

Harvard Recycling Update

Winter 2014-15 Issue

Harvard University Sustainability Plan: Towards Zero Waste

Waste reduction plays an essential role in the new Harvard Sustainability Plan, endorsed by deans from all faculties, staff green teams and student organizations and announced this October. A roadmap for building and operating a healthier, more sustainable campus community, the plan is organized around five core topics: emissions and energy, campus operations, nature and ecosystems, health and well-being, and culture and learning. The plan incorporates Harvard's existing goal to reduce campus greenhouse gas emissions by 30 percent below 2006 levels by 2016. Under "Campus Operations," the plan sets targets to reduce trash per capita by 50 percent by 2020 from a 2006 baseline, with a goal of becoming a zero waste campus; to reduce water use by 30 percent by 2020 from a 2006 baseline; and maintaining at least 75 percent of the campus' landscaped area organically by 2020. Here are some of Harvard Recycling's initiatives in support of the Sustainability Plan.

Progress toward Our Goal: The final Sustainability Strategic Plan adopted a goal of reducing per capita waste by 50% from the 2006 baseline year. This translates to 237 pounds per capita or less. Campuswide, the goal is to generate less than 4,550 tons by 2020. We are currently forecast to generate about 6,000 tons in FY15 ... putting us about 65% of the way to our goal.

Measurement Systems: Our vendor partner, Republic Services, has installed scales on all of the hauling trucks, including Harvard's mini-packers. Republic has also "geofenced" all of the locations where refuse is picked up on campus. Although technical challenges are still preventing Republic from recording weights for every location, we expect to have comprehensive weights going back to January 1, 2015 for the following schools: Business, Law, Medical, and Public Health. We expect Republic to have comprehensive data for all locations available before July 2015.

Online Reporting: Republic has created a Web Portal where data will be posted daily. The site is currently still in beta format. Republic expects to have accurate data available for all locations before July 2015, when we plan to make the site available to managers of all Harvard buildings.



REPs David Bicknell '15 and Remi Gosselin '18 display 8' tall Mount Trashmore, one day's trash from Harvard Yard. This was the 16th annual display. Before recycling and composting, Mount Trashmore would have been 50% taller.

Expanding student occupant engagement to waste reduction is a key strategy for reducing our trash. The Office for Sustainability's Resource Efficiency Program is an essential element of this process. Harvard Crimson Photo by Matthew Deshaw. Waste Audits: Harvard Recycling & Waste Services teamed with the Undergraduate Resource Efficiency Program (REP) and others to perform seven (7) Waste Audits this fall, including: the undergraduate houses & dormitories, Smith Campus Center (see photo below), 46 Blackstone Street, Peabody Terrace, Radcliffe Institute, the Law School and the Business School. These Audits revealed the opportunity for further recycling and waste reduction, with an average of 30% of the trash total consisting of recyclables or reusables. Results are shared with local building management and Green Teams who use the information to help drive behavior changes in occupants and building service staff. Six additional building Waste Audits are currently planned for the next six months.

Event Waste Mitigation: Harvard Recycling & Waste Services continues to organize and lead waste mitigation efforts at large scale events across campus. Highlights of the current academic year include: Football Gameday Recycling Challenge this fall, placing third nationally in the Waste Diversion category; Basketball Gameday Recycling Challenge on February 13th; and RecycleMania. (We are founding partners of the first two events and were the first campus outside Ohio to sign up for RecycleMania.)



Similar to trash generated at indoor public areas, outdoor litter barrels overflow with single-use cups and bottles. Please bring your reusable travel mug and refillable bottle on your commute to classes and to your lab or office!

	Fiscal Year (July-June) Per capita trash <i>target</i>	Total campus trash <i>target</i>
Baseline	2006	473 pounds	9,100 tons
Actual	2014	330 pounds	6,786 tons
	2015	310 pounds	6,000 tons
	2016	280 pounds	5,500 tons
	2017	260 pounds	5,000 tons
	2018	250 pounds	4,800 tons
	2019	240 pounds	4,600 tons
Goal	2020	235 pounds	4,500 tons

Objectives Year-by-Year

Our Compost Lady on TV: Andrea Lord picks up compost at Harvard for Republic Services,

following in the footsteps of her mother, Valerie Savage, who inaugurated our organics collection service in 1996 with Herb's Disposal. Andrea enjoyed a moment of fame 1-26-15 when David Robichaud of WBZ-TV, our Allston neighbor, broadcast a feature about her. With perfect hair and polished nails, she picked up food scraps from



the Business School's Spangler Center and the Law School's Wasserstein Hall, Caspersen Student Center, Clinical Wing Building. See 3:36 clip here:

http://boston.cbslocal.com/2015/01/23/robi-on-the-road-the-trash-lady-part-of-groundbreaking-waste-removal-family/

Photo by WBZ-TV

Smith Campus Center FreeCycle, 3-20-15

The Harvard Information Center will host our next FreeCycle this Friday, 3-20-15. Bring unwanted but reusable office supplies, computers & peripherals, books, clothing, tools, hardware, kitchen ware and any other reusables and swap with your colleagues. At the January FreeCycle, a lucky visitor scored an iPhone 5 when Rob Gogan set down his phone on a table next to printers to prune a large houseplant. We hope that the pickups from the upcoming event are all intentional! If you are interested in volunteering, please let us know.

Recyclable or Compostable "H-cup?"

The Keurig "K-cup" individually-brewed hot drink system offers a wide range of choices that have made the machines popular all over campus. However, the cups are neither recyclable nor compostable. Each used pod contains about 26 grams of wet grounds or tea leaves, plastic and aluminum foil. The company does offer composting for a fee through their "Grounds to Grow On" program:

https://www.groundstogrowon.com/keurig/learn-more.html

Another coffee service, Nespresso, offers compost collection to its customers at no extra cost. See their web link: http://www.nespresso.com/ecolaboration/us/en/article/9/3068/collecting-and-recycling-used-capsules-in-the-usa.html

A group of Harvard departments in the Smith Campus Center is interested in leveraging Harvard's buying power to make composting used coffee grounds and recycling packaging more widespread. Perhaps this could be a design project for GSD or SEAS to make the pods more sustainable. Please let us know if you are interested in participating in either designing a better cup, or in implementing compost systems for existing single-cup programs.

User frustrations with single-serve brewers prompted a cadre of Hollywood special effects videographers to make this spoof on the bad environmental effects of non-recyclable individual coffee cup brewers. Thanks to Grist for pointing out the link. See their funny but extremely violent video here:

https://www.youtube.com/watch?v=uRGiGbX9lIo



Waste Auditor Heroes

ABOVE LEFT: Waste auditors determined that 30% of Smith Campus Center trash could be recycled based on last fall's sample. From left, Sasha Schultz, Office for Sustainability; Rob Gogan, Recycling & Waste Services; Olivia Percy, OfS; Marija Featherman, Harvard Planning & Project Management; Chuck O'Brien, Commercial Real Estate; Diane Gray, Harvard Planning & Project Management; Kris Locke, OfS; Mark Verkennis, HPPM; Mike Kuchta; HPPM; Berley McKenna, Commercial Real Estate; and Amy Fater, HPPM.

ABOVE RIGHT: Amy Fater, Mike Kuchta, Mark Verkennis, and Diane Gray sort out trash into recyclables, compostables, reusables and residual trash. Both photos by Katharyn Hurd, HPPM.

Thanks Auditors! If you would like us to help arrange a Waste Audit of your building or department, please let us know. We have a detailed protocol that covers random selection of bags for the sample, custodial duties, volunteer duties, auditing precautions and data tracking methodology. The process is not for the faint-hearted, but it's surprisingly interesting and fun! Look at all those happy faces above.

Dining Services Feeds the Hungry

This fall, Harvard University Dining Services (HUDS) began scheduling daily pickups of surplus food to Food for Free, a Cambridge based non-profit. On a typical week, they recover 2,000 meals. HUDS has donated food to a variety of organizations for many years. When the Massachusetts Food Waste Ban outlawed disposal of food scraps state-wide, Food for Free expanded its collection schedule to capture servable food from restaurants and institutions. With more regular pickups, HUDS can send food that would have been composted to hungry people instead. Read more:

http://news.harvard.edu/gazette/story/2015/03/making-the-most-of-meals/

City of Cambridge Debates Free Checkout Bags

The Cambridge City Council is considering a proposal to ban free single-use bags at check-out counters. Discussions have focused on preventing plastic of less than 2.25 mils thickness and imposes a charge on all bags unless brought in by the consumer. For more details, read this blog from City Councillor Dennis Carlone. Thanks to Aryt Aresti for passing this along!

http://www.denniscarlone.org/plastic_bag_ban_amendments? utm_campaign=plasticbb3&utm_medium=email&utm_source=denniscarlone



Harvard leads Stanford in Waste Minimization

Through the first half of this year's RecycleMania, an eight-week inter-collegiate recycling competition among over 400 schools, Harvard leads Stanford in waste reduction and waste diversion. The Cardinals lead the Crimson in per capita recycling rate and they definitely lead in video challenges. As the photos on this page show, they also have better weath-

er! With apologies to Meghan Trainor, Sustainable Stanford teamed up with the Stanford Cheerleaders and Peninsula Hauling to produce "All About No Waste." The lyrics specifically state (without merit, so far) that Stanford beats Harvard at waste reduction. To see the video or check the current standings, see the two links below:

https://sustainable.stanford.edu/recyclemania

http://recyclemaniacs.org/scoreboard/current-results/competition-division



Winter Challenges

This winter's unprecedented snow and cold made February 2015 the hardest month for refuse collection in memory. See photos from around campus and nearby to see some of the difficulties faced by drivers this winter. The Boston Globe reports the difficulty trash and recycling trucks have had in negotiating local streets:

http://www.bostonglobe.com/metro/2015/02/27/snow-hampers-boston-trash-collection/uOIolqiCPBPQnzxcPnghFL/story.html

Left: Sorry, we couldn't pick up this recycling today... There was an 800-pound ice chunk fused to the lid of one barrel at the Student Activities Center.

Below: Capital Waste employees climb 5' snowbanks to access trash. Photos by Wendy Maeda, Boston Globe, 2-27-15





Good barrel access, visible and reachable from street



Sorry... no recycling pickup today. Inaccessible barrels obstructed by snowbanks make pickup



The photos below illustrate poor barrel set-out. If the collection driver can neither see nor access the barrels, he or she cannot pick them up. Custodial or Landscape staff needs to clear all the casters and shovel a path through the snowbanks so that the driver can see and access the barrels and containers. Note all the single-use beverage cups in the trash, now the #1 public area litter source. All photos by Rob Gogan unless noted.



What the public sees from the sidewalk...



...and what the driver sees from the street.



No clear casters here...driver cannot move the container to dump it.

Right: Even

though the shovelers made good access for residents who needed to discard their refuse, the driver could not access these containers due to the casters being iced in. Building staff or landscapers need to shovel out wheels so that containers can be moved to a safe tipping site out in the street.





Snowbank and parked car blocks trash truck turning radius.

Snowbanks and parked cars made access by Republic's large trash and recycling trucks impossible at many locations around campus. Thanks to Harvard Recycling's drivers and their smaller trucks, we were able at least to manually scoop out enough trash and recycling off the top so that buildings like Kittredge Hall could make it through the night without their trash overflowing. Harvard Recycling drivers Nelson Medeiros and Ed Bettencourt did double-duty, working long days on recycling and then picking up snow shovels to help Landscape cope with the snow. Ed and Nelson spent several nights on campus getting through the storms.



Until this snowbank melts, this dumpster can only be picked up by hand.



Republic's large trucks were forced off the road only twice during the snowfilled month of February 2015, when State Police banned travel. Thanks to driver Ryan Young for pulling the recycling through blizzard conditions! Note also clear access path dug through snowbanks in front of Eliot House's "E" entry on JFK Street. Thanks to Jason MacKay, Paul Smith, Joe Rebeiro and their hard-working team of landscapers who made every effort to provide good access for trash and recycling collection.





Conga line of twelve 10-wheeler dump trucks lumbers up North Harvard Street past Harvard Stadium towards Cambridge to remove snow. We sincerely hope some of the trucks are headed to snowbank-choked side streets which prevent us from collecting trash or recyclables safely and efficiently. Thanks, Cities of Boston and Cambridge, along with hundreds of contracted landscape truckers!



"Top 10 in the Bin" — What Recyclers Really Want

These 10 commodities are the ones we most need you to recover for SingleStream recycling at Harvard, at home and everywhere. If you don't see it on this list, please throw it into the trash! Industry groups collaborated with the US EPA's WasteWise program to identify the most easily recoverable items for which ready markets exist. Note item #10: plastic bottle caps should go on their empty bottles. Otherwise the small caps fall through the wires wrapped around the finished bales and the caps are discarded as trash.

Here at Harvard, we'd like to see much more of these four materials get recovered for recycling:

- 1. Boxes—Please flatten if possible.
- 2. Papers-Printed documents, stationery, all mail.
- 3. Cans—Aluminum or steel. Please drain residue.
- 4. Bottles—Plastic or glass. If plastic, please drain contents and re-cap.

LEVI'S KEEPS OLD JEANS CYCLING

When it bought the naming rights to the new stadium in Santa Clara, CA, Levi's Jeans called for fans to bring in old jeans to cover the field with donations for Goodwill Industries. Over 18,000 SF Giants and 49ers fans responded and volunteers created a "Field of (Recycled) Jeans" to celebrate. See more photos and video here:

http://mashable.com/2014/11/24/levis-field-of-jeans/





San Francisco bans plastic bottles: a green city gets greener! Single use shopping bags are already banned. Rob Gogan poses at left with public area compost, recycle and landfill barrels at Yerba Buena Gardens Park. The East Coast has a long way to go before it catches up to this City's extensive waste reduction, public area composting and recycling options.

http://ht.ly/JyUyY

SURPLUS FURNITURE and other items are available at our Recycling and Surplus Center in

Allston every Thursday at 156 Western Avenue from 11 AM - 2 PM. We are open until 2 PM but for best selection you need to come at or shortly before 11 AM, but not before 10 AM. We need to allow people who work in the building to find a place to park. At 11AM you may sign up for an appointment to "shop" in the warehouse. Harvard departments and non-profits may come on Mondays from 11-2. If donating furniture, please instruct your movers to contact us 24 hours before delivery < rob_gogan@harvard.edu > so that we can receive and display everything safely. We can take material only from Harvard buildings which use FMO Recycling & Waste Services, and we can never receive any trash or hazardous waste. Movers must unload items one at a time so we can photograph and inventory the goods. All loose items must be placed on shelves or in hampers available here.



SURPLUS INVENTORY NOW VIEWABLE ON LINE

Working with TradeGrouper.com, we have posted many surplus items on a special Harvard page. You can see photos of the goods, read a description including measurements, and reserve the item. We will hold it for one week to give you time to arrange transportation to pick it up. See screenshot above of some of the goods in our inventory. Link to TradeGrouper is below. Registration is free.

http://bit.ly/harvardsurplus

PROTECTING CONFIDENTIALITY: When donating file cabinets and desks, please unlock, open up and clean out all drawers. We cannot receive any furniture with unknown contents. Likewise, please make sure all computers, smart phones and other electronic devices are purged of any confidential information. Harvard Recycling does not shred or otherwise destroy any confidential materials we pick up or that are delivered to the recycling and surplus center. Thus it is the responsibility of the donor or recycler to make proper arrangements to protect confidential information. Please call us if you need extra recycling barrels or more pickups when cleaning out offices and furniture. Also, please ask us for contact information for confidential destruction vendors serving the campus. Our preferred vendor is DataShredder at 1-800-622-1808

Please keep in mind that parking space limitations force us to be STRICT ABOUT PARKING RULES. Please respect our neighbors' need to maintain safe traffic flow around the Recycling and Surplus Center. When here for Thursday's Surplus Distribution, follow the parking monitor's direction and park only in designated areas. You may also park in the free spaces in the streets adjacent to the property. If you are interested in seeing any of the items now available, come to our Recycling and Surplus Center at 156 Western Avenue, Allston. For directions, see map and text below. We may be able to deliver goods to Harvard departments for a small fee.

DIRECTIONS by the T, walking, biking or driving (see next page):

By the "T" then walk-- For GPS directions use "156 Western Avenue, Allston." Legal address is 28 Travis Street.

Take the Red Line to "Harvard" station up double escalators to main exit. Walk south on JFK St across Charles River, where road becomes N. Harvard Street. Walk past Harvard Stadium on right to first traffic light at Western Avenue. Turn left (east) onto Western, then walk one tenth of a mile past Flint Cleaners and Swiss Bakers. Just after the SwissBakers parking area is the driveway to 28 Travis.

By the "T" then bus: Leave Harvard Station by "Church St." exit. Walk north one block on Mass. Ave. (opposite traffic flow) across Garden St. to Dawes Island bus stop. Take either Bus 66 or Bus 86 and tell driver you want to get off at Western Ave in Allston. Sit on right side of bus and look for Harvard Stadium on right. Turn left (east) onto Western, then walk one tenth of a mile past Flint Cleaners and Swiss Bakers. Just after the SwissBakers parking area is the driveway to 28 Travis.



DIRECTIONS continued...

By the "T" then bus:

Leave Harvard Station by "Church St." exit. Walk north one block on Mass. Ave. (opposite traffic flow) across Garden St. to Dawes Island bus stop. Take either Bus 66 or Bus 86 and tell driver you want to get off at Western Ave. in Allston. Sit on right side of bus and look for Harvard Stadium on right. Turn left (east) onto Western, then walk one tenth of a mile past Flint Cleaners and Swiss Bakers. Just after the SwissBakers parking area is the driveway to 28 Travis.

By car—For GPS directions use "156 Western Avenue, Allston."

From I-90: take I-90 east (Mass. Pike) to exit 18, "Allston - Cambridge." Bear left after toll booth towards Allston, onto Cambridge Street. Take Cambridge Street to second light approx. one quarter mile to gas station on right. Go right just past gas station onto North Harvard Street. Take North Harvard Street one quarter mile to traffic light at intersection with Western Avenue. Turn right (east) onto Western, then go one tenth of a mile past Flint Cleaners and Swiss Bakers. Just after the SwissBakers parking area is the driveway to 28 Travis. Park in one of the "Visitor" spots.

From I-93: take I-93 to Charles Circle (Cambridge/Somerville exit). Get onto Storrow Drive westbound 3 miles. Look for "Allston/Harvard Square" exit. Go right up ramp to North Harvard St. and take a left. Go four tenths of a mile, past Stadium, to first traffic light. Turn left (east) onto Western Avenue, then go one tenth of a mile past Flint Cleaners and Swiss Bakers. Just after the SwissBakers parking area is the driveway to 28 Travis on the right. Park in one of the "Visitor" spots.

From Route 2/ Soldiers Field Road: get onto Soldiers Field Road. Go past athletic fields to exit sign: "Allston/ Harvard Square." Take right at top of ramp onto North Harvard Street. Go four tenths of a mile, past Stadium, to first traffic light. Turn left (east) onto Western Avenue, then go one tenth of a mile past Flint Cleaners and Swiss Bakers. Just after the SwissBakers parking area is the driveway to 28 Travis on the right. Park in one of the "Visitor" spots.

All delivery trucks-- For GPS directions use "114 Western Avenue, Allston."

Follow above directions for "By Car." Go to intersection of Western Ave and N. Harvard St, Allston and turn EAST on Western Avenue. Go .3 mi and turn RIGHT at the light onto Hague St opposite Harvard Business School. Bear RIGHT at dead end onto Rotterdam St. Go three tenths of a mile to driveway to 28 Travis. Follow signs past wooden fences to large white building. Go to Loading Dock C (first on right), Harvard Recycling and Surplus.









Recent donations: this table went from the Libraries to a Campus Services lunchroom; the refrigerators went from a Harvard University Housing residence to a halfway house in Fitchburg; the file organizers went from the Student Activities Center to a self-employed plumber setting up a home office; and the toaster oven went from SAC to a Campus Services break room. Thanks for donating and reusing!

HARVARD CAMPUS NATURE WATCH: Thanks to Campus Nature Watchers

Lydia Carmosino, Colin Durrant, Christine Gooding, Sonia Ketchian and Kevin Sheehan!



Watch this stunning Instagram slow motion video of a red-tailed hawk coming in for a landing high on the south side of the 10th floor of the Smith Campus Center. Thanks to Colin Durrant for passing this along! Thanks also to Christine Gooding of Public Affairs and Communication for filming the drama.

https://instagram.com/p/0Ayw45Oeap/? modal=true

RED-TAILED HAWK flies out of an oak tree by Grays Hall, carrying a bundle of twigs in its talons, and crosses Mass Ave towards Holyoke Center. [Building or refurbishing the same nest to which the hawk above is flying?]

On a pine tree outside Conant Lab, a DOWNY WOODPECKER hops vertically up and down the trunk... a BLUE JAY perches for a short rest... and on another day, a RED-TAILED HAWK alights, perches for a moment, then flies off with small prey clutched in its talons.

Flock of a dozen CEDAR WAXWINGS congregates high in maple tree branches outside a second story window at 46 Blackstone Street.

Small WHITE-BREASTED NUTHATCH, probably fledged last spring, flies into the WHITE OAK on the Sever side of Robinson Hall, looking for food to get it through its first frigid winter.

Loud peep claims the foraging territory of a YELLOW-BELLIED SAPSUCKER in the trees in front of Loeb House as it moves from tree to tree toward Lamont Library before flying off.

RIGHT: GRAY SQUIRREL pauses on a Cambridge recycling barrel beside the JFK Street bus stop in front of the Kennedy School of Government; the rodent nimbly rotates a ball of aluminum foil to gnaw off cheesy breakfast sandwich residue, providing a welcome distraction to commuters from their long, cold and sometimes unsuccessful waits for the 66 and 86 buses.



Below: Gray squirrels (or other rodents?) dig a long network of tunnels through the 4' snowbank surrounding the granite post & rail fence around Hemenway Gymnasium. Tunnels run at least 100 feet under the top rail. Note the leaping footprints in new-fallen snow atop the lower rail just below the tunnel entrance. Buried food scraps provide a mother lode of nutrition to snowbound squirrels, mice and Norway rats, who build extensive burrows through the snow. When the snowpack finally melts, there may be an increased population of well-fed scavengers scurrying throughout our campus. Please try to clean up debris exposed by melted snow to reduce rodent food.



Right: SNOW CAVE dug by Yardlings along the bank forming Pusey Library's earthen roof provides shelter from sub-zero temperatures. Snow penguins, snow turtles, and of course snow men and women sprouted from the Yard's February bounty.



Above: PAPER WASP NEST the size of a basketball lingers in a LONDON PLANE TREE opposite Weld Boathouse on Memorial Drive among abundant pendulous inflorescences, contrasting with the brilliant azure winter sky.





Male CARDINAL sings his glorious spring mating song atop WHITE OAK tree at Botanic Gardens. Back in the 1830's, when the Fernald Drive neighborhood really was the site of Harvard's Botanic Gardens, Professor Thomas Nuttall (curator of the Gardens at the time) reported the first cardinal seen in Massachusetts. The bird was probably an escaped songbird, as cardinals and other southern birds were sold in cages across northern states in that era. Now abundant, cardinals range as far north as Maine and New Brunswick.

A Seed Blows in Allston— The tragic collapse of the MONARCH BUTTERFLY can be traced to the loss of the MILKWEED across much of North America. It is cheering in a dark time to see that at least one campus milkweed pod is spread-

ing its seeds to the four winds. This seed was in The Grove in Allston across from 175 N. Harvard Street during the early snow-free part of the winter. This summer for the first time since 2000, not a single monarch was sighted on Harvard's campus. For an analysis of how agricultural processes and herbicide use may be causing the dramatic decline of the milk-weed, see here:



http://www.nytimes.com/2011/07/12/ science/12butterfly.html?pagewanted=all&_r=0

Three-foot thick blanket of snow and ice completely covers the Charles in front of Newell Boathouse... Tracks on the frozen river-scape tell a story rich in activity: small, prancing prints with thin lines (rats dragging their tails?) spread across the river from storm sewer outfall pipes by the base of the Larz Anderson Bridge... Small canine prints (fox?) lope from open water at the outfall by One Western Avenue to the next one upstream...Large canine prints (dog?) parallel cross-country ski tracks (human) downriver across the ice and snow...

Seeds from London Plane Trees peel off from pendulous inflorescences and disperse, floating on their pappuses to land across the snow surface of JFK Park beside JFK Street gateway to park; shadow shows park's cast iron perimeter fence.

