

Rob Gogan – Harvard University



Rob Gogan is Recycling and Waste Manager for Harvard University. He oversees waste reduction, surplus, recycling, composting and disposal for the campus. His goal is to partner with vendors, manufacturers, farmers and members of the University community to reduce per capita trash by 50% by 2020.



Antlion, the Zero Waste insect

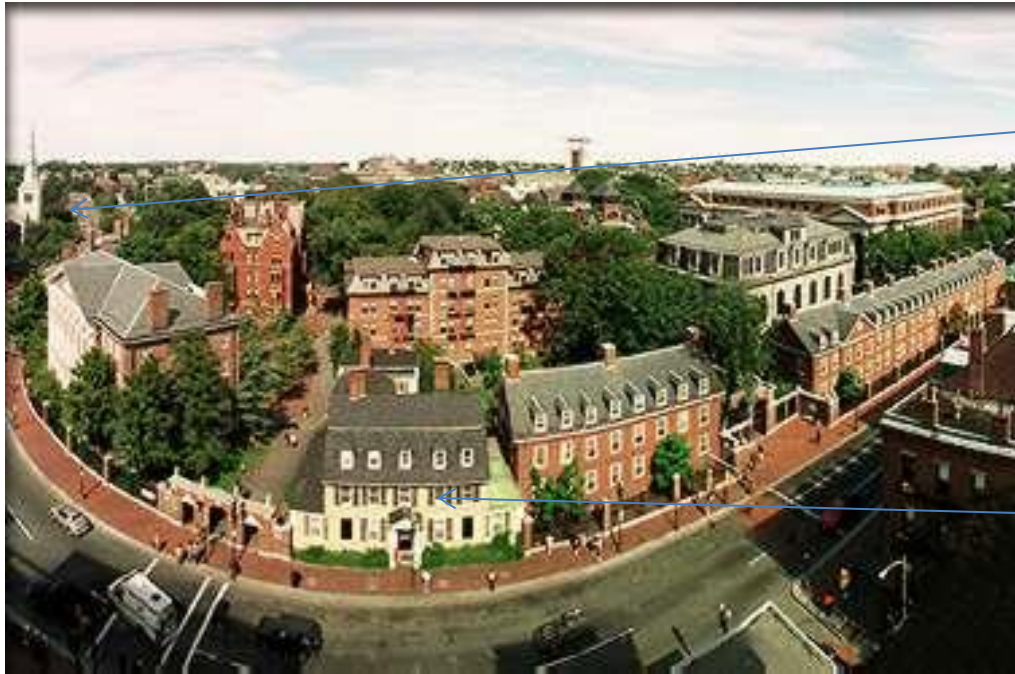


Benchmarking Waste Reduction

CURC Webinar, 12-10-15

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Continental Army troops
barracked here in 1775 &
recycled roof flashing into
bullets for the Battle of
Bunker Hill.

George
Washington slept
here.

- *"Every tub on its bottom" ethic of decentralization (FAS = 92 departments)
- *4,000 funds in Harvard endowment
- *Historic campus laid out on ox trails and Indian paths in 1636, first in Anglo America—no back alleys, few loading docks, few dumpsters allowable
- 500 buildings on 600 acres in Cambridge, Boston and Watertown
- Urban setting in most densely populated part of metro area of 3.5 million
- 25,062 FTE students + 16,114 FTE faculty and staff = 41,176 FTE population
- Built on Charles River flood plain with low elevation
- \$36 billion endowment 2014, biggest in U.S.

Harvard Campus Refuse, 2014

- Basic Recyclables: 26% 3,674 tons
- Composting: 24% 2,377 tons
- Other recycling: 8% 1,101 tons
- Landfill/incinerate: 49% 6,786 tons
- Total refuse 13,938 tons
- Per capita trash 330 pounds
- Per capita recycling 348 pounds
- Average per-meal waste, 2002: > 5 ounces
- Average per-meal waste, 2014: < 2 ounces

Importance of Waste Audits



Peabody Terrace Waste Audit	2 – 5 Feb. 2015	
(All weights are in grams)		
	Weight (g)	Percent
Recycling	21,336	35%
Compost	26,769	44%
Liquids	660	1%
Reusables	5,331	9%
Trash	6,715	12%
Bag total	60,811	

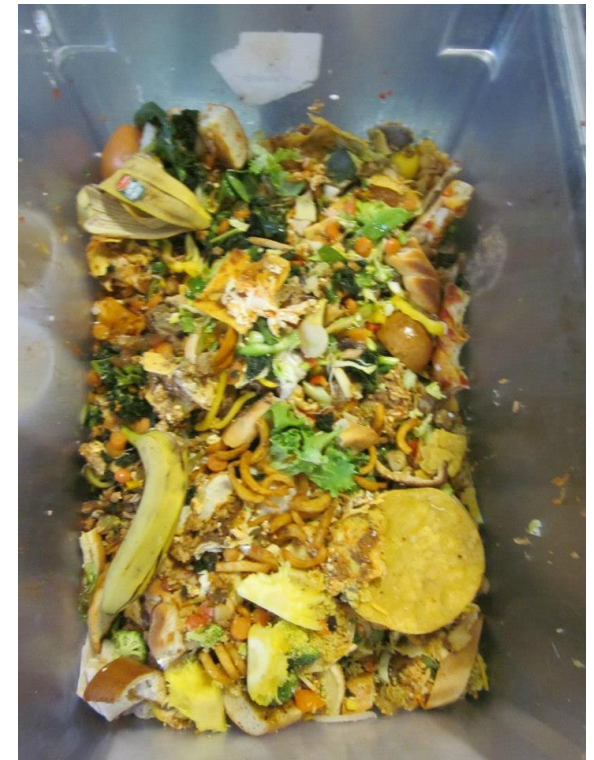


UCalifornia Santa Cruz food waste audit: measure edible food per plate

Also from UCSC: Making wasted edible food visible makes a powerful statement (and risks health code violation). Freshman waste over twice as much as upperclassmen.



Harvard students pledge to reuse mugs; plate food waste drops from 5 oz to <2 oz over five years



You can't measure the waste you prevented, but you CAN measure:

- Tons of trash/recycling/compost
- Cubic yards of trash/recycling/compost
- Bags, gallons or litres of trash/recycling/compost
- Characterization of trash/recycling/compost
- Weight per unit (e.g., edible food left on plate)
- Truckloads of trash/recycling/compost
- Amount of commodities procured (e.g., paper, mattresses, toner, cooking oil, tires, batteries, confidential shredding)

House Renewal

- Supply students with more energy efficient appliances nearby so they don't feel the need to buy their own mini-fridges and microwaves
- Provide enough upholstered furniture that students don't buy their own futons, coffee tables & chairs
- First year after House Renewal: Quincy House reusables donations down by 75%; decrease in trash
- Bonus: elevators, ramps, barrier free recycling
- LEED Platinum for Stone Hall



Count napkins used: 50% fewer napkins consumed by dispensing napkins on tables instead of at head of line





RecycleMania

Waste Reduction category determines which campus wins lowest refuse per capita. Campuses also pledge to take waste reduction actions.

Coming soon: ZeroMania!

- Campus buildings of similar type compete with other school's buildings
- All refuse streams weighed
- Diversion Rate category: What fraction of refuse is recycled or composted?
- Waste minimization: How much municipal solid waste landfilled or incinerated per usable square foot?
- Waste Audit Prize: lowest percentage of recyclables in random waste sample

...So this is how old John Harvard learns how to be green by measuring waste reduction.



Right Whale, official marine mammal of Massachusetts



Right Whale

THANK YOU

For more information

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