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“Prevent. Donate. Compost.”

A Review of Policies to Reduce Food Waste and Recommendations for Future Efforts

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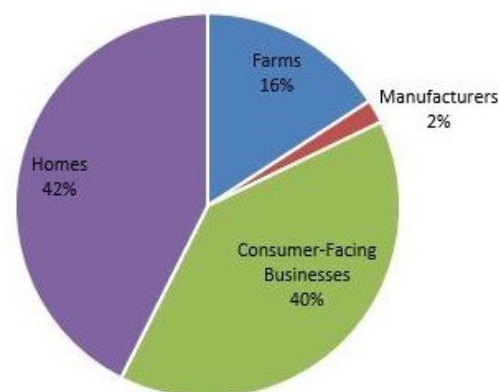
Executive Summary: The prevalence of food waste around the globe indicates a widespread challenge to balance food production and distribution with the demands of consumers.¹ As the population continues to grow, the social, economic, and environmental impacts of this unnecessary waste are becoming increasingly evident. Reducing food waste at the retail and consumer levels has the capacity to significantly decrease environmental strain and improve food security around the world.^{2,3} This brief explores current policies and initiatives which aim to discourage food waste through various efforts including prevention, donation, and composting. Recommendations for future efforts are also discussed.

Why Worry About Food Waste?

More than 133 billion tons of edible food is wasted each year, resulting in a loss of 1,200 calories per person per day³ and \$160 billion worth of food.⁴ Food waste is also the largest source of solid waste to enter landfills and is responsible for the bulk of greenhouse gas emissions.³ As the population continues to grow, the human and environmental impact of this unnecessary food waste is becoming harder to ignore. The Food and Agriculture Organization of the United Nations (FAO) estimates that food production will need to increase by 50-70 percent in order to adequately feed the world's population in 2050.^{2,5}

In the United States, a majority of food waste has been linked to the processing, distribution, and consumption stages of the supply chain due to strict quality standards among supermarkets and common consumer mistakes such as overbuying perishable foods and failing to plan meals adequately.² According to The Natural Resources Defense Council, Americans throw away an average of 20 pounds of uneaten food per person every month.⁶ By enacting state-level policies to prevent food waste and divert organic materials from landfills, it is possible to increase food security and reduce strain on the environment.^{2,3}

Food Wasted by Weight



Source: ReFed: A Roadmap to Reduce US Food Waste by 20 Percent

What is Currently Being Done?

Worldwide

Campaigns to increase awareness and encourage people to voluntarily reduce their food waste are being spearheaded by nonprofits (e.g. Love Food Hate Waste,⁷ Food Shift,⁸ I Value Food⁹) and universities (e.g. Boston University,¹⁰ University of Maryland,¹¹ Kansas State University¹²), while mandatory food waste reduction policies for manufacturers and retailers are being implemented by local, state, and national governments. These policies attempt to decrease the amount of edible food being sent to landfills by making the prevention, donation, and composting of food waste an easier and more attractive option.

United States

In 2013, the United States Department of Agriculture (USDA) and the Environmental Protection Agency (EPA) launched the **U.S. Food Waste Challenge**. This challenge asks all members of the supply chain, including farmers, retailers, manufacturers, businesses, and local governments, to make a joint effort to reduce, recover (donate), and recycle (use for animal feed or compost) food waste. Over 4,000 participants agreed to be part of the challenge by the end of 2014. In 2015, a national food waste and loss reduction goal was established to reduce food waste by fifty percent across the nation by 2030.⁴ State and local municipalities have also enacted their own policies about food waste reduction and diversion from landfills, including California, Connecticut, Massachusetts, Rhode Island, San Francisco, Vermont, and others. (See Table I for sample state and local policies.)

Additionally, federal laws and regulations are in place that provide protections, incentives, and avenues for avoiding food waste at local levels. These include the **Bill Emerson Good Samaritan Food Donation Act**, the **Path Act**, the **Richard B. Russell National School Lunch Act**, and options available within the Summer Food Service Program. The Good Samaritan Food Donation Act protects those who provide food in good faith to nonprofit organizations from liabilities,¹³ and the Path Act outlines tax incentives for donating food that, in particular, applies to donations made by farmers, retailers, restaurants, and food manufacturers.¹⁴ Within the National School Lunch Act, there are provisions that allow for the donation of excess food within child nutrition programs (e.g., school and summer meals) to nonprofit and charitable organizations. In addition to this option that applies to the **Summer Food Service Program**, more strategies aimed at avoiding food waste are encouraged within the program; these include transferring meals from one meal site to another, offering seconds and “share tables,” letting youth take certain whole food items from their own meal home, or a whole meal at the end of the day’s service (note: whole meals taken home are not reimbursable).

South Carolina

Despite the fact that one in six south Carolinians is food insecure,¹⁵ residents wasted more than 600,000 tons of food between July of 2014 and June of 2015.⁶ In an effort to reduce this high amount of waste and meet the national goal established in recent years, the state recently launched its own food waste campaign called “Don’t Waste Food SC.” Don’t Waste Food SC is a collaborative campaign that is actively bringing together partners from across the public and private sector to help reduce food waste in the state. Their **Food Recovery Initiative** is designed to increase awareness of the economic, environmental, and social impacts of food waste and empower individuals, businesses, and communities to take action through outreach, education, and technical assistance centered on prevention, donation, and composting.⁶

Table 1: Sample State and Local Laws on Food Waste

Title	Effective Date	Description	Goals and Outcomes
California Mandatory Commercial Organics Recycling (MORE) Law ¹⁶	April 2016	Requires businesses to have their food waste and food-soiled paper recycled, composted, or anaerobically digested. Applies to businesses producing 8 cubic yards of organic waste per week in 2016; expands to businesses producing 4 cubic yards of organic waste per week in January 2017.	Goal: 75% of waste recycled by 2020 Outcome: Information not available
Connecticut Organics Recycling Law ¹⁷	January 2014	Requires commercial food wholesalers, distributors, industrial food manufacturers, processors, supermarkets, resorts, and conference centers located within 20 miles of a permitted recycling facility to recycle source separate organic material if they expect to generate an annual volume of 104 tons or more.	Goal: 60% of diversion of waste from disposal by 2024 (would require diversion of 300,000 tons of organic waste annually to meet goal ¹⁸) Outcome: Information not available
Massachusetts Commercial Organics Disposal Ban ¹⁹	October 2014	Institutes a ban on disposal of commercial organic wastes by businesses and institutions that dispose of one ton or more of these materials per week. Any method may be used to divert organic waste from landfills.	Goal: Reduce the quantity of waste disposed by 30% in 2020 Outcome: Information not available Goal: Reduce the quantity of waste disposed by 80% in 2050 Outcome: Information not available
Rhode Island Food Waste Disposal Ban ²⁰	January 2016	Requires institutions generating more than 104 tons of organic waste per year (two tons per week) to separate organics at the source, then arrange for materials to be composted, anaerobically digested, or recovered through another approved recycling method; generators are exempt from recycling if not located within 15 miles of composting or anaerobic digestion facility.	Goal and Outcome: Not specified/not available
San Francisco Mandatory Recycling and Composting Ordinance ²¹	June 2009	Requires all city residents and institutions to separate food scraps, recyclable material, and trash into three separate curbside containers. City can impose fines of \$100 for small businesses and households or up to \$1,000 for large businesses and multi-unit buildings that do not effectively separate materials.	Goal: 75% landfill diversion citywide by 2010 Outcome: Surpassed goal (80%) Goal: Zero waste by 2020 Outcome: Information not available
Vermont Universal Recycling Law: Food Scrap Ban ²²	July 2014	Food scrap generators of 104 tons/year (2 tons/week) must divert material to any certified facility within 20 miles beginning in 2014; changes to 52 tons/year (1 ton/week) in 2015; 26 tons/year (1/2 ton/week) in 2016; 18 tons/year (1/3 ton/week) in 2017; all haulers and solid waste management facilities must provide collection services for these materials by 2017; all food scraps banned from the landfill in 2020 with no exemption for distance.	Goal: zero food waste by 2020 Outcome: Information not available

What is Working?

The EPA's Food Recovery Hierarchy prioritizes ways to manage food: prevent food waste, feed hungry people, feed animals, recover energy, composting, and lastly landfill/incineration.²³ Examples of policy initiatives and campaigns follow.

Prevention

Large-scale consumer education campaigns have the potential to divert more than half a million tons of food waste per year in the United States.²⁴ One of the most effective and widespread campaigns was launched in the United Kingdom (UK) by a nonprofit called the Waste & Resources Action Plan (WRAP) and sponsored by the national government.⁵ WRAP focuses on building partnerships with food and drink manufacturers, supermarkets, and the hospitality industry and helps them reach measurable food waste reduction goals by providing tools, guidance, and financial support. Their awareness campaign entitled "Love Food Hate Waste" educates individuals and households about different ways to prevent food waste by using proper food storage techniques, meal planning, making smarter buying choices, and more.²⁵ In just two years, Love Food Hate Waste reached more than two million households in the UK and prevented 137,000 tons of food waste.⁵ After five years, consumer food waste had decreased by 21% nationally.²⁴

Donation

The aforementioned federal laws have shown to be effective in increasing food donations, thereby preventing wasted food. In 2005, when tax incentives began applying to an expanded amount of businesses, food donations across the country rose by 137% the following year.²⁶ Numerous states have enacted laws to provide their own tax incentives or credits.

Composting

San Francisco has the highest food waste diversion rate in the United States due to their Mandatory Recycling and Composting Ordinance. The ordinance requires residents and businesses to separate their recyclables, compostable materials, and landfill trash into three separate collection bins.²⁷ On collection day, the compost is picked up and transported to a composting facility where it is later sold and reused by gardeners and farmers. Recycling and compost services are bundled with regular trash services, so cost is not a deterrent. The city further encourages composting by allowing consumers to downsize to a smaller trash cart at a reduced rate when the larger one is no longer necessary.²⁸ When the law was first passed in 2009, San Francisco worked to educate residents about proper sorting and allowed for a two year transition period where they vowed not to issue any fines for noncompliance. Curbside collection has made composting simple and convenient for consumers, allowing San Francisco to achieve an 80% diversion rate.²⁷



Recommendations

- ⇒ **Education:** Continue to educate businesses and consumers about effective prevention efforts, food donation laws, and proper sorting of compostable materials. Increase reach of the Don't Waste Food SC campaign to manufacturing, institutional, and commercial sectors. Provide technical support for composting and food waste diversion activities.
- ⇒ **Policy:** Investigate the development of South Carolina specific policy and plans to increase food recovery. Create a workgroup to discuss policy options and identify a stakeholder that may take the lead on that issue.
- ⇒ **Incentives:** Provide rebates or other incentives for businesses to ease the transition into composting. Expand state tax incentives as a mechanism to incentivize food donation.
- ⇒ **Grant Funding for Composting Infrastructure:** Develop a grant fund for public and private sectors to help increase infrastructure in the state. Seek external grant funding to augment pool of funds.
- ⇒ **Government Facility Food Waste Diversion:** Require food waste diversion in government facility generators. Determine the tonnage amount of food waste per year threshold that would require government facilities to compost and ensure that composting infrastructure exists within 25 miles. Provide exemptions for generators that are not within that proximity.
- ⇒ **Compost Specifications:** Work with state agencies like Department of Transportation to specify the use of compost in their landscape and erosion control projects.
- ⇒ **Yard Waste Ban:** Investigate a yard waste ban for Class II landfills in areas with composting infrastructure available. Yard trimmings are a carbon source and consistent feedstock need for composting facilities.
- ⇒ **Connect the Dots:** Advance food recovery by facilitating connections between generators, processors, and users in South Carolina.
- ⇒ **Food Recovery Programs in K-12 Schools:** Encourage food waste reduction in K-12 schools to reduce the amount of waste produced, recover food for the school and broader community, and recycle, via composting, whatever cannot be reduced or recovered.
- ⇒ **Curbside Composting Programs:** Investigate offering curbside composting programs where infrastructure is available.
- ⇒ **Pay as You Throw:** Encourage composting by bundling compost collection with regular trash collection fees via Pay as You Throw programs and allowing consumers to reduce waste disposal costs by decreasing the size of their trash cart.
- ⇒ **Monitor and Evaluate:** Monitor the implementation of policies and evaluate the impacts on an annual basis. Release findings to the public.

Helpful Tools and Resources

Don't Waste Food SC

The Don't Waste Food SC/Food Recovery Initiative is a group of public and private stakeholders dedicated to working together to help South Carolina reduce food waste and meet or exceed the national goal of cutting its food waste in half by 2030. Stakeholders include food banks, food rescue organizations, faith-based communities, grocery stores and other retailers, food manufacturers, restaurant and hospitality facilities, composters, haulers, local and state governments. Their website contains guides and tip sheets for **businesses** and **residents** to prevent food waste.

scdhec.gov/HomeAndEnvironment/Recycling/FoodWaste



General Information and Toolkits about Food Waste

Food: Too Good to Waste Implementation Guide and Toolkit

[epa.gov/sites/production/files/2016-02/documents/](http://epa.gov/sites/production/files/2016-02/documents/implementation_guide_and_toolkit_ftgtw_2_1_2016_pubnumberadded508_alldocuments.pdf)

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Food Rescue Locator

sustainableamerica.org/foodrescue

Keeping Food Out of the Landfill: Policy Ideas for States and Localities

endhunger.org/PDFs/2016/Harvard_FoodWaste_Toolkit_Oct2016.pdf

ReFed: A Roadmap to Reduce U.S. Food Waste by 20 Percent

refed.com/downloads/ReFED_Report_2016.pdf

Wasted: How America Is Losing Up to 40 Percent of Its Food from Farm to Fork to Landfill

nrdc.org/sites/default/files/wasted-food-IP.pdf

Reducing Food Waste at the Retail/Community Level

A Guide to Conducting and Analyzing a Food Waste Assessment

epa.gov/sites/production/files/2015-08/documents/r5_fd_wste_guidebk_020615.pdf

Comprehensive Guidelines for Food Recovery Programs

recyclingworksma.com/wp-content/uploads/2015/07/food-recovery-final2007.pdf

Donating Food

epa.gov/recycle/donating-food

Municipal Curbside Compostables: What Works and Why?

dusp.mit.edu/sites/dusp.mit.edu/files/attachments/project/Municipal%20Curbside%20Compostables%20Collection%20%20What%20Works%20and%20Why.pdf

Reducing Food Waste at the Consumer Level

Backyard Composting: It's Only Natural

nepis.epa.gov/Exe/ZyPDF.cgi?P1006PSV.PDF?Dockey=P1006PSV.PDF

Composting at Home

epa.gov/recycle/composting-home

Date Labels Explained

lovefoodhatwaste.com/article/date-labels

Food Waste Prevention Resources

ivaluefood.com/resources

Reducing Wasted Food at Home

epa.gov/recycle/reducing-wasted-food-home#toolkit

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