



**Food Law and Policy Clinic, a Division of the Center for Health Law and  
Policy Innovation of Harvard Law School**

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United States Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460  
Docket No. EPA-HQ-OA-2022-0859

*Sent via electronic submissions on the Federal eRulemaking Portal: [www.regulations.gov](http://www.regulations.gov)*

**Re: Comments on the Greenhouse Gas Reduction Fund**

To Whom It May Concern,

These comments are submitted on behalf of the Harvard Law School Food Law and Policy Clinic (FLPC) in response to the Environmental Protection Agency's (EPA) request for information (RFI) and comment on the Greenhouse Gas Reduction Fund program design and implementation.

FLPC is an educational program at Harvard Law School that serves partner organizations and communities by providing guidance on food system issues and advocating for food systems change, while engaging law students in the practice of food law and policy. FLPC focuses on increasing access to healthy foods, supporting sustainable and equitable production, promoting community-led food system change, and reducing waste of healthy, wholesome food.

These comments are in response to section three, question one of the EPA's RFI regarding eligible projects. When structuring eligible projects under the Greenhouse Gas Reduction Fund, the EPA should prioritize projects that reduce organic waste in landfills and include such projects in their Grants Notice, when published.

Decomposing food waste in landfills is a primary source of methane emissions in the United States. Municipal Solid Waste (MSW) landfills account for 15% of all methane emissions in the United States and are the third largest emissions source after livestock management and natural gas and petroleum systems.<sup>1</sup> The primary source of MSW landfill methane emissions is decomposing food and other organic matter.<sup>2</sup> Food is wasted at every point along the supply chain, leading to economic, social, and environmental harms. Every year, 80 million tons of surplus food is left unconsumed, 54.2 of which goes to landfill, incineration, or is left to decompose in fields.<sup>3</sup> Actors along the food supply chain spend \$408 billion every year to grow, process, transport, and dispose of this unconsumed food.<sup>4</sup> Implementing food

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<sup>1</sup> *Climate and Resources*, ReFED, <https://refed.org/food-waste/climate-and-resources/> [https://perma.cc/CK2V-DB66].

<sup>2</sup> *Climate and Resources*, ReFED, <https://refed.org/food-waste/climate-and-resources/> [https://perma.cc/CK2V-DB66].

<sup>3</sup> *ReFED Insights Engine: Food Waste Monitor*, ReFED, [https://insights-engine.ReFED.org/food-waste-monitor?break\\_by=sector&indicator=tons-surplus&view=detail&year=2019](https://insights-engine.ReFED.org/food-waste-monitor?break_by=sector&indicator=tons-surplus&view=detail&year=2019) [https://perma.cc/3XJ2-X9E4].

<sup>4</sup> *New Data from ReFED Reveals Amount of Food Waste Has Leveled Off after Increasing 11.9% Since 2010*, ReFED (Feb. 2, 2021), <https://ReFED.com/articles/new-data-from-ReFED-reveals-amount-of-food-waste-has-leveled-off-after-increasing-11-9-since-2010/> [https://perma.cc/42Y9-NAMJ].

waste solutions could avoid 75 million tons of greenhouse gas emissions every year.<sup>5</sup> Landfills are overburdened by food waste and states and cities are running out of space to store their organic waste.<sup>6</sup> In fact, food waste accounts for 24% of landfilled municipal solid waste, with around 35 million tons of landfilled food waste per year.<sup>7</sup>

The buildup of food waste in landfills is also an environmental justice problem. Landfills are disproportionately sited in communities composed of ethnic minorities and low-income persons.<sup>8</sup> As food waste accumulates in landfills, new landfills are needed. Preventing the further expansion of landfills into low-income communities of color supports environmental justice goals. In recognition of the environmental and social benefits associated with reducing food waste, the EPA and the United States Department of Agriculture (USDA) in 2015 announced the nation's first-ever food waste reduction goal to have United States food waste by 2030.<sup>9</sup>

**The most effective solution at reducing the greenhouse gas emissions associated with food waste is reducing the amount of food left to decompose in landfills. The EPA should prioritize funding projects that prevent food from ending up in landfills, particularly those projects that keep food at the top of the EPA Food Recovery Hierarchy.** The hierarchy encourages reducing food waste at the outset, followed by recovering food to feed people. After that, the hierarchy suggests that other surplus food should be recovered to feed animals or else diverted to anaerobic digestion or compost rather than landfill. In addition to funding projects in alignment with the food recovery hierarchy, EPA should account for the varying needs of communities by funding projects at various scales. The EPA should provide funding for projects that provide regional support, such as with organic processing infrastructure, as well as small scale projects, such as transportation, storage, and processing infrastructure for food banks and food recovery organizations.

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<sup>5</sup> *New Data from ReFED Reveals Amount of Food Waste Has Leveled Off after Increasing 11.9% Since 2010*, REFED (Feb. 2, 2021), <https://ReFED.com/articles/new-data-from-ReFED-reveals-amount-of-food-waste-has-leveled-off-after-increasing-11-9-since-2010/> [https://perma.cc/42Y9-NAMJ].

<sup>6</sup> EPA, *ADVANCING SUSTAINABLE MATERIALS MANAGEMENT: 2018 FACT SHEET-ASSESSING TRENDS IN MATERIALS GENERATION AND MANAGEMENT IN THE UNITED STATES (2020)*, [https://www.epa.gov/sites/default/files/2021-01/documents/2018\\_ff\\_fact\\_sheet\\_dec\\_2020\\_fnl\\_508.pdf](https://www.epa.gov/sites/default/files/2021-01/documents/2018_ff_fact_sheet_dec_2020_fnl_508.pdf) [https://perma.cc/6STD-WPML]; see James Thompson & Rob Watson, *Time is Running Out: The U.S. Landfill Capacity Crisis*, WASTEADVANTAGE MAG. (May 13, 2018), <https://wasteadvantagemag.com/time-is-running-out-the-u-s-landfill-capacity-crisis/> [https://perma.cc/CX2D-KMTU].

<sup>7</sup> *National Overview: Facts and Figures on Materials, Wastes, and Recycling*, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (December 3, 2022), <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials#NationalPicture> [https://perma.cc/Y38Y-Y3SD].

<sup>8</sup> A thorough study conducted in 1995 demonstrated communities living near waste facilities are often composed of racial minorities and low-income persons. These communities are disproportionately exposed to pollutants and disproportionately experience health defects as a result. Unfortunately, the US government has not updated this study since 1995. *Hazardous and Nonhazardous Waste Demographics of People Living Near Waste Facilities*, UNITED STATES GENERAL ACCOUNTING OFFICE (June 1995), <https://www.gao.gov/assets/rced-95-84.pdf> [https://perma.cc/TX9H-KDAY].

<sup>9</sup> *United States 2030 Food Loss and Waste Reduction Goal*, EPA, <https://www.epa.gov/sustainable-management-food/united-states2030-food-loss-and-waste-reduction-goal> (last visited Mar. 10, 2022) [https://perma.cc/DC3S-S2UV]; *USDA and EPA Join with Private Sector, Charitable Organizations to Set Nation's First Food Waste Reduction Goals*, USDA (Sept. 16, 2015), <https://www.usda.gov/wps/portal/usda/usdamediafb?contentid=2015/09/0257.xml&printable=true> [https://perma.cc/C3SM-6UMN].

## Food Waste Prevention and Recovery

EPA can reduce GHG emissions associated with food waste, by prioritizing projects that create food waste prevention and recovery infrastructure and thus ensure food stays high in the food recovery hierarchy. EPA can do so by providing funding to food recovery organizations. Scaling food recovery infrastructure is costly. Targeted investments, such as investments to increase food storage capacity and refrigeration, including refrigerated transportation, can help organizations to capture excess edible food that would otherwise be sent to landfill to instead be consumed by people. Funding can also go to processing infrastructure to process surplus food into products that can be preserved and used longer. For example, infrastructure needs include flash freezing or canning for food recovery organizations to store surplus crops in summer that can be distributed after harvest season.

Funding can also be used to support infrastructure for upcycling of human foods, a food waste prevention solution. Upcycled food is a growing sector of the economy that looks to find new, environmentally beneficial uses for food products previously considered waste. This can build a market for new uses for surplus or unmarketable products, and in some cases even for inedible byproducts of food that become edible through upcycling. The EPA should provide funding to the infrastructure needs of upcycling businesses, such as facilities and processing infrastructure, as well as other infrastructure costs identified by upcycling businesses.

The EPA can also provide funding for and prioritize projects that support waste-to-feed food waste solutions, which is the third element on the food recovery hierarchy. Funding in this category could go to developing animal feed facilities that take animal-based and/or non-animal-based food scraps, heat treat them if needed (as is required for animal-based food scraps), and sell them as animal feed.<sup>10</sup>

## Food Waste Processing Infrastructure

The EPA should also support projects that will develop composting and anaerobic digestion processing infrastructure. In addition to the greenhouse gas reduction benefits associated with reducing the amount of food in landfills, both compost and anaerobic digestion infrastructure can support carbon sequestration in soils. Both of these facilities result in productive soil amendments that when applied to soil, contribute nutrients and carbon to depleted soils.<sup>11</sup> Initial findings from the University of California-Berkeley's Silver Lab demonstrate that soil amendments derived from food scraps show greater climate mitigation potential than manure or plant waste derived soil amendments.<sup>12</sup> Studies and literature reviews by the Marin Carbon Project found that a one-time application of a quarter inch of compost can double the soil's carbon sequestration potential to approximately one ton of carbon per hectare.<sup>13</sup>

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<sup>10</sup> ReFED, A Roadmap to Reduce U.S. Food Waste by 20 Percent 66 (2016), [https://refed.org/downloads/ReFED\\_Report\\_2016.pdf](https://refed.org/downloads/ReFED_Report_2016.pdf) [https://perma.cc/7643-HCA7].

<sup>11</sup> *Composting At Home*, EPA, <https://www.epa.gov/recycle/composting-home> (last visited Feb 10., 2022) [https://perma.cc/M7KRKC44].

<sup>12</sup> See HANNAH MARSH, FOOD WASTE COMPOST APPLICATION TO GRASSLANDS THE CLIMATE CHANGE MITIGATION POTENTIAL OF FOOD WASTE COMPOST APPLICATION TO GRASSLAND SOILS (2019), [https://nature.berkeley.edu/classes/es196/projects/2019final/MarshH\\_2019.pdf](https://nature.berkeley.edu/classes/es196/projects/2019final/MarshH_2019.pdf) [https://perma.cc/MPJ8-QF83].

<sup>13</sup> See *Science*, MARIN CARBON PROJECT, <https://www.marincarbonproject.org/marin-carbon-project-science> (last visited Mar. 4, 2022) [https://perma.cc/FSS7-N4AT]; see Rebecca Ryals et. al., *Long-term climate change mitigation potential with organic matter management on grasslands*, 25 *ECOLOGICAL APPS.* 531 (Mar. 2015); see Rebecca Ryals & Whendee L. Silver, *Effects of organic matter amendments on net primary productivity and greenhouse gas emissions in annual grasslands*, 23 *ECOLOGICAL APPS.* 46 (Jan. 2013).

Investment into composting and anaerobic digestion infrastructure is necessary because constructing these facilities involves high up-front costs. An anaerobic digestion facility costs around \$20 million to construct; a full-service composting facility costs around \$5-9 million.<sup>14</sup> However, once built, these facilities can process between 5,000 – 100,000 tons of organic waste every year, depending on the facility size.<sup>15</sup> The high up-front costs associated with building these facilities may preclude communities, particularly low-income communities, from building them. Greenhouse Gas Reduction Fund project funding should support existing composting and anaerobic digestion facilities that do not currently process food scraps to update their infrastructure to be able to process food scraps. Project funding should also support the development of new processing facilities.

Investing in composting and anaerobic digestion infrastructure enables communities and policymakers to use the infrastructure to support other food waste reduction policies. For example, a growing number of states and localities have enacted organic waste bans, which are laws or regulations that restrict food businesses and/or individuals from throwing organic waste into landfill. However, to make these policies successful, states and localities need to ensure there is sufficient organics processing infrastructure to divert food from landfills. Having the financial support for this infrastructure can help encourage more governments to utilize these proven policies to reduce food in landfills.

Supporting food waste reduction solutions, including by funding projects to build and support food recovery, upcycling, and organics processing infrastructure, is consistent with the statutory definition of “qualified projects.” As discussed in detail above, food waste reduction projects avoid greenhouse gas emissions produced when food and organic matter decomposes in MSW landfills. These projects assist communities in reducing greenhouse gas emissions not only by redirecting food that would otherwise go to landfills, but also by enabling the implementation of other food waste solutions such as organic waste bans.

Thank you for your consideration of FLPC’s comments and recommendations.

Sincerely,



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<sup>14</sup> REFED, A ROADMAP TO REDUCE U.S. FOOD WASTE BY 20 PERCENT 62 (2016), [https://refed.org/downloads/ReFED\\_Report\\_2016.pdf](https://refed.org/downloads/ReFED_Report_2016.pdf) [<https://perma.cc/7643-HCA7>].

<sup>15</sup> REFED, A ROADMAP TO REDUCE U.S. FOOD WASTE BY 20 PERCENT 62 (2016), [https://refed.org/downloads/ReFED\\_Report\\_2016.pdf](https://refed.org/downloads/ReFED_Report_2016.pdf) [<https://perma.cc/7643-HCA7>]; *Food Waste Composting Infrastructure in the U.S.*, BIOCYCLE (Jan. 4, 2019), <https://www.biocycle.net/food-waste-compostinginfrastructure-u-s/> [<https://perma.cc/7Y98-CQV9>].