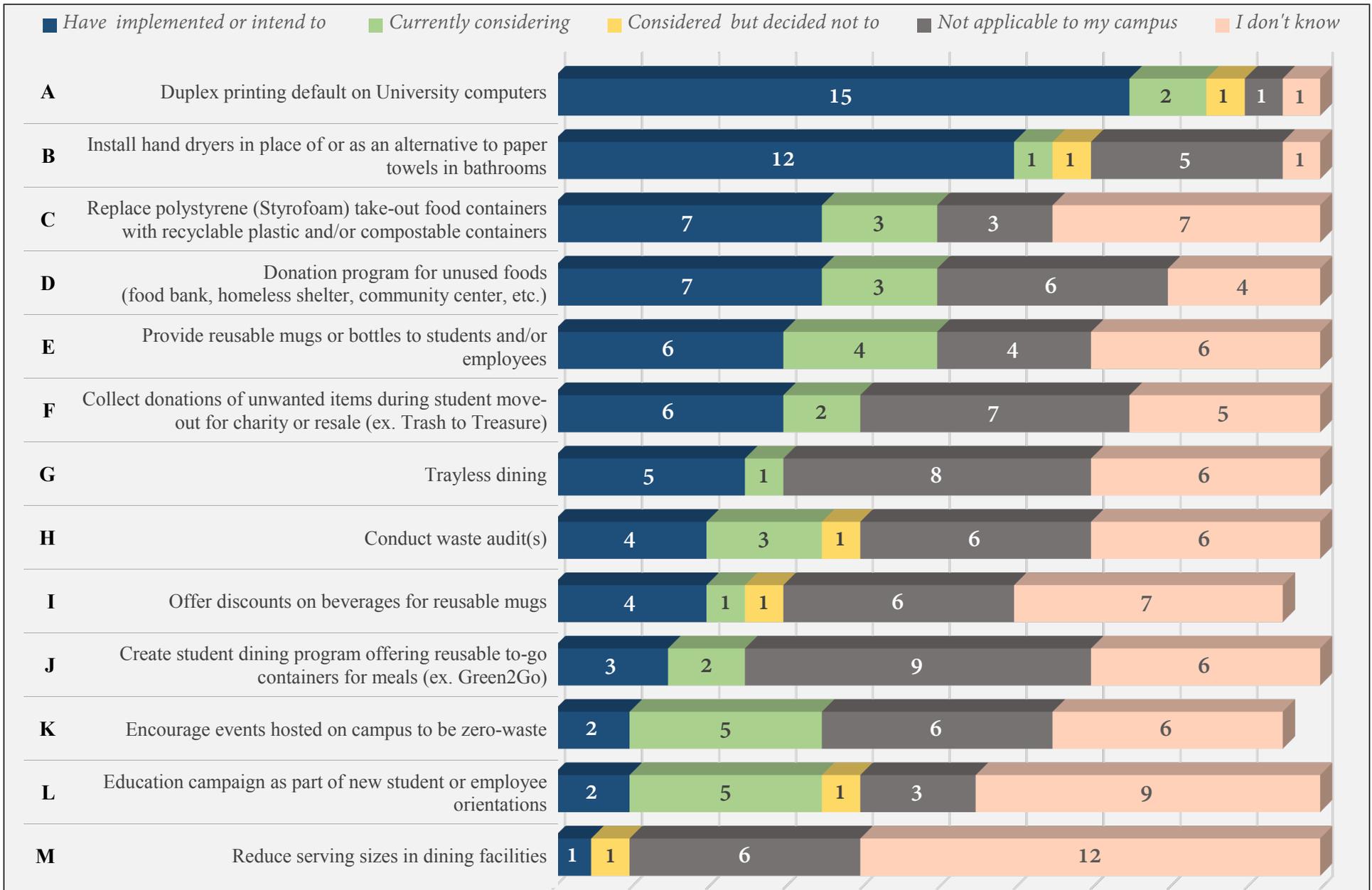
Respondents were also provided a “not applicable to my campus” option, since some practices pertain to services that are not offered at all campus locations (ex., university housing).

Comments Related to Waste Reduction Practices
“We send all of our scrap metals to salvage” – <i>Anne Miller, Mont Alto</i>
“As indicated, we supply recycling containers for both offices, classrooms and buildings” - <i>Gene Grogan, Worthington Scranton</i>
“We are with a private vendor food service provider until our cafe renovation project is complete in 2020, then we will be with the University's chosen vendor Metz, who will provide more sustainability opportunities” - <i>Helene Miksitz, Lehigh Valley</i>
“Some of these ideas were mentioned today: waste audit, education program for new student orientation. We have had duplex printing on all of our public printers for many years. Some bathrooms are hand dryer only, others have both.” - <i>Randy Geering, Erie</i>
“Our food service is currently contracted out to Metz. Scale and resources are a challenge at many of the smaller campuses” - <i>Jason Bush, Fayette</i>

⁴ Interviews with personnel at Penn State Erie also suggest that Waste Management charges by the cubic yard, potentially making diversion calculations by weight difficult to obtain.

⁵ For example, see Penn State’s performance information for the Waste Management and Diversion credits here: <https://stars.aashe.org/institutions/pennsylvania-state-university-pa/report/2017-09-14/OP/waste/OP-19/>

Has your campus implemented or considered implementing any of the following practices for reducing waste?



Campus ^a	Waste Reduction Practices (see key below)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
Harrisburg	Yellow	Blue	Gray	Blue	Gray	Blue	Gray	Blue	Yellow	Gray	Gray	Yellow	Gray
Erie	Blue	Blue	Blue	Blue	Green	Blue	Blue	Green	Blue	Blue	Green	Green	Orange
Abington	Green	Blue	Orange	Blue	Orange	Orange	Blue	Gray	Orange	Orange	Orange	Orange	Orange
Altoona	Blue	Blue	Orange	Orange	Orange	Blue	Orange	Gray	Orange	Orange	Orange	Orange	Orange
Berks	Blue	Blue	Blue	Gray	Blue	Gray	Blue	Orange	<i>nr</i>	Blue	Blue	Blue	Blue
Brandywine	Blue	Yellow	Orange	Orange	Green	Blue	Orange	Green	Orange	Orange	Green	Green	Orange
Worthington Scranton	Blue	Gray	Blue	Blue	Green	Gray	Orange	Orange	Green	Gray	Orange	Orange	Orange
York	Gray	Blue	Blue	Orange	Orange	Orange	Blue	Gray	Gray	Gray	Gray	Orange	Orange
Lehigh Valley	Blue	Blue	Gray	Green	Blue	Green	Gray	Blue	Gray	Gray	Green	Green	Gray
Mont Alto	Blue	Gray	Blue	Gray	Blue	Blue	Blue	Gray	Blue	Blue	<i>nr</i>	Blue	Orange
Hazleton	Blue	Blue	Orange	Orange	Orange	Orange	Orange						
Schuylkill	Blue	Blue	Orange	Gray	Gray	Gray	Gray	Orange	Blue	Gray	Gray	Gray	Orange
Beaver	Blue	Blue	Green	Blue	Blue	Blue	Orange	Green	Orange	Green	Green	Green	Orange
Fayette	Blue	Orange	Orange	Blue	Orange	Orange	Orange	Blue	Orange	Orange	Orange	Orange	Orange
DuBois	Blue	Gray	Gray	Gray	Orange	Gray							
Greater Allegheny	Blue	Gray	Green	Green	Blue	Gray	Orange	Blue	Orange	Orange	Gray	Gray	Yellow
Shenango	Green	Green	Green	Green	Orange	Green	Green	Orange	Orange	Green	Green	Green	Orange
Wilkes-Barre	Blue	Blue	Orange	Blue	Green	Gray	Gray	Yellow	Gray	Orange	Orange	Orange	Gray
Great Valley	Blue	Blue	Blue	Gray	Blue	Gray	Gray	Blue	Gray	Gray	Blue	Orange	Gray
Dickinson School of Law	Orange	Gray	Blue	Gray	Gray	Gray	Gray	Gray	Gray	Gray	Gray	Gray	Gray
% Implemented or intend to	75	60	35	35	30	30	25	20	20	15	10	10	5

^a Campus list organized from largest to smallest, based on total enrollments in Fall 2017

nr = no response

Blue Cells = <i>Have implemented or intend to</i>	Green Cells = <i>Currently considering</i>	Yellow Cells = <i>Considered but decided not to</i>	Gray Cells = <i>Not applicable to my campus</i>	Orange Cells = <i>I don't know</i>
A Duplex printing default on University computers				
B Install hand dryers in place of or as an alternative to paper towels in bathrooms				
C Replace polystyrene (Styrofoam) take-out food containers with recyclable plastic and/or compostable containers				
D Donation program for unused foods (food bank, homeless shelter, community center, etc.)				
E Provide reusable mugs or bottles to students and/or employees				
F Collect donations of unwanted items during student move-out for charity or resale (ex. Trash to Treasure)				
G Trayless dining				
H Conduct waste audit(s)				
I Offer discounts on beverages for reusable mugs				
J Create student dining program offering reusable to-go containers for meals (ex. Green2Go)				
K Encourage events hosted on campus to be zero-waste				
L Education campaign as part of new student or employee orientations				
M Reduce serving sizes in dining facilities				

3.6 Open-ended Items

The survey included six open-ended items to provide respondents with an opportunity to share their own insights and unique experiences related to waste reduction efforts at their campus. Topics covered in this final section of the survey include educational efforts and outreach, opportunities and barriers, the University's role, and transferable practices for other campuses.

1. Please briefly describe any educational efforts on your campus to promote recycling and waste reduction among University employees

Campus	Response
Harrisburg	Discussions held during team meetings to ensure we maximize our recycling of metals and acceptable waste - <i>Chuck Garber</i>
Erie	With the recent changes in the recycling industry our process for collecting recycling has changed drastically. We just (today) had a recycling forum (50 in attendance) to educate faculty and staff on those changes. We have sent emails to the list serve as well. We see this as an ongoing effort to educate so we can clean up our recycling stream. - <i>Randy Geering</i>
Altoona	Sustainability Council promotes recycling - <i>Michael Long</i>
Berks	Campus has formed a Sustainability Committee - <i>Kim Berry</i>
Worthington Scranton	Office recycling containers are located in each office for single stream recycling. New recycling containers were recently purchased and placed throughout the campus hallways for single stream recycling. We don't have/offer any "educational" programs. - <i>Gene Grogan</i>
York	New trash receptacles in the Ruhl Student Center highlight recycling. - <i>Holly Gumke</i>
Lehigh Valley	We have a Sustainability Committee that conducts events to encourage recycling and create signage. - <i>Helene Miksitz</i>
Mont Alto	Our campus Sustainability Committee widely promotes recycling and waste reduction efforts. - <i>Anne Miller</i>
Beaver	Very little is done to promote recycling. We have some flyers around campus to help faculty/staff/students know what they can and can not recycle. Our sustainability initiative is gaining strength and we hope to improve in this area. - <i>Adam Rathbun</i>
Fayette	Sustainability Forum participation. Sustainability website resources shared among campus listserves - <i>Jason Bush</i>
DuBois	Emails and messages from our "Green Team" - <i>John Luchini</i>
Shenango	We have an Agricultural Club that monitors and works with sustainability programs. - <i>William Dungee</i>
Great Valley	We have an active Sustainability Committee that suggests sustainable practices to the business office, shows educational films, and celebrates Earth Day. - <i>Maria Zuccato</i>
Dickinson School of Law	Just containers for specific recyclable materials - <i>Kar Souders</i>

2. Please briefly describe any educational efforts on your campus to promote recycling and waste reduction among University students

Campus	Response
Harrisburg	Signage and posters - <i>Chuck Garber</i>
Erie	The Student Government is involved and will be working to provide education to the student body. We are charging the Student Affairs Committee of the Faculty Senate to work on an education program. Strategic Communications will be sending out information to the campus community about the changes and new process. - <i>Randy Geering</i>
Altoona	Students are on the above listed council - <i>Michael Long</i>
Berks	Campus works with students through clubs, orientation, and signage - <i>Kim Berry</i>
Worthington	Every building and most classrooms have recycling containers in these areas. We don't have/offer any educational programs for recycling. - <i>Gene Grogan</i>
Scranton	
York	New trash receptacles in the Ruhl Student Center highlight recycling. - <i>Holly Gumke</i>
Lehigh Valley	We teach SUST 200 and 400 level courses and one of our faculty runs a program called CHANCE, info can be found at this link. www.chance.psu.edu - <i>Helene Miksitz</i>
Mont Alto	Our campus Sustainability Committee widely promotes recycling and waste reduction efforts. - <i>Anne Miller</i>
Schuylkill	We provide recycling containers in all locations. - <i>Stephanie Wood</i>
Beaver	Same as above. In addition, we do provide more recycling options at the end of the semester (mainly spring) for those moving out of the residence hall. - <i>Adam Rathbun</i>
Fayette	I tried to connect with our Student Affairs Office to see what programming is happening. - <i>Jason Bush</i>
DuBois	Emails and messages from our "Green Team" - <i>John Luchini</i>
Great Valley	We have signage and plenty of receptacles to promote recycling. - <i>Maria Zuccato</i>

3. *What, if any, barriers do you see preventing your campus from further engaging in solid waste reduction initiatives?*

Campus	Response
Harrisburg ^{1,2}	Resources; money and human - <i>Chuck Garber</i>
Erie ³	Buy-in from faculty/students/staff. We don't see enough of a commitment to reduce waste and recycle responsibly - <i>Randy Geering</i>
Berks ⁴	Limited storage - <i>Kim Berry</i>
Worthington Scranton ³	Lack of student involvement or participation. Hard to believe for a generation that has been recycling, when they come to the campus they don't think it is their responsibility to do so? - <i>Gene Grogan</i>
Lehigh Valley ⁴	We do not have the space, we only have 29 acres. - <i>Helene Miksitz</i>
Mont Alto ¹	Funding. - <i>Anne Miller</i>
Hazleton	None - <i>Michael Morrison</i>
Schuylkill ^{1,2}	Budget constraints and lack of manpower - <i>Stephanie Wood</i>
Beaver ^{1,3}	Cost of implementation may be the biggest barrier followed by campus-wide participation. - <i>Adam Rathbun</i>
Fayette	I think getting a waste hauler that has single stream recycling would be advantageous for us, but this is dictated by North Union Township & Fayette County. Due to scale and volume it doesn't make sense for us to participate in some of these initiatives. - <i>Jason Bush</i>
DuBois ^{1,2}	Increased costs and effort required - <i>John Luchini</i>
Shenango ²	Individual dedicated towards serving and leading this initiative. - <i>William Dungee</i>
Wilkes-Barre	None if some other initiatives were brought to our attention. - <i>Gary Beisel</i>
Great Valley ¹	Cost. Disposable, compostable flatware, plates, and cups are more expensive. - <i>Maria Zuccato</i>
Dickinson School of Law ¹	Cost - <i>Kar Souders</i>

¹ Related to financial constraints ($n = 7$)

² Related to human resources constraints ($n = 4$)

³ Related to lack of campus participation ($n = 3$)

⁴ Related to lack of space ($n = 2$)

4. Where do you believe are the greatest opportunities for reducing solid waste on your campus?

Campus	Response
Harrisburg ¹	H&FS - <i>Chuck Garber</i>
Erie ²	Education; we need to have a fundamental shift in the way we think about waste and recycling starting with what and how we purchase goods - <i>Randy Geering</i>
Berks ¹	HFS - <i>Kim Berry</i>
Worthington Scranton ²	Continue awareness through educational programs to promote the positives of recycling. - <i>Gene Grogan</i>
York ¹	Continued recycling efforts. New programs in food service with a new food service provider now in place. - <i>Holly Gumke</i>
Lehigh Valley ²	Continue to educate about recycling and sustainability. - <i>Helene Miksitz</i>
Mont Alto ¹	Housing & Food Services could install a compost station. - <i>Anne Miller</i>
Schuylkill ¹	Cafeteria Food Services - <i>Stephanie Wood</i>
Beaver ¹	Housing and Food Operations. - <i>Adam Rathbun</i>
Fayette ¹	I think the campuses have minimized solid waste over the years simply due to frugal budgets. An opportunity may be working with our contracted food service to look at where they can participate in terms of using recyclable paper products. These operations are subsidized due to lack of volume so it's difficult telling them we need to be using recyclable materials when they are more expensive. - <i>Jason Bush</i>
Shenango	Expanding the compost area. - <i>William Dungee</i>
Wilkes-Barre ¹	Probably in Food Services. - <i>Gary Beisel</i>
Great Valley	Some faculty still insist on making paper copies of materials for their students. - <i>Maria Zuccato</i>

¹ Related to Housing and/or Food Services ($n = 8$)

² Related to education programs ($n = 3$)

5. How could the University best support solid waste reduction efforts on your campus?

Campus	Response
Harrisburg	Finding new outlets we can work with to recycle more than the Big 4 - <i>Chuck Garber</i>
Erie ¹	University-wide education campaign. - <i>Randy Geering</i>
Berks ²	Funding for collection stations and signage - <i>Kim Berry</i>
Worthington Scranton ¹	Again, educational programs that tout successes of recycling and what it does for the environment. - <i>Gene Grogan</i>
Lehigh Valley	I'm not sure. - <i>Helene Miksitz</i>
Mont Alto ²	Funding. - <i>Anne Miller</i>
Schuylkill ^{1,2}	Provide financial resources and training for additional staff - <i>Stephanie Wood</i>
Beaver ¹	Guidance on implementation of programs. For example, composting of food. - <i>Adam Rathbun</i>
Fayette ¹	Provide guidance in areas we can support related to sustainability initiatives. Provide regional training that our campus participants can attend. - <i>Jason Bush</i>
Shenango ²	Funding towards these efforts. - <i>William Dungee</i>
Wilkes-Barre ¹	By providing a list of some of the potential initiatives and giving us a chance to pick and choose those that we might be able to implement. - <i>Gary Beisel</i>
Great Valley ²	Augment campus committees comprised of volunteers with an appointment charged with sustainability practice implementation as an assigned work duty. Offer financial incentives to campuses and start-up funding. - <i>Maria Zuccato</i>

¹ Related to education programs, training, or guidance ($n = 6$)

² Related to funding ($n = 5$)

6. *Of the recycling and/or waste reduction efforts successfully employed at your campus, which do you feel are most transferable to other campuses?*

Campus	Response
Harrisburg	Landscape waste - <i>Chuck Garber</i>
Erie	Not sure, we are still working through many of the changes. We are interested in anything that has been done at other campuses that has worked. - <i>Randy Geering</i>
Berks	Conduct an annual shredding event - <i>Kim Berry</i>
Worthington Scranton	I think the placement of recycling containers in classrooms and more prominent containers throughout the campus has been a successful. - <i>Gene Grogan</i>
York	Trash receptacles for recycling. - <i>Holly Gumke</i>
Lehigh Valley	The CHANCE program is offered University-wide. - <i>Helene Miksitz</i>
Mont Alto	Contracting a sustainable solid waste vendor. - <i>Anne Miller</i>
Schuylkill	Not at this time - <i>Stephanie Wood</i>
Beaver	Hard to answer as I'm not sure what other campus have been doing. - <i>Adam Rathbun</i>
Fayette	Single stream recycling - <i>Jason Bush</i>
Shenango	Agriculture Club working with our Sustainability Committee. - <i>William Dungee</i>
Wilkes-Barre	We pretty much do standard recycling that most campuses do. - <i>Gary Beisel</i>
Great Valley	Bring your own cups, plates, etc. to meetings. Add dishwashers to faculty/staff main lounges. - <i>Maria Zuccato</i>

4. Conclusions

Results from this survey indicate that many of the Commonwealth Campuses face unique challenges in managing solid waste. For example, Penn State Fayette has only one waste hauler available for it to contract with (see pp. 3, 8, 10). This, combined with its relatively small scale, presumably limits the campus' ability to negotiate broader services at a reasonable rate. Another example is Penn State Lehigh Valley, which cited the small size of its property as a major barrier to engaging in waste reduction initiatives (see p. 13).

Despite these unique challenges, the survey results also suggest the primary factors impacting waste reduction efforts are widely shared among many of the Commonwealth Campuses. Predominantly among these are financial and human resources constraints. Nearly three-quarters of responding campuses noted such constraints as barriers to reducing solid waste (see p. 13). Similarly, approximately 42% of responding campuses identified the provision of funding as how the University could best support their waste reduction efforts (see p. 15).

Another major factor that already has or likely will impact waste reduction efforts at campuses across the University system is market shifts resulting from China's National Sword policy on imports of recyclable materials. Considering the prevalence of Waste Management as the contracted waste hauler among Commonwealth Campuses, it seems very likely that many campuses may soon be faced with changing waste collection policies. For instance, Penn State Erie has been forced to make substantial changes to its recycling collection processes due to policy changes imposed by Waste Management in early 2018 (pp. 11, 16). Penn State Harrisburg, too, noted the challenges it was presented by changes in Waste Management policies (pp. 3, 5). The new realities of the market for recyclables have diminished leadership's ability to make a "business case" for more comprehensive recycling programs.

Many Commonwealth Campuses also identified similar opportunities. Nearly 62% of responding campuses specifically noted Food and Housing Services as an area offering the greatest opportunity for reducing solid waste. Survey results suggest that most campuses would like to do more composting of food and biomass. However, compost systems can be somewhat expensive to operate and maintain while needing a critical mass of materials. These reasons, combined with others, have reduced the prevalence of materials being composted on the campuses. About a quarter of responding campuses also identified education programs as the greatest opportunity for reducing waste (see p. 14).

In summary, nearly all campuses seem to be striving for better waste management even though leadership faces the proverbial uphill battle. All campuses appear to be short of funds that could be used for infrastructure improvement, training, etc. that would lead to improved diversion rates. All campuses are also facing challenges related to human behavior (e.g., student and employee) that is inconsistent with recycling objectives, while attempting to mitigate drastic changes in markets for recyclable materials. Interestingly, University methods for procuring goods was mentioned only once among respondent comments: "We need to have a fundamental shift in the way we think about waste and recycling starting with what and how we purchase goods" (Randy Geering, Penn State Erie) (see p. 14).

APPENDIX A
Respondent Information

Campus	Respondent Name	Respondent Title	Respondent Email
Abington	Alexis Donohue	Assistant Director of Business Services	axa259@psu.edu
Altoona	Michael Long	Assistant Director, Business Operations; Director, Facilities and Operations	mgl103@psu.edu
Beaver	Adam Rathbun	Director of Finance & Business Service	awr130@psu.edu
Berks	Kim Berry	Sr. Director of Business & Community Service	krb11@psu.edu
Brandywine	Margaret Buban	Director of Finance and Business Service	mmb89@psu.edu
Dickinson School of Law	Kar Souders	Director of Business Services (Carlisle)	krs8@psu.edu
DuBois	John Luchini	Director of Finance & Business Service	jbl1@psu.edu
Erie	Randy Geering	Sr. Director of Business & Operations	rrg3@psu.edu
Fayette	Jason Bush ¹	Director of Finance & Business Service	qjb4@psu.edu
Great Valley	Maria Zuccato	Director of Finance & Business Service	mnz1@psu.edu
Greater Allegheny	Dave DeNardo	Director of Finance & Business Service	ddd92@psu.edu
Harrisburg	Chuck Garber	Interim Director of Business Services	cwg13@psu.edu
Hazleton	Michael Morrison	Director of Finance and Business Service	mjm87@psu.edu
Lehigh Valley	Helene Miksitz	Business Coordinator	hqm1@psu.edu
Mont Alto	Anne Miller	Director of Business Service	amc267@psu.edu
Schuylkill	Stephanie Wood	Director of Finance and Business Service	smw32@psu.edu
Shenango	William Dungee	Director of Finance & Business Service	whd10@psu.edu
Wilkes-Barre	Gary Beisel	Director of Business Service	geb4@psu.edu
Worthington Scranton	Gene Grogan	Director of Business Service	etg1@psu.edu
York	Holly Gumke	Director of Business Service	hlg4@psu.edu

¹ Jason Bush also serves as the Director of Finance & Business Service at Penn State New Kensington. He was asked to complete the survey only once, from the perspective of Penn State Fayette.

APPENDIX B Example of Educational Materials

Informational flyer recently provided by Waste Management for use at Penn State Erie



RECYCLE OFTEN. RECYCLE RIGHT.

WM.
WASTE MANAGEMENT

RECYCLE OFTEN:

Metal Cans

Steel, tin & aluminum soda, vegetable, fruit & tuna cans

Plastic Bottles & Containers #1-5 & 7

Natural and pigmented plastic narrow-neck containers. Milk bottles, water bottles, detergent bottles, shampoo bottles, bleach bottles, etc.

Paper

Brown paper bags, non-confidential, office paper, newspaper, magazines

Paper Cardboard, Dairy & Juice Containers

Food and beverage cartons such as milk, soup and broth. Lids must be removed

Flattened Cardboard & Paperboard

Corrugated cardboard, construction paper, Kraft paper, cereal boxes, shoeboxes or similar

RECYCLE RIGHT:

Things you can do to ensure quality material is recycled:

DO NOT INCLUDE: Food waste, plastic bags, or polystyrene foam cups & containers



**Survey of Waste Reduction and Materials Management Practices
at Penn State Commonwealth Campuses**

This survey is part of a larger effort to study the University's waste management practices and recommend measures for improving the efficacy and sustainability of how solid waste is managed throughout the University. An immediate objective of these efforts is to reduce the total amount of solid waste generated at Penn State as well as increase diversion rates of waste from landfills.

To help us better understand the complexities and individual challenges of managing waste across the University system, we request you complete this survey by:

Friday, August 24th

Your responses will automatically be saved and you may return to the survey using the link that was emailed to you. If you feel there is another person on your campus who could also provide valuable input on these topics, please contact Nathan Elser. Questions about the survey can also be directed to Nathan:

nce5000@psu.edu

(814) 865-9485

Thank you for your assistance in this important endeavor.

Phillip R. Melnick

Senior Director, Buildings and Grounds

Tom Richard

Director, Institutes of Energy and the Environment
Professor of Agricultural and Biological Engineering

What type of hauler does your campus utilize for transporting solid waste from campus?

- Private Company
- Municipal/County Service
- University Employees
- I don't know

Notes or comments related to waste transport:

Which of the following methods does your campus primarily employ for collecting standard recyclables (i.e., paper, plastic, glass, metals) in common areas?

- Single stream recycling (a single container for commingled recyclables)
- Dual stream (two separate containers for recyclables, e.g., one for paper and another for plastic, glass, and metals)
- Multi-stream recycling (multiple containers that further separate different types of materials)

Notes or comments related to recycling streams:

How is solid waste generally collected in buildings on your campus?

- Faculty/staff sort and dispose of their own waste in separate receptacles located in common areas of buildings
- Custodial services/Housekeeping collect waste from individual trash receptacles located in private offices and rooms
- Another method

Notes or comments related to waste collection:

Which of the following commonly recycled materials are widely collected on your campus?

	Yes, these are collected	No, these are <u>not</u> collected	I don't know
Plastic bottles, jugs, and jars 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plastic tubs and trays (i.e., miscellaneous plastic) 	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Yes, these are collected

No, these are not collected

I don't know

Plastics films, wraps, and bags



Aseptic cartons (such as for milk and juice)



Polystyrene packaging



Yes, these are collected

No, these are not collected

I don't know

Glass bottles and jars



Steel and aluminum containers



Yes, these are collected

No, these are not collected

I don't know

Office paper and junk mail



Newspapers, magazines, and softcover books



Hardcover textbooks



Yes, these are collected

No, these are not collected

I don't know

Spiral notebooks and course packets



Paperboard boxes and tubes



Yes, these are collected

No, these are not collected

I don't know

Corrugated cardboard



Electronics



Rechargeable batteries



Notes or comments related to materials accepted for recycling:

Are there any local ordinances or laws that regulate solid waste collection or recycling practices at your campus?

- Yes
- No
- I don't know

Notes or comments related to local regulations for managing solid waste:

* Item only presented if respondent selected "Yes" to compost program for Campus operations (below)

** Item only presented if respondent selected "Yes" to either type of compost program (below)

Does your campus have a formal collection program for organic/compostable materials (ex. food scraps, kitchen waste, paper napkins, landscaping debris, animal bedding, etc.) available to:

	Yes	No	I don't know
<u>Campus users?</u> (i.e., students, staff, faculty, visitors)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<u>Campus operations?</u> (ex. grounds maintenance, food services, event planning)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Which of the following materials generated from campus operations are widely collected for composting?

- Landscaping debris
- Back of the house kitchen waste
- Animal bedding and/or manure

** Is there a composting operation located on your campus?

- Yes
- No
- I don't know

Notes or comments related to collection of organic/compostable materials:

* Item only presented if respondent selected "Yes" to measuring waste diversion (below)

Does your campus measure the amount of waste diverted from landfill (i.e., materials recycled, composted, donated)?

- Yes
- No
- I don't know

* What was the most recent landfill diversion rate (as a percentage; may be approximate)?

Notes or comments related to landfill diversion:

Please briefly describe any educational efforts on your campus to promote recycling and waste reduction among University employees.

Please briefly describe any educational efforts on your campus to promote recycling and waste reduction among University students.

Has your campus implemented or considered implementing any of the following practices for reducing waste?

	Have implemented or intend to	Currently considering	Considered but decided not to	Not applicable to my campus	I don't know
Conduct waste audit(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Duplex printing default on University computers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduce serving sizes in dining facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trayless dining	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Offer discounts on beverages for reusable mugs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Have implemented or intend to	Currently considering	Considered but decided not to	Not applicable to my campus	I don't know
Provide reusable mugs or bottles to students and/or employees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Create student dining program offering reusable to-go containers for meals (ex. Green2Go)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Replace polystyrene (Styrofoam) take-out food containers with recyclable plastic and/or compostable containers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Have implemented or intend to	Currently considering	Considered but decided not to	Not applicable to my campus	I don't know
Install hand dryers in place of or as an alternative to paper towels in bathrooms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Donation program for unused foods (food bank, homeless shelter, community center, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Have implemented or intend to	Currently considering	Considered but decided not to	Not applicable to my campus	I don't know
Encourage events hosted on campus to be zero-waste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education campaign as part of new student or employee orientations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collect donations of unwanted items during student move-out for charity or resale (ex. Trash to Treasure)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please describe any other waste reduction practices that have been (or are in the process of being) implemented on your campus:

What, if any, barriers do you see preventing your campus from further engaging in solid waste reduction initiatives?

Where do you believe are the greatest opportunities for reducing solid waste on your campus?

How could the University best support solid waste reduction efforts on your campus?

Of the recycling and/or waste reduction efforts successfully employed at your campus, which do you feel are most transferable to other campuses?

APPENDIX D
Updates from 2019 Regional Sustainability Forums

The following chart comprises the Commonwealth Campuses’ waste efforts and progress reported at the 2019 Sustainability Regional Forums.

Northeastern Region		
Campus	Green Team, Committee	Programs/Progress
Scranton	Forming a Sustainability Council	<p>Single stream recycling saves \$1,900 annually 12% of solid waste recycled, producing 6.25 tons recyclables. With hydration stations, avoided 400,000 single use disposable water bottles annually. Adding 5 more stations this summer. Discount for refillable mugs. Biodegradable plastics to replace Styrofoam. SGA began giving out reusable cups, lids and straws. Wants to install dishwasher in kitchen but told that instead, they will use chemical sanitation.</p>
Schuylkill		<p>Used many reclaimed materials in on campus renovations, including student café. Eco coin to launch in the Fall</p>
Hazleton	Sustainability Committee	<p>Eco coin to launch in the Fall Residence Life put recycling information in 1st year student arrival packets Added recycling bins in all the offices – model for all the students. Designated bulletin board space in the Fall in dorms to share green tips Residence Life/Conduct/BTMT/Care Team has moved almost entirely to paperless productions Addition of recycling bins to all offices with an expectation model Continuing use of Green 2 Go containers Putting pressure on Housing and Food Services to stop the use of Styrofoam and move toward sustainable products SGA created a “sustainability chair” and a committee and next spring will promote educational programming</p>
Lehigh Valley	Sustainability Committee	<p>Want to install dishwasher, but not allowed by Food service. Eco coin to launch in the Fall</p>
Wilkes-Barre		<p>Waste Management Single Source Recycling Scrap Metal Recycling Eco coin to continue in the Fall Interested in composting.</p>

Southeastern Region

Campus	Green Team, Committee	Programs/Progress
Brandywine	Sustainability Committee	<p>Education regarding waste issues through Level 3 of Green Paws; prioritize the actions.</p> <p>On campus café implementing programs to reduce waste and promote healthy living</p> <p>Eco coin to launch in Fall</p> <p>Collaboration with Tyler Arboretum – change from plastic straws to paper.</p>
Mont Alto	Sustainability Committee	<p>Implemented recycling within all academic buildings</p> <p>Monthly tidbits about sustainability, including waste on building monitors</p> <p>Eco Coin to launch in Fall</p> <p>Career closet program repurposes clothing and aids students in preparation for interviewing.</p> <p>Launching Green Paws Program campuswide this fall.</p> <p>By next January: incorporating recycling games into NSO.</p>
York	None	<p>Continuing success with dishwashing in lieu of paper products in the Student Center</p> <p>Continuation of Campus single stream recycling</p> <p>Eco Coin to launch in Fall</p> <p>Dr. Robert Farrell, research faculty, eliminated organic solvents for RNA research and uses non-toxic kits instead.</p>
Great Valley	Green Team	<p>Launched Green Paws Certification Program</p> <p>Glass water dispensers being used vs. individual plastic bottles</p> <p>Switched to compostable flatware in on campus café</p> <p>Encouraging the reuse of building materials in construction</p> <p>Eco coin to launch in Fall</p>
Harrisburg	Forming a Sustainability Council	<p>Starting 3rd year of on campus special living option for students interested in sustainability</p> <p>Testing different materials for sustainable building renovations</p> <p>Evaluating waste materials to purify wastewater (using fruit peels)</p> <p>Eco coin to launch in Fall</p> <p>Interested in composting</p> <p>Hosts the Recycling Market Center on campus.</p>
Berks	Sustainability Team	<p>Sustainability Team hosted “Earthfest 2019”</p> <p>Not able to expand composting efforts/acknowledges recycling dilemma</p> <p>Describes waste reduction as “daunting and complex”-no staffing, complex, and time intensive logistics</p> <p>Hosts a website with sustainability information</p> <p>Students for Sustainability club began composting</p> <p>Challenge involving more faculty from different departments and divisions</p> <p>Eco Coin to launch in Fall</p> <p>Student engagement is good but turn-over due to graduation or transfer</p>

Western Region

Campus	Green Team, Committee	Programs/Progress
Abington	Sustainability Champion	Students and a few faculty held a meeting and want to focus on food waste and composting of food.
Beaver	Green Team	Community partnership with Shell (County recycling, wetlands baseline measurements)
New Kensington	No Specification	Shredding changed to Westmoreland Blind Association (materials are now recycled) Completed all 4 levels of Green Paws
Dubois	Sustainability Committee	Needs reorganization of Sustainability Committee Continuing Eco coin program Challenges with recycling management, strategic plan, funding and reorganization of the sustainability committee Goal to improve on campus composting efforts
Greater Allegheny	Green Team	On campus café has returned to metal-ware, reusable plates, and metal straws Continuation of green 2 go containers Experimented with Cupanion program Canvas bags made available for use at campus store Eco coin to launch in the Fall
Altoona	Sustainability Council	Continuation of Eco coin program Continuation of Green 2 Go containers
Behrend	Green Team	Reports challenges with STARS Eco coin to launch in the Fall
Fayette		Eco coin to launch in the Fall