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Tackling Food Waste Through Prevention and Recycling Laws

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Introduction: Our Food Waste Crisis

Almost [40% of the food produced](#) in the U.S. each year isn't eaten. The vast majority of that uneaten food – roughly [80 million tons](#) per year – ends up as waste. That's 80 million tons of food waste [producing methane](#) in landfills, burning in [climate-damaging incinerators](#), rotting in fields, and ending up as [toxic sewage sludge](#).

Food waste is a significant contributor to the waste crisis – and the climate crisis. It makes up almost 25% of all the trash we bury and burn each year. Meanwhile, millions of people in the U.S. [struggle with food insecurity](#).

We produce more than enough food to feed everyone. But we don't have good systems in place to help food reach those who need

it most, and keep the rest out of landfills, incinerators, and sewers. It is all too easy to just throw food into the trash or the garbage disposal. Disposal-oriented waste management models have made landfilling and incineration the status quo. And it can be challenging to find services that donate excess edible food to those in need, or that collect and compost food waste.

[Food Waste Prevention and Recycling Laws](#) are one of our best solutions to address these overlapping problems. Whether in the form of state legislation or local ordinances, these laws help reduce food waste, increase the amount of excess edible food that is donated, and bolster food waste recycling programs like composting.

CONSEQUENCES OF FOOD WASTE

SOCIAL

According to the U.S. Department of Agriculture, [one in ten Americans](#) – or about 38 million people, including 12 million children – are food insecure. Much of the food that we throw out is still perfectly good and safe for consumption and can be used to help feed those in need.

ECONOMIC

Wasted food in the U.S. has an estimated aggregate value of [\\$240 billion annually](#). This costs the average U.S. household about [\\$1,866 per year](#). Meanwhile, the average grocery store in the U.S. throws out between [\\$5,000 and \\$10,000](#) worth of food each week.

ENVIRONMENTAL

Food waste accounts for [8% of global greenhouse gas emissions](#). In the U.S. the carbon footprint of food waste is [greater than the entire airline industry](#).

SOURCES OF EMISSIONS



Growing, harvesting, processing, and transporting food that will eventually go to waste.



Methane production from the breakdown of food waste in landfills. Methane is a climate-damaging greenhouse gas that is 28 times as potent as carbon dioxide.



Burning carbon-rich food waste in trash incinerators.

Overview

At their best, Food Waste Prevention and Recycling Laws progressively ban all food waste from disposal in landfills and incinerators. Businesses, institutions, and eventually households are required to find more sustainable ways to avoid food waste and manage the waste they create. Initially, the ban only applies to large generators of food waste – usually those that generate two tons of food waste or more per week like food processing facilities, large grocery stores, universities, hospitals, and prisons.

Next, the ban expands to include businesses and institutions that generate one ton of food waste or more per week. This generally includes larger restaurants and smaller food service businesses, institutions, and grocery stores. After that, the threshold is lowered to those who produce at least half-a-ton of food waste per week. Eventually, the ban applies to individuals and households.

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A Pathway to Zero Waste

One of the most important aspects of these laws is that the ban is slowly phased in over a period of several years. Right now, most states don't have the necessary collection, hauling, donation, and recycling infrastructure.

The first phase of the ban, which only applies to businesses and institutions that generate an enormous amount of food waste (two tons or more per week) creates a relatively small class of large generators that must find alternative methods for managing the food waste they generate. Starting with a small class of large generators makes collection, hauling, and management simpler. Food banks and pantries can work with large generators to arrange the logistics of donations. Similarly, hauling costs are often the biggest barriers to entry when it comes to [composting](#) programs. Hauling large volumes of food waste from centralized locations is simpler and more economical than hauling small amounts of waste from more locations.

A clear phased-in schedule set in law helps generators and recyclers prepare and plan for each phase of implementation. Maryland

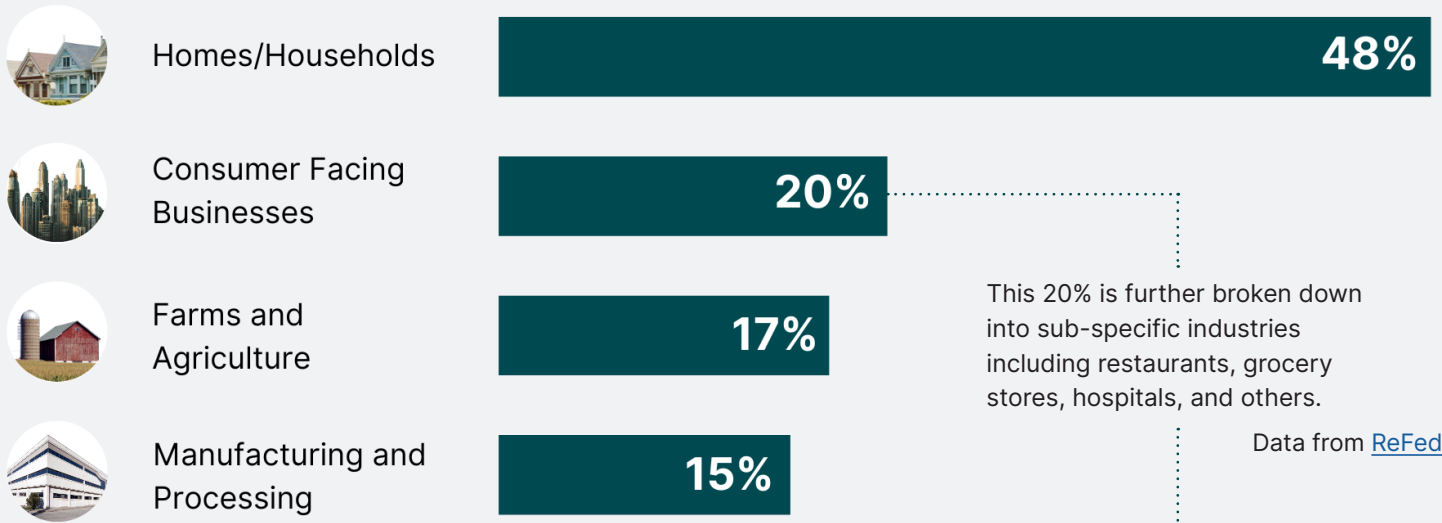
provides an example of this in action. Maryland passed its food waste prevention and recycling law in 2021. The law currently only applies to businesses and institutions that generate at least two tons of food waste per week and are located within 30 miles of an organics recycling facility. However, beginning in 2024, the threshold drops to 1 ton of food waste per week.

[The Compost Crew](#), Maryland's largest food waste collection and compost company has rapidly expanded due to the law. In 2022, the company [doubled its annual volume of food scraps](#) and increased the total number of businesses and residents it services to over 8,500. [The law is largely credited with fueling the expansion](#). To prepare for the next wave of implementation, the company recently secured [5.5 million in funding to expand its operations](#).

These laws create a market that allows for the expansion of existing businesses and the development of new ones that specialize in food donations and food waste recycling. All while keeping valuable material out of landfills.

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Where Does Food Waste Come From?

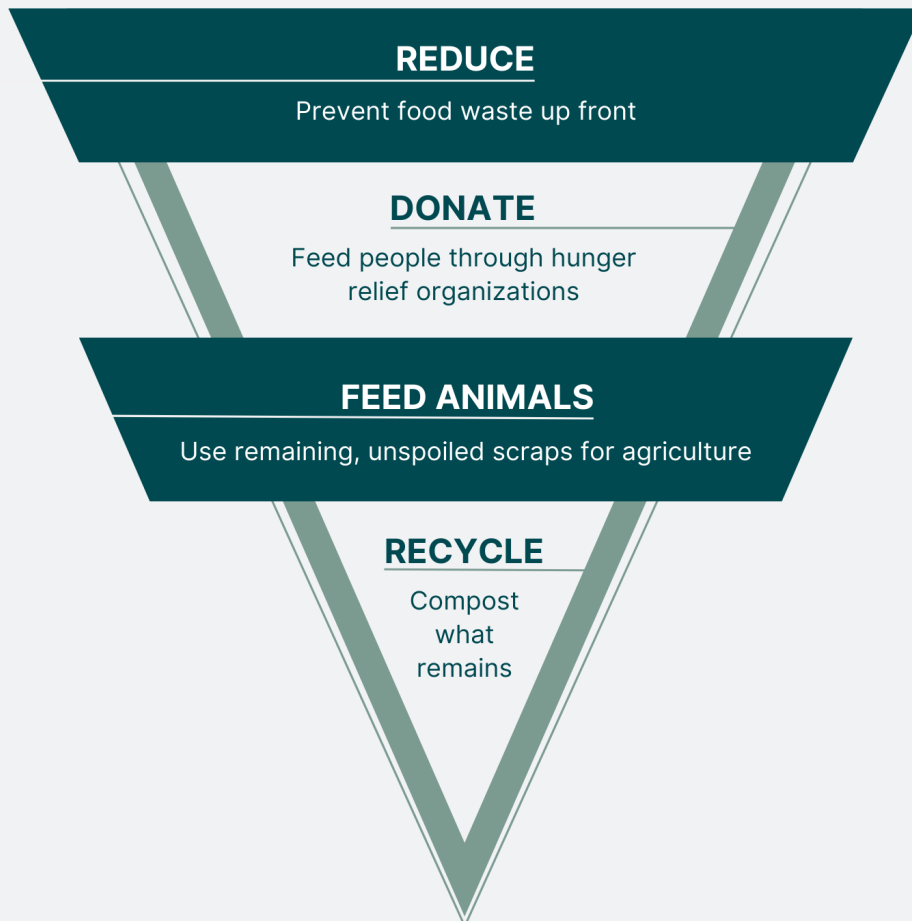


This 20% is further broken down into sub-specific industries including restaurants, grocery stores, hospitals, and others.

Data from [ReFed](#)

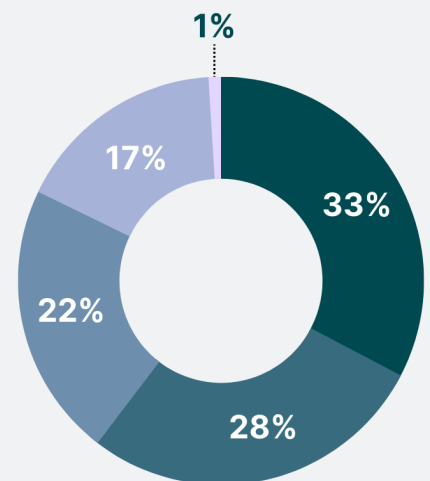
Empowering Better Management

The best laws don't just ban food from being thrown away. They also create a structure that shows businesses, institutions, and individuals how these materials should be managed.



Breakdown of Food Waste from Consumer Facing Businesses

- Full-Service Restaurants
- Retail (grocery stores)
- Other Food Service*
- Limited-Service Restaurants
- Other



*Other Food Service includes healthcare, assisted living, military, and more.

Data from [ReFed](#)

Current Landscape of Food Waste Prevention and Recycling Laws

Currently, eight states have enacted Food Waste Prevention and Recycling Laws.

| STATE | YEAR POLICY WAS ENACTED | THRESHOLD |
|--------------------------------------|-------------------------|--|
| <u>California</u> | 2014 | Businesses that generate at least two cubic yards of organic waste per week. |
| <u>Connecticut</u> | 2011 | Businesses and institutions that (1) generate at least half a ton of food waste per week, and (2) are located within 20 miles of an organics recycling facility. |
| <u>Massachusetts</u> | 2014 | All businesses and institutions that generate at least half a ton of food waste per week. |
| <u>Maryland</u> | 2021 | Currently – Businesses and institutions that (1) generate at least two tons of food waste per week, and (2) are located within 30 miles of an organics recycling facility. Beginning Jan. 1, 2024 – Businesses and institutions that (1) generate at least one ton of food waste per week, and (2) are located within 30 miles of an organics recycling facility. |
| <u>New Jersey</u> | 2020 | All businesses and institutions that (1) generate at least one ton of food waste per week, and (2) are located within 25 miles of an organics recycling facility. |
| <u>New York</u> | 2021 | All businesses and institutions that (1) generate one ton of food waste per week, and (2) are located within 25 miles of an organics recycling facility. |
| <u>Rhode Island</u> | 2014 | All businesses and institutions that (1) generate at least one ton of food waste per week, and (2) are located within 15 miles of an organics recycling facility. |
| <u>Vermont</u> | 2012 | Any person that generates any amount of food waste. This includes individuals and households. This is not strictly enforced at the individual level. |

Current Landscape of Food Waste Prevention and Recycling Laws

And, several high-profile cities across the country also passed similar laws at the local level.

| CITY/TOWN | DATE ENACTED | SUMMARY |
|--|--------------|---|
| <u>Austin, Texas</u> | 2017 | All food permitted businesses are prohibited from sending organic waste – including food waste – to landfills or incinerators. Instead, they must either donate extra food to shelters, send food scraps to animal farms, or compost it. |
| <u>Boulder, Colorado</u> | 2015 | All individuals are required to separate and recycle household organic waste. All property owners and businesses are required to subscribe to appropriate organic waste collection services and provide proper containers to residents for disposing of compostable materials. |
| <u>New York City</u> | 2023 | New York City requires mandatory composting throughout the city. The residential mandate will roll out borough by borough starting with Brooklyn and Queens in Oct. 2023, followed by the Bronx and Staten Island in March 2024. Followed by Manhattan in Oct. 2024. |
| <u>Portland, Oregon</u> | 2018 | Currently – All businesses that generate at least half a ton of food waste per week. October 2023 – All businesses that generate at least a quarter ton of food waste per week. October 2024 – All businesses that generate at least an eighth of a ton of food waste per week. |
| <u>San Francisco, California</u> | 2009 | All individuals must separate food scraps from all other household waste and manage it through an organic recycling service. |
| <u>Seattle, Washington</u> | 2015 | Prohibits individuals and businesses from disposing of food waste. Instead, food should be donated or recycled. |

Other State Policies

While Food Waste Prevention and Recycling Laws are by far the most prevalent kind of policy when it comes to reducing and addressing food waste, there are other, similar approaches.

For instance, in addition to its reduction and recycling law, [California](#) also requires all municipalities to provide organic waste collection services to all residents and businesses. This is part of California's commitment to diverting 75% of food waste generated in the state from disposal by 2025. California has also set the goal of capturing at least 20% of all excess edible food for hunger relief purposes.

Washington has taken a similar approach. In 2022, [Washington](#) passed a law requiring the state to reduce organic waste disposal by 75% by 2030. To accomplish this, beginning in 2024 businesses that generate at least

eight cubic yards of weekly organic waste will be required to have on-site management or collection services in place. The threshold drops each year until 2027 when local governments will also have to offer a collection service.

Food Waste Prevention and Recycling Laws Have Been Extremely Successful

Overall, these laws have succeeded at reducing food waste, alleviating hunger, and strengthening composting and aerobic digestion programs. The laws have helped keep a tremendous amount of food waste out of landfills. Additionally, they've spurred investment into organics recycling programs, increased the amount of food that is donated to hunger relief organizations, helped feed livestock, and provided a clean stream of compost that can be used to grow healthy plants and food.



Massachusetts Case Study

Between 2014 and 2022, Massachusetts lowered its threshold from applying to businesses and institutions that generated one ton of food waste per week to those that generate half-a-ton per week.

Massachusetts' program increased the annual food waste diversion tonnage from a baseline of 100,000 tons prior to implementation to 320,000 tons in 2020. At the same time, food rescue of fresh and perishable foods grew by more than 50%. Meanwhile the number of businesses separating food scraps from disposal has increased from 1,350 in 2014 to 3,200 in 2020. This expansion has dramatically increased the state's capacity to manage food waste through recycling programs.

The program has also boosted economic growth by \$175 million and created over 900 jobs.



Vermont Case Study

Vermont is currently the only state in the country that has a Food Waste Prevention and Recycling Law that applies to everyone. Through a slow, steady, and consistent phase-in between 2012 and 2020, Vermont created the most successful program in the country. The results speak for themselves:

1. Hauling – In 2012, only 12 companies in Vermont offered residential food waste hauling services. In 2021, the number was [up to 45](#).
2. Food Donations – Between 2014 and 2017 (the first phases of implementation), [donations to the Vermont Foodbank nearly tripled](#). This growth continued during the later stages, with [donations doubling between 2017 and 2019](#).
3. Diversion – Reports show that, after the law was fully implemented, [71% of all food waste](#) generated in Vermont was being donated or recycled.

A Model Policy – Building on Success and Learning from Mistakes

Thoughtful, expansive, and phased-in Food Waste Prevention and Recycling Laws can help make food waste a thing of the past. Edible food will be kept where it should be – on tables. Inedible food will be [composted](#) to create healthy fertilizers that will store carbon and enrich and replenish our farmlands and soils. But, as with all laws, the details matter.

Don't Limit the Scope

Several of the existing Food Waste Prevention and Recycling laws only apply to very large generators of food waste. And some of the laws only require large generators to comply if they are located near a compost or anaerobic digestion facility. These limitations can mean that any initial [impact is followed by stagnation](#). The lack of a clear, predictable timeframe for if, and when, the law will be expanded to include more generators results in lack of certainty. This limits the likelihood that organic recyclers will invest money to expand their operations. We don't limit who has to recycle paper, glass, aluminum, and

plastics to large generators or those that live near recycling facilities. We shouldn't apply these limitations on organics recycling.

Add Protections to Avoid Contamination

Many existing laws don't have protections in place to make sure that the food waste that is composted will be free of contamination. But just like with "traditional" recycling, the earlier you separate out the targeted material from all other waste, the better the system functions. This is called source separation.

If not properly separated, inorganic material – mostly food packaging like containers, bags, produce stickers, and wraps – [can contaminate the resulting compost](#). This creates operational problems for organics [recycling facilities](#) who are stuck trying to remove all this contamination. To address this, the best Food Waste Prevention and Recycling Laws require all generators to separate food waste from all other forms of inorganic solid waste, including food packaging, at the point

A Model Policy – Building on Success and Learning from Mistakes

of generation. Additionally, these laws also have robust education components that focus on explaining what material is compostable, and what isn't.

Prohibiting Co-Digestion of Sewage Sludge with Food Scraps

Some states allow food waste to be mixed with other materials when composted or anaerobically digested. A common example is processing food waste with industrial sludge from wastewater treatment plants to create fertilizer.

Wastewater treatment plants are pollution sinks. These facilities treat industrial and household waste, stormwater, landfill leachate, and sewage. As a result, the sludge created from the treatment processes is full of an array of harmful toxic compounds. This includes [per-and-polyfluoroalkyl substances \(PFAS\)](#), a highly toxic class of chemicals that have serious environmental and public health

impacts. In many states, sewage sludge is processed to create fertilizer, which is then spread on farmlands. Some states even mix sludge with food waste to create compost. To protect the value of food waste and ensure that it is used to create a clean, healthy, and toxic-free fertilizer, Food Waste Prevention and Recycling laws should prohibit mixing food waste with [industrial and wastewater treatment plant sludge](#).

The Best of All Worlds

To help states implement the strongest and most effective policy possible, Just Zero has created a [Model Food Waste Prevention and Recycling Law](#) that can be introduced at the state or local level. We've studied existing policies to determine what is working and what is limiting the success of these laws to create a policy that will result in the strongest benefits for our environment and our communities.

Conclusion

To address food insecurity, improve soil quality, and fight climate change, we need to make food waste a thing of the past. Food is simply too valuable of a resource to waste away in a landfill or burn in an incinerator. Food Waste Prevention and Recycling Laws provide a comprehensive framework that will reduce food waste, alleviate hunger, and develop and expand food waste recycling programs and infrastructure.



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