

West Coast Commitment to Reduce Wasted Food and Implement SDG 12.3

Join us and help Reduce Wasted Food by 50% along the North American West Coast by 2030



The **Pacific Coast Collaborative** is calling on food retailers and their supply chain partners— with support from local, state and provincial governments—to join a **Voluntary Agreement (VA)** to explore and implement effective, industry-wide actions that prevent and reduce wasted food.

The Voluntary Agreement will help leverage other platforms and implement existing commitments made under **UN Sustainable Development Goal 12.3 and Champions 2030**, while bringing a regional focus along with public sector partners to the work.

It's estimated between 25 and 40 percent of all food grown or imported into the United States for consumption is never eaten. This means large quantities of food—and the resources used to produce it—go to waste every day, costing about \$218 billion dollars each year and \$49.5 billion dollars annually in Canada.

Through regional collaboration between public and private partners across the west coast, we have an opportunity to lead the country in addressing an environmental, hunger, and climate change crisis by reducing wasted food and increasing food recovery.

ABOUT THE PACIFIC COAST COLLABORATIVE

The Pacific Coast of North America represents the world's fifth largest economy, a thriving region of 55 million people with a combined GDP of \$3 trillion. Through the Pacific Coast Collaborative (PCC), British Columbia, Washington, Oregon, California, and the cities of Vancouver, Seattle, Portland, San Francisco, Oakland and Los Angeles have committed to reduce carbon emissions by focusing on preventing and recovering wasted food.

Wasted food is responsible for at least 2.6% of all U.S. and Canadian greenhouse gas emissions, equal to more than 41 million passenger vehicles, or 1 in 7 road vehicles



25% of water consumed in the U.S. is used to produce food that is never eaten



42 million Americans and 4 million Canadians, including more than 14 million children, are food insecure



HOW CAN YOU REDUCE AND PREVENT FOOD LOSS AND WASTE?

(1) Commit: Commit to joining the **Voluntary Agreement (VA)** to reduce and prevent wasted food by 50% by 2030 and works towards implementing existing commitments made under UN Sustainable Development Goal 12.3 and Champions 2030 as a region.

(2) Measure: We must measure before we can manage. Establishing a streamlined methodology for measurement – which includes anonymized reporting and creating individual dashboards – will help businesses across the food supply chain reduce waste and better identify areas to target for action.

(3) Act: Drive industry progress through sharing of best practices, leading demonstration projects, and providing technical assistance related to policy, financing, business solutions and education.

WHAT DOES A COMMITMENT MEAN FOR YOUR BUSINESS?

By signing on to a **Voluntary Agreement (VA)** signatories commit to the following:

- A public commitment to private sector actions that reduce food waste by 50% by 2030.
- Establishing a baseline year and reporting against it annually.
- Participate in pre-competitive and collaborative VA Working Groups to share lessons learned, demonstration projects and non-competitive solutions to shared challenges.
- All signatories will receive support via facilitated convenings, and hands-on engagement designed to help you reach your commitments, implement meaningful actions that reduce wasted food, and meet annual reporting goals.
- No cost year 1. Mutually acceptable annual fees in subsequent years.

HOW IS THIS COMMITMENT BENEFICIAL FOR BUSINESS?

- Proven ROI: Food waste reduction programs have shown proven return on investment for all food service businesses.
- Analysis at Scale: Individual anonymous reporting will help your business measure progress, identify priority areas of action and allow for broader industry benchmarking.
- Supports Tangible Actions: By collaborating through pre-competitive VA Working Groups, your business can achieve results faster and help to build a regional roadmap for reducing wasted food.
- Leadership and Community Building: Demonstrate your leadership on climate and hunger issues while engaging your community through increased and more streamlined food rescue and donation activities.

A COLLABORATION MODEL THAT WORKS

The West Coast Commitment to Reduce Wasted Food is rooted in concepts from a successful industry supported Voluntary Agreement in the United Kingdom. This UK effort resulted in¹:

- Over £100 million in business savings from reducing food waste.
- Overall delivery of a 19% reduction in UK food waste.
- A 50% increase in food redistribution to address food insecurity.
- A reduction of 555,000 tons of CO₂e emissions in the food and supply chain.
- 14:1 return on investment for every dollar spent on food waste reduction.

ORGANIZING PARTNERS



¹ Courtauld Commitment 3: Delivering Action on Waste, Final Report, Jan. 2017.

What Signatories Can Expect

Signatories to the Voluntary Agreement (VA) will learn how to tackle the big challenges that help meet individual targets to reduce the amount of edible food that is wasted and the amount of inedible food that is landfilled through prevention, rescue and recovery strategies.

Simplicity and Synergy

- By joining, Signatories to the VA work towards implementing existing commitments made under UN Sustainable Development Goal 12.3 and Champions 2030 as a region and in partnership with the public sector.
- Use one platform to take action and move towards the SDG 12.3 target laid out by the PCC, WWF, WRI, and ReFED. Submit data through one universal form.

Access to Tools and Learning Exchanges

- Early access to new tools, evidence, market assessments, guidance and case studies created across signatories.
- Attendance at annual convenings to publicize the Voluntary Agreement's progress, share best practices, and celebrate success.
- Opportunities to host, support and attend workshops to upskill and engage your wider internal teams.
- Learning exchanges with other global food waste reduction initiative projects.

Public-Private Partnership

- Work directly with public sector government partners in your region and collaborate on challenges and solutions at the local, state and regional level.
- Direct collaboration with businesses across the supply chain, large and small, and experts that will help identify common problems and troubleshoot solutions through working groups and ground-breaking flagship projects.

Precompetitive Collaboration

- Pre-competitive information sharing and best practices for cost-saving strategies and implementation pathways.
- Participate in pre-competitive and collaborative working groups with food retailers to solve problems and create best practices together.

- Access to regular member-only communications, including monthly updates and member-only webinars and working groups.

Tailored Strategies

- Strategies for high impact food waste reduction measures, personally tailored to your industry and sector.
- Project management, facilitation, and supporting tools to keep you on track to meet these goals of implementation.
- Engagement in the latest public awareness strategies and the opportunity to take part in consumer campaigns.
- Designated *Business Support Manager* working to support the VA who can offer one-on-one assistance to help you prioritize actions in your business and advise on implementation through an individual action plan.
- Introduction to data-driven Pacific Coast Regional Roadmap for reducing wasted food.

Data Management and Reporting Support

- Establishment of a streamlined methodology for measurement.
- Individual anonymous reporting that allow help your business measure progress and identify priority areas of action.
- Collectively help set sector specific benchmarks across the food supply chain.
- Track the Voluntary Agreement's progress against its target to reduce waste food 50%.
- Quantify the potential impact, benefit, and adoption rates of various solutions.

Leadership Opportunities

- Media publicity and recognition as a business spearheading this commitment toward a more environmentally sustainable food system.
- Use of the PCC Food Waste Reduction Project logo to show your collaboration with the public sector and commitment to leadership and measurable food waste reduction.
- Opportunity to join the PCC West Coast Food Waste Reduction Project Steering Committee and guide priorities and focus areas for the Voluntary Agreement.

Supporting Every Business Signatory through the Voluntary Agreement Structure

Food business signatories to the Voluntary Agreement (VA) will receive tools and resources to implement solutions and realize their commitments to reduce wasted food. This will include general and specific guidance for prevention, rescue and recovery efforts, along with technical assistance and access to a variety of communication channels.

As a signatory, you will have access to working groups that allow you to work through common problems with your peers, tailored technical assistance, and collaboration with partners in the public sector to find common solutions to problems. More details can be found below.

Voluntary Agreement Working Groups

WWF, with strategic advising and assistance from WRAP, will facilitate collaboration among the Food Business Signatories through in-person and virtual meetings and through the development of VA Working Groups. Through these efforts, the Resource Partners, PCC Food Waste Sub-Committee and Food Business Signatories will share best practices and lessons learned across areas of policy, financing, business solutions and education. Working Groups will help advance and implement actions to reduce wasted food and meet individual reduction goals.

The VA Working Groups will provide an opportunity for PCC Jurisdictions to interface directly with Food Business Signatories and identify collaboration opportunities or streamline solutions to shared challenges across the private and public sector.

WRAP will support WWF by serving as consultant, strategic and technical advisor to the VA Working Groups. In this role, WRAP will:

- 1) provide guidance in developing and implementing Food Business Signatory action plans,
- 2) advise on technical support for measurement, and
- 3) assist with hosting an annual training for Food Business Signatories.

Guidance, Support and Technical Assistance

Available data and capacity to measure food waste levels and identify and implement priority actions to reduce food waste varies widely by company. Success will require additional support from external technical experts who have a track record of working with food businesses to conduct food measurements and identify, evaluate and implement solutions to specific problems in hot spots where large amounts of food waste is occurring.

WWF, through their *Business Support Manager* position, will serve as the primary point of contact between Food Business Signatories seeking technical assistance, implementation support, or other guidance.

The Business Support Manager will be responsible for providing and facilitating food loss and waste technical support to the Food Business Signatories, will orchestrate regional training opportunities and will help to identify sub-contracts for consultants that may help provide more direct support to individual food business signatories as the project budget allows.

Pacific Coast Regional Roadmap Development

Further support and guidance will be established through a “Pacific Coast Regional Roadmap” that identifies and quantifies high-impact opportunities to reduce food waste and guide activity in the Pacific Coast region. Interim targets, measurement tools, prevention, rescue and recovery strategies and resources – expertise and available grants – will be components of a cohesive strategy to support businesses and governments in taking action to reduce food waste.

ReFED will develop a “Pacific Coast Regional Roadmap” (Roadmap) edition of its 2016 Roadmap to Reduce U.S. Food Waste that identifies food waste and loss opportunities specific to the Pacific Coast region, based on area policies, programs and infrastructure.

ReFED will work in collaboration with the PCC Food Waste Sub-Committee and the Resource Partners to develop the regional edition. The Roadmap will serve as a toolkit and guide for Food Business Signatories of the VA in addition to other interested business and government partners who are not necessarily signatories to the VA. The Roadmap will help establish the financial, environmental and social costs of food waste, and capture best practices, compelling case studies and include a compendium of general technical supports available to food business signatories.

Reporting and Establishing Baselines

To implement and streamline anonymous data reporting associated with the project, ReFED is developing the Food Waste Data Alliance, a confidential, voluntary data reporting platform for organizations, including food businesses, to report U.S. food waste data. The Voluntary Agreement will use the Food Waste Data Alliance to capture signatory food waste data enabling the VA to:

- 1) Track the Voluntary Agreement’s progress against its target to reduce waste food 50%.
- 2) Quantify the potential impact, benefit, and adoption rates of various solutions.
- 3) Track progress against the national U.S. goal to cut food waste in half by 2030; and
- 4) Identify the largest causes of food waste in order to better prioritize efforts.

Select ReFED staff will aggregate and anonymize all data before sharing public industry average numbers, contingent on minimum reporting thresholds. The industry average numbers will be utilized in the *ReFED Insights Engine* as well as other public platforms such as the Pacific Coast Collaborative in partnership with World Wildlife Fund and WRAP and the Food Waste Atlas that reports on Food Loss and Waste globally.

Operating Definitions and Project Partners

Operating Definitions

PCC Jurisdictions: Signatories to the Food Waste Reduction Project Memorandum of Understanding (MOU) representing high-level leadership within each participating state, city or province.

PCC Food Waste Sub-Committee: Government members of the 2018-2019 PCC food waste working group who will be engaging and supporting implementation of the Voluntary Agreement project on behalf of the PCC Jurisdiction.

Resource Partners: Collectively WRAP, ReFED and WWF.

Food Business Signatories: Businesses that sign onto the Voluntary Agreement created and implemented by the PCC West Coast Food Waste Reduction project.

Voluntary Agreement Steering Committee: Representatives of the Resource Partners, PCC Food Waste Subcommittee, and business signatories convening every two months in order to lead and advise the governance and implementation the VA.

Voluntary Agreement Working Groups: Comprised of Food Business Signatories and PCC Subcommittee Members, convened as part of the VA structure to share best practices and lessons learned and advance and implement actions to reduce food waste and meet reduction goals.

Pacific Coast Region: Encompassing all of the Province of British Columbia and States of Washington, Oregon and California and local municipalities therein.

Project Partners

The PCC jurisdictions are working with three “Resource Partners” who will implement the Food Waste Reduction Project. They are as follows:

WWF: World Wildlife Fund (WWF), an international environmental advocacy organization.

WWF will lead the effort to recruit Food Business Signatories, beginning with food retailers and their suppliers (such as brand manufacturers). WWF will lead the effort to provide technical assistance to Food Business Signatories but may request support from other Resource Partners or PCC Jurisdictions in recruiting or providing technical assistance. WWF also lead a “Business Support Manager” who will serve as the primary point of contact for Food Business Signatories.

ReFED: ReFED is a North American nonprofit wholly dedicated to reducing food waste using a systems approach and economic analysis.

ReFED will work with the other PCC Resource Partners, the PCC Food Waste Sub-Committee and, the Food Business Signatories to establish and implement common standards for setting company specific and PCC regional baselines and for collecting and managing food waste data from Signatories to measure progress over time.

ReFED will lead the methodology, baseline and data collection and storage, and the measurement, data analysis, reporting and aggregating workstream.

ReFED will also support the development of a ***“Pacific Coast Regional Roadmap”*** edition of its 2016 *Roadmap to Reduce U.S. Food Waste* that identifies food waste and loss opportunities specific to the region based on its policies, programs and infrastructure.

ReFED will also lead the communications workstream for the Project.

WRAP: WRAP is a United Kingdom based NGO focused on food waste, resource management and textiles and has successfully developed 14 voluntary agreements. In 2011 it developed and implemented a voluntary agreement package to reduce food waste called the “Courtauld Commitment,” which has successfully reduced food waste in the UK by 12 million tons. It is currently developing and supporting other food waste voluntary agreements in Europe, North America, Southern Africa, and Asia.

WRAP will serve as a consultant and as a strategic and technical advisor to the VA Working Groups and to the “Business Support Manager.” In this role, WRAP will: 1) provide guidance in developing and implementing food business signatory action plans, 2) disseminate new tools, guidance and best practices, 3) advise on technical support for measurement, and 4) host an annual training for Food Business Signatories.

Case Studies from Public and Private Sectors

To begin to understand the climate impacts of wasted food, some initial facts must be shared.

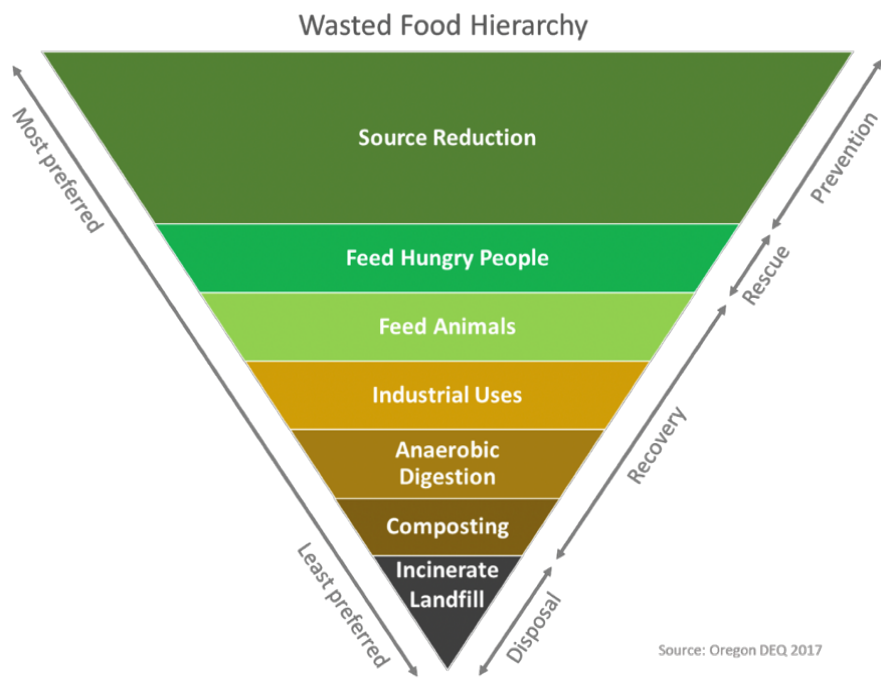
- Up to 40% of all food produced or imported for consumption in the U.S. is never eaten.
- Wasted food is responsible for at least 2.6 percent of all U.S. greenhouse gas emissions,¹ equivalent to more than 37 million passenger vehicles, or 1 in 7 vehicles on the road.
- 25% of all water consumed in the U.S. is used to produce food that is never eaten.
- It is estimated that approximately 30 to 40 percent of the food produced in Canada is discarded annually which is worth about \$31 billion.
- 42 million Americans, including 16 million children, are food insecure.

Through regional collaboration, we have an opportunity to address the environmental, hunger, and climate change crisis by reducing wasted food and increasing food recovery.

Food Waste Prevention

Sending wasted food to a composter or anaerobic digester reduces greenhouse gas emissions from landfills. Using the compost or digestate stores carbon in soils and can offset fertilizer or fuel use. But preventing the wasting of food in the first place has a GHG reduction benefit (per ton) that is 6-7 times higher than composting or digesting food waste. While food waste in landfills generates methane, over 80% of the carbon emissions and other environmental impacts associated with food come from producing the food. Food production, including fertilizers, pesticides, manufacturing, storage and transport are all energy and emissions intensive. Prevention avoids emissions across the full life cycle of food, while composting and digestion largely reduce downstream (disposal-related) emissions. That is one of the reasons that the traditional waste management hierarchy makes waste prevention (“source reduction”) the highest priority approach.

¹ Heller, M and G. Keoleian, “Greenhouse Gas Emission Estimates of U.S. Dietary Choices and Food Loss.” Journal of Industrial Ecology, 2014. This study finds that the production of food lost at the retail and consumer level in the United States in 2010 contributed an additional 160 MMT CO₂e of GHG emissions. This estimate does not include GHG emissions from disposal, which we conservatively estimate to add another 16 MMT CO₂e by applying 2014 US EPA estimates of food waste in landfills to the US EPA Waste Reduction Model (WARM). Together, these amount to 176 MMT CO₂e, which equates to 2.6% of the total US EPA GHG Inventory of 6873 MMT CO₂e.



Prevention also offers potential economic benefits. A recent study of corporate food waste reduction initiatives found that every dollar invested in those efforts yielded a median net financial return of \$14.² Wasted food measurement and analytics at businesses could unlock \$1.6 billion in annual financial benefits for the food sector industry in the U.S.

Because preventing the wasting of food is such a high priority and because it results in very significant GHG emission reductions and economic benefits, the regional proposal for collaboration described here emphasizes prevention.

Leaders in the public and private sector have already taken action to prevent the generation of wasted food:

- The Oregon Department of Environmental Quality adopted a prevention goal to reduce greenhouse gas emissions, water use, energy use and wasted resources by reducing the generation of wasted edible food by 15 percent by 2025 and 40 percent by 2050.
- The City of Vancouver and Province of British Columbia have recently taken steps to address food waste by partnering with Canada’s National Zero Waste Council on a national Love Food Hate Waste (LFHW) campaign. The campaign is based on a successful model in the United Kingdom, where avoidable household food waste was cut by 21% in its first five years.
- City of Portland’s Climate Action Now! provides residents with meal planning and food storage tools and information to help reduce food waste at home. Portland is also

² <http://www.wri.org/blog/2017/03/numbers-business-case-reducing-food-loss-and-waste>

gathering food waste prevention case studies from restaurants to inform outreach efforts and develop waste prevention tools.

- In the Portland Metro region, Rockwood Rising, a neighborhood revitalization effort, received a grant to distribute information on preventing wasted food to start-ups in its food business incubator and to purchase equipment to help these businesses quickly freeze or dehydrate food for later use or donation.
- San Diego County is using LeanPath,³ a smart technology system designed to address food waste, in hospitality, colleges & universities, and corporate dining facilities to increase understanding of where and why food is being wasted.
- Alameda County received a grant to help the unified school district in Livermore and Oakland achieve a 25% source reduction goal through a student challenge, integrate food waste prevention curriculum at students' homes, and help nutrition services reduce food waste through tracking and measuring toward an overall reduction in the generation of wasted food.
- Bon Appetit Management Company has removed trays from their "all you can eat" facilities to improve self-portioning and reduce post-consumer plate waste.⁴
- In 2015, Walmart ran a video campaign in checkout lanes across the country explaining ways shoppers could save money by reducing food waste at home.⁵
- Stony Brook University adopted a food waste reduction program called Trim Trax, developed by foodservice contractor Compass Group to help businesses track and measure food waste costs.⁶
- Some manufacturers have experimented with adding "freeze by" language onto packaging to encourage customers to take active steps to preserve food in the freezer instead of throwing it in the trash.
- To help its customers, Walmart also began a campaign to work directly with its suppliers to standardize date labels on the packaging of all of its privately branded products to provide clear and consistent information to customers.⁷
- Grocery Outlet's 225 retail stores, based primarily on the West Coast, work with manufacturers to understand their particular waste issues (the top reason is short-coded products near expiration) and come up with a custom distribution path.⁸
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³ <https://www.leanpath.com/>

⁴ www.bamco.com

⁵ ReFED, "A Roadmap to Reduce U.S. Food Waste by 20%", 2016.

https://www.refed.com/downloads/ReFED_Report_2016.pdf

⁶ "Waste Reduction." Stony Brook University: Campus Dining. <http://www.stonybrook.edu/commcms/campusdining/sustainability/trimtrax.html>.

⁷ ReFED, "A Roadmap to Reduce U.S. Food Waste by 20%", 2016.

https://www.refed.com/downloads/ReFED_Report_2016.pdf

⁸ Discount Retail Organization, interview by Sarah Vared, 27 July 2016.

- BluWrap uses a controlled atmosphere technology solution to reduce oxygen in protein packages during transit to extend shelf life.
- Applied Data Corporation uses enhanced analytics to manage the stages of fresh food items for grocery and supermarkets throughout their life cycle, from ingredients ordering to display management and decision-making.⁹

Food Waste Rescue

Of course, not all food waste can be prevented. Food rescue refers to actions that “rescue” edible food that would otherwise be disposed of or recovered and diverts it for human consumption.

The following examples include approaches to food rescue that will divert edible food from potential disposal or recovery to food banks and other hunger relief agencies.

Examples of rescue efforts across the country include the following:

- In 2017, CalRecycle provided \$9 million in funding to expand food rescue efforts by local governments and hunger relief organizations, in alignment with SB 1383, which requires at least 20 percent of edible food currently disposed to be recovered for human consumption by 2025.
- In Washington State, Thurston (county) Food Rescue was funded by the Department of Ecology through a comprehensive program grant that builds upon household food waste prevention campaigns previously implemented in the county. The program improved infrastructure to rescue and process more food within the county’s food rescue network.
- In Oregon, the Department of Environmental Quality partnered with the regional government supporting the Portland metro area to provide over \$100,000 to expand capacity for food donation infrastructure, including expanding the fresh produce donation program developed by the Oregon Food Bank.
- The Protecting Americans from Tax Hikes (PATH) Act of 2015 made permanent an enhanced tax deduction for donating food, increasing business incentives to participate in food recovery.¹⁰
- In Massachusetts, Recycling Works worked with a multi-stakeholder group of state and local health officials, food rescue organizations, and businesses with food donation programs to develop Food Donation Guidance documents to help clarify local policies for food donation.¹¹

⁹ ReFED, “A Roadmap to Reduce U.S. Food Waste by 20%”, 2016.
https://www.refed.com/downloads/ReFED_Report_2016.pdf

¹⁰ ReFED, “A Roadmap to Reduce U.S. Food Waste by 20%”, 2016.
https://www.refed.com/downloads/ReFED_Report_2016.pdf

¹¹ “Food Donation Guidance for Massachusetts Businesses.” Recycling Works Massachusetts. January 2016. <http://www.recyclingworksma.com/donate/>.

- The Borderlands Food Bank annually recovers 35 to 40 million pounds of rejected but safe-to-eat produce from Nogales, Ariz., which could be replicated at produce terminals nationally. Borderlands redistributes this food throughout the U.S., with hunger-relief organizations paying two cents per pound for transportation – which can equate to less than \$1,000 per truckload for \$70,000 worth of product.¹²
- The Second Harvest Food Bank of Middle Tennessee provided a Feeding America Produce Capacity Grant to Hughes Farm and Produce to cover the cost of installing a new processing line to sort green beans that were the incorrect size for retail standards. The upgrade cost less than \$50,000, and Second Harvest expects to recover 1 million lbs. of green beans per year.¹³
- Bon Appetit spearheaded Imperfectly Delicious Produce to utilize “ugly produce” in their recipes. They have also instituted donation protocols that have enabled them to adopt aggressive donation goals.¹⁴
- The Alameda Kitchen in Alameda, Calif., uses a shared kitchen to transform fruits and vegetables that would otherwise be wasted into affordable food products and meals for low-income populations.¹⁵
- Several social enterprises have emerged recently to sell value-added products from food waste at a profit. These include Barnana (banana snack bites from rejected products), Misfit Juicery (repurposing wasted food into juice), and MM Local Foods (value-added products from seconds from farmers).¹⁶

Food Waste Recovery

Finally, with regard to wasted food, a third approach is important. Inedible wasted food will be generated even in a high functioning food production/management system and, for the short term at least, large amounts of edible wasted food and other compostable organic waste will also be generated.

Composting, anaerobic digestion and other approaches to processing wasted food are far superior to landfilling and provide significant greenhouse gas reduction benefits. Recovery is more than collection and processing, however. Utilizing the resulting compost, digestate, and other organically derived products to restore and improve agricultural and other soils provide a multitude of benefits, including soil carbon sequestration and soil productivity.

¹² Morehouse, Lisa. “Borderlands Food Bank: Cutting Food Waste at the Border.” *Food & Environment Reporting Network*. April 2015. <https://thefern.org/2015/04/borderlands-food-bank-cutting-food-waste-at-the-border/>.

¹³ “Green Bean Project reduces waste, feeds hungry families.” *The Tennessean*. November 2015. <http://www.tennessean.com/story/sponsor-story/second-harvest-food-bank/2015/11/18/green-bean-project-reduces-waste-feeds-hungry-families/75988104/>.

¹⁴ www.bamco.com

¹⁵ “The Alameda Kitchen.” *Food Shift*. 2016. <http://foodshift.net/the-alameda-kitchen/>.

¹⁶ ReFED, “A Roadmap to Reduce U.S. Food Waste by 20%”, 2016. https://www.refed.com/downloads/ReFED_Report_2016.pdf

Therefore, recovery initiatives in the proposal focus on the potential for greenhouse gas reduction and soil restoration.

Public partners can share information and take a collaborative approach to recovering wasted food by:

- Compiling existing study results that examine soil carbon sequestration impacts of compost, anaerobic digestate and other products that include food waste.
- Designing, funding and implementing additional research across a variety of soil conditions to improve understanding of the carbon sequestration impacts of compost, digestate and other products that incorporate food waste.
- If research suggests significant soil carbon sequestration benefits of compost and other recovery products that incorporate food waste, governments can work on creating new incentives, financial support and market development initiatives.

Private and non-profit partners are recovering wasted food through the following actions:

- The Lower East Side Ecology Center provides New York City residents with free food waste drop-off programs. The resulting compost is incorporated into a potting soil product and sold.¹⁷
- Sandwich MeIn, a Chicago restaurant, sends food scrap waste to local chickens and then serves the eggs from the chickens to close the loop.¹⁸
- Quest Resource manages Walmart's waste stream and is able to send 60% of Walmart's organic waste to animal feed, due to a high number of store locations that are close to rural areas.¹⁹
- For Solutions LLC installed an in-vessel composting machine at a large university and saved the university \$25,000 in trash-hauling fees while producing compost to use for local landscaping.²⁰

¹⁷ "Community Compost Program." Lower East Side Ecology Center. 2016. <http://www.lesecologycenter.org/programs/compost/>.

¹⁸ Bellware, Kim. "This Restaurant Hasn't Taken Out The Trash In Nearly Two Years." *Huffington Post*. April 2014. http://www.huffingtonpost.com/2014/04/28/zero-waste-restaurant_n_5215019.html.

¹⁹ Worley, Kate. "Walmart's Landfill Waste Reduction, the Organics Solutions." Food Waste Reduction Alliance. 2014. http://www.foodwastealliance.org/wp-content/uploads/2014/07/Walmartorganics-case-study_FWRA_07212014.pdf.

²⁰ "Helping a Large Mid-Atlantic University's Sustainability Program." FOR Solutions. 2016. <http://forsolutionsllc.com/case-study/>.