Food Waste Diversion Discussion / Analysis

Houston-Galveston Area Council

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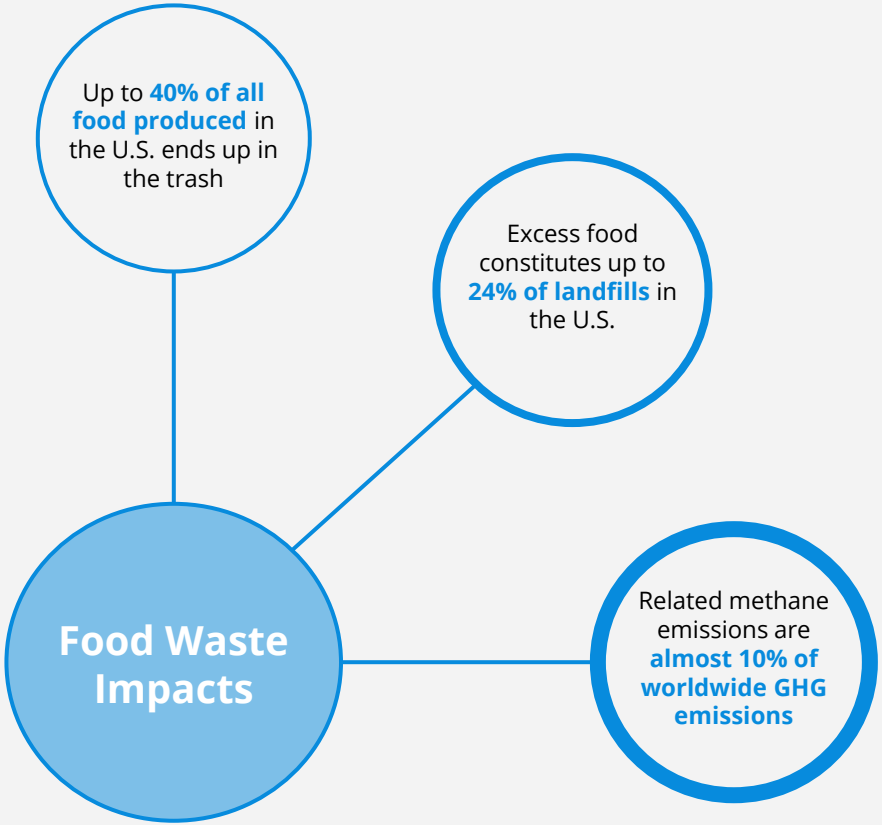
July 2024

Food waste is as plentiful as it is harmful, with an **estimated 66 million tons annually in the U.S.**



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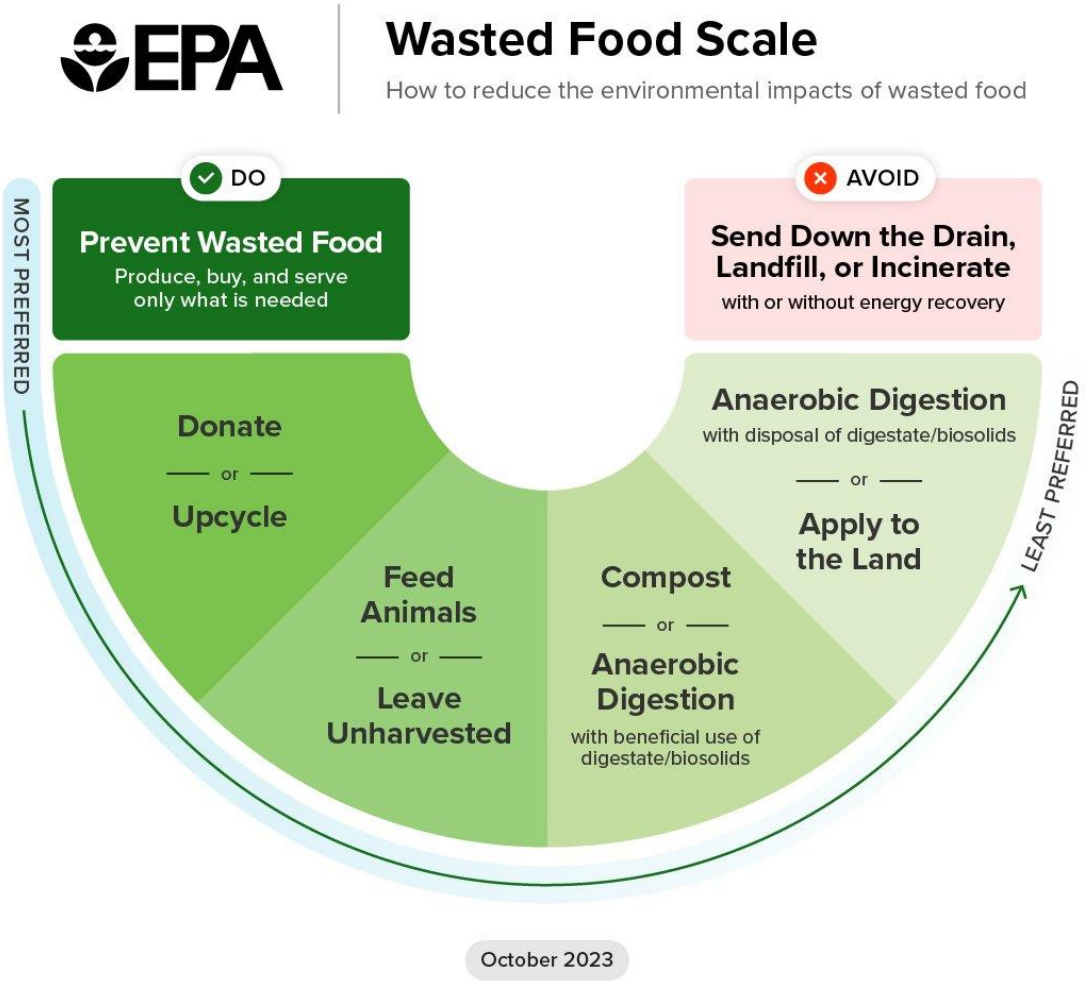
Groupings of 11 different pathways for food waste



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Other Key EPA Conclusions

- Source **reduction, donation and upcycling are the most environmentally preferable pathways** because they can displace additional food production.
- The benefits of pathways beyond source reduction, donation, and upcycling are small relative to the environmental impacts of food production; thus, **they can do little to offset the environmental impacts of food production**.
- Sewer/wastewater treatment (i.e., sending wasted food “down the drain”) and landfilling **stand out for their sizeable methane emissions**.
- All wasted food pathways other than landfill and sewer/wastewater treatment **demonstrate beneficial or near neutral global warming potential**.
- Recycling wasted food into soil amendments offers opportunities **to make long-term improvements in soil structure and health and help regenerate ecosystems by recovering nitrogen and carbon and returning them to the soil**.
- As the U.S. becomes less dependent on fossil fuels for energy, the **environmental value of producing energy from wasted food will decrease**.

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City of Houston's Long-Range Plan 2022

Figure 8-12 – Organics Program Implementation Schedule

Organics Program	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Collection of Organics (O-1)																					
Brush Collection (O-2)																					
Biosolids Composting (O-3)																					
Expand Master Composter Program (0-4)				Element of expanded public information program																	
Support Efforts Related to Food Waste Reuse (0-5)																					
Lead by Example By Using Compost in City Projects (0-6)																					
Encourage Use of Compost outside City Projects (0-7)																					
Encourage Development of Additional Capacity (O-8)																					
Enforce Current Ordinance on Grass Clippings (0-9)				Tied to Recycing Enforcement Program																	
Increase Number of Depositories for Organics (0-10)									Refer to R-4												
Collect Residential Food Watse in Third Cart (0-11)																					
Monitor New Organics Processing Technology (0-12)			Include as a Task Force of Implementation Committee																		

[Click here for plan document]

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COH Waste Stream Analysis -
Resource Recovery Implementation Program

Table 2-10 Estimated Quantities of Waste Materials by Type (City of Houston 2020)			
Material	% of Waste Stream	Tons / Year	Tons / Day
Paper and Paperboard	23%	981,746	2,690
Glass	4%	178,461	489
Metals	9%	373,106	1,022
Plastics	12%	519,623	1,424
Yard Trimmings	12%	515,789	1,413
Food	22%	919,562	2,519
Wood	6%	263,645	722
Rubber and Leather	3%	133,313	365
Textiles	6%	248,312	680
Other	2%	66,444	182
			-
Total	**100**	**4,200,000**	**11,507**

Sources of Waste Generation in Houston

Current Composting Infrastructure

Table B-5 Organics and Capacity of Major Facilities			
		Throughput (Tons/yr)	Capacity (Tons/yr)
In Houston			
	Living Earth/Letco (7 sites)		375,000
	The Ground Up		100,000
	Lone Star Disposal		5,000
	Farm Dirt Compost		1,000
	Total In Houston	**>235,000**	**481,000**
Outside Houston			
	New Earth (2 sites)		350,000
	Nature's Way		50,000
	Living Earth/LETCO (7 sites)		375,000
	WMI Coastal Plains		40,000
	Don Tal		NA
	Kirsch		NA
	Total Outside Houston	**>613,500**	**>815,000**

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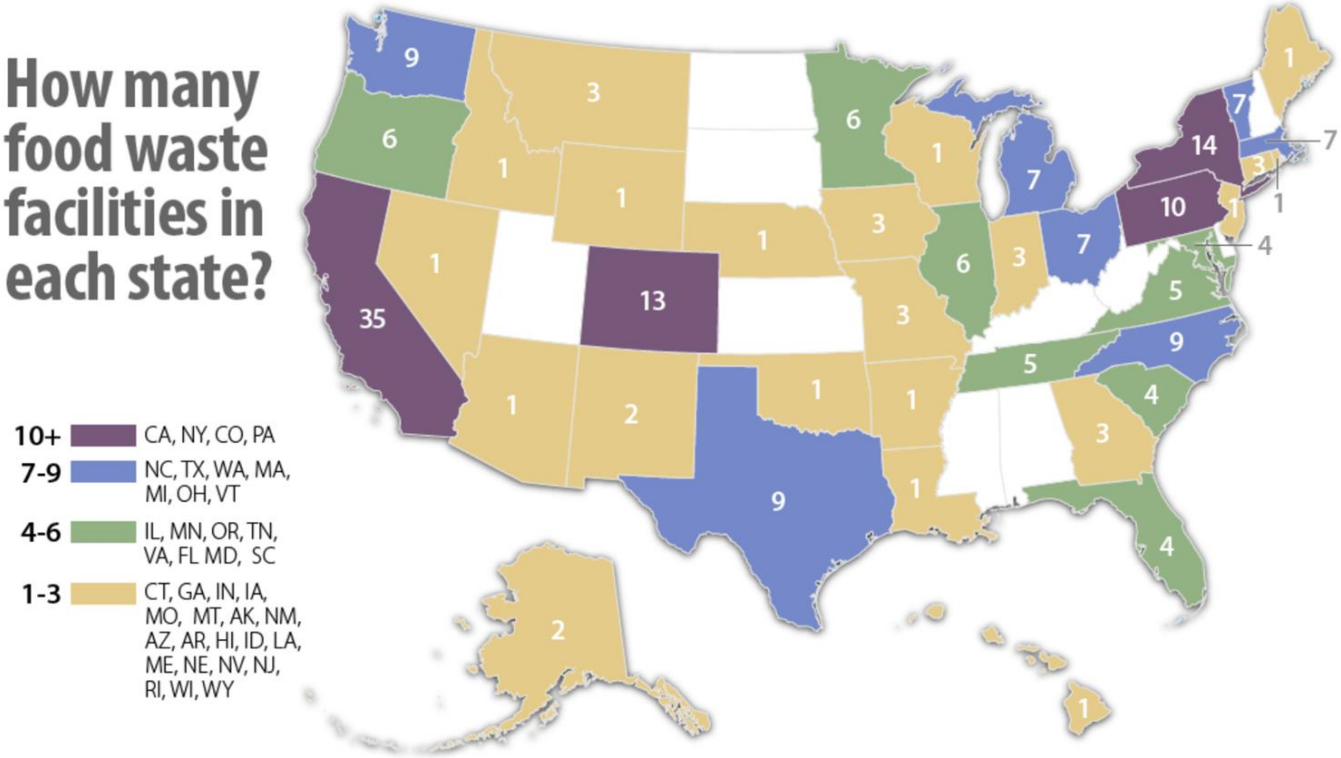
National Composting Infrastructure - Food Waste



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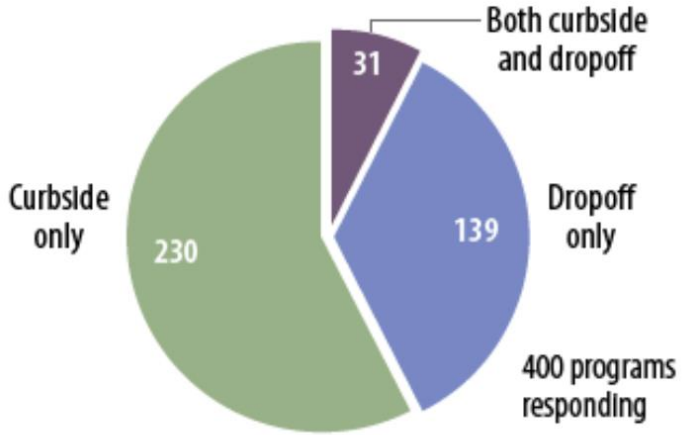
Source

Food Waste Diversion Program Availability - 14.9 million American households

- **Curbside Only**: 230 programs, 321 communities, 8.2 million households with access
- **Drop-Off Only**: 139 programs, 357 communities, 5.1 million households with access
- **Curbside + Drop-Off**: 31 programs, 32 communities, 1.8 million households with access



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Source

Tools available to state & local governments

➔ Organic Waste Bans

➔ Food Donation Requirements

➔ Mandatory Reporting Laws

➔ Disposal Surcharge Fees

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Source

Available Tools - Focus on bans

➔ Organic Waste Bans

- **SB1383 in California is a mixed bag to date**
- **Contamination rates (15 - 20%)**
- **Poor quality compost / stress to infrastructure**
- **Apparent disconnect between regulatory goals and experience on the ground**

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Available Tools - Focus on surcharge

➔ Disposal Surcharge Fees

- Creates space for innovation
- Commit funds to food waste prevention / diversion efforts
- Invest funds into local communities

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You can’t change, what you can’t measure

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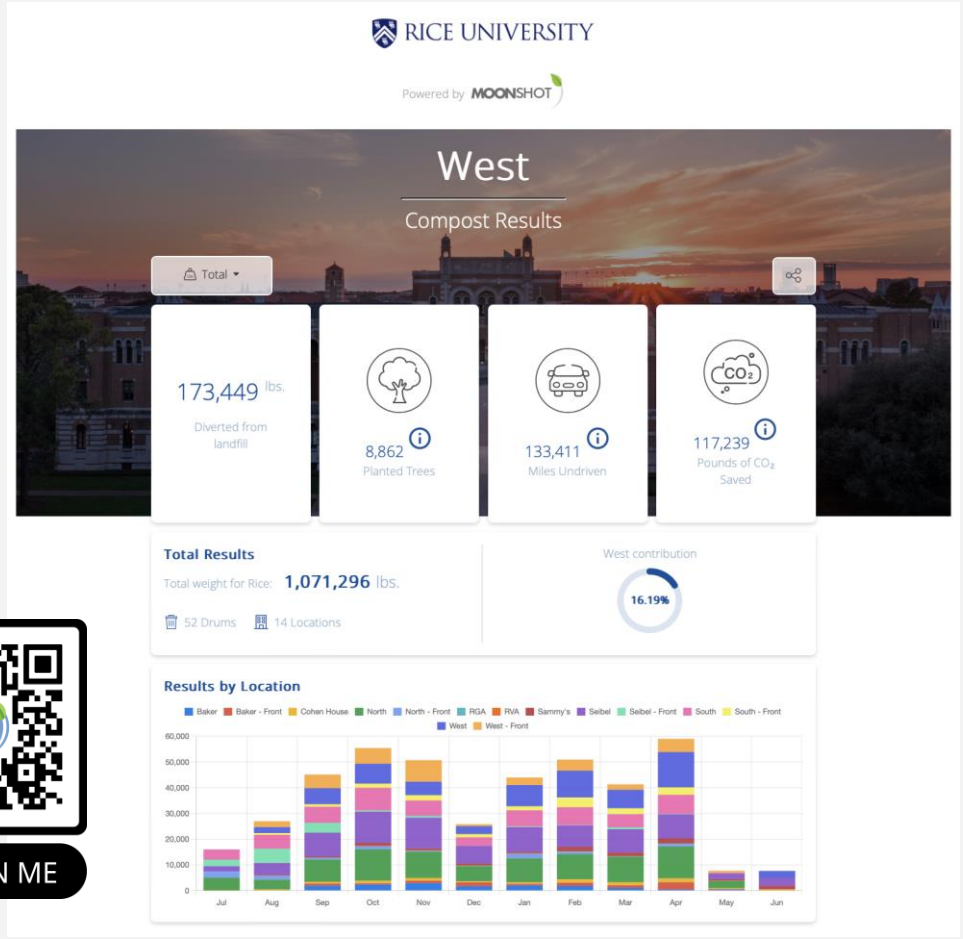
Data by location



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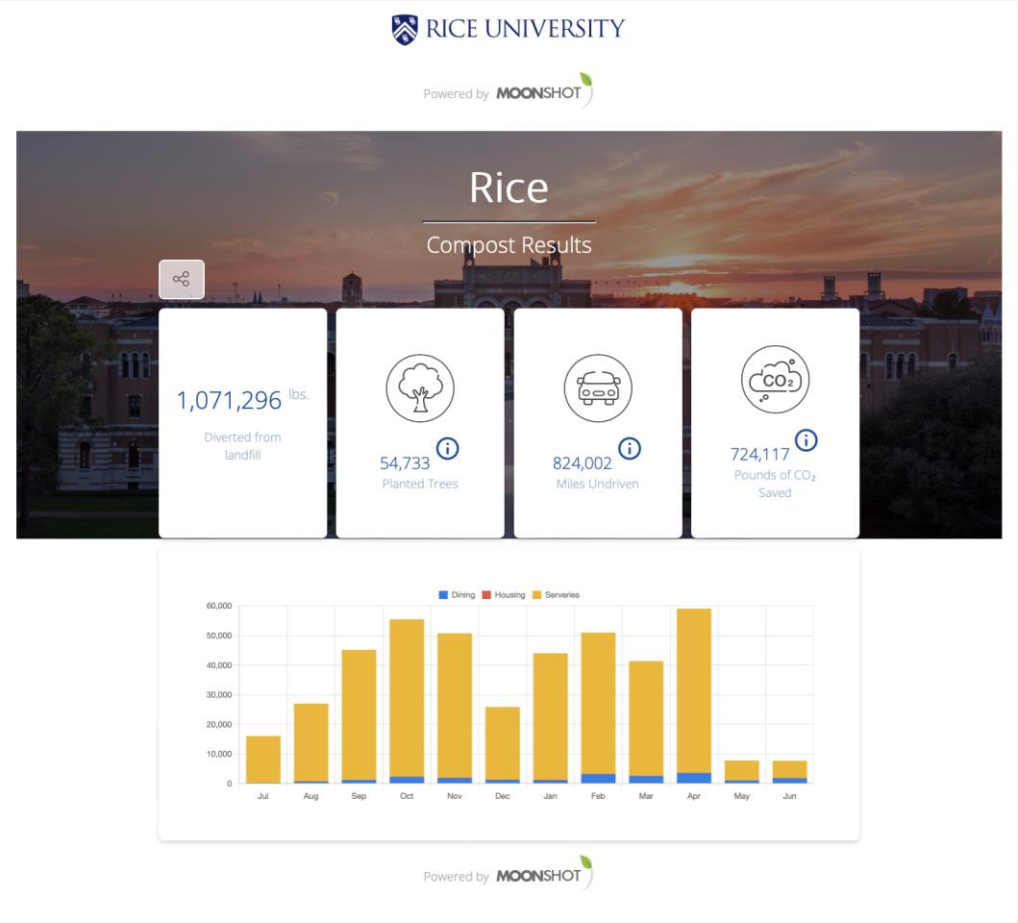
Data by organization



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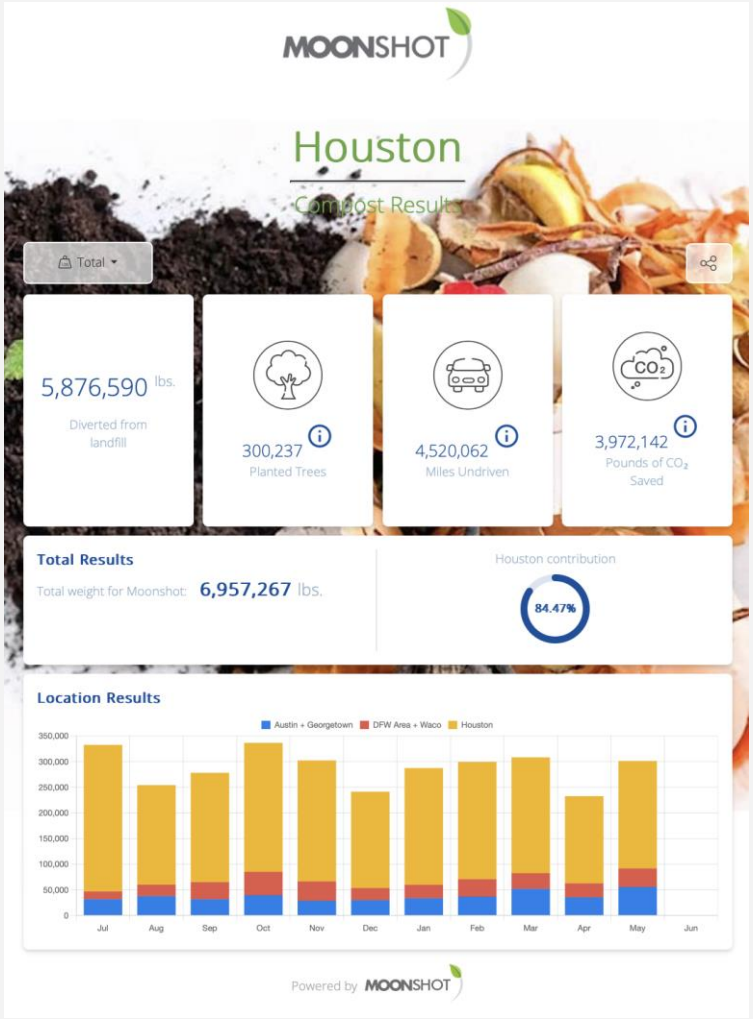
Data by city



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