



# COALITION *for* RESOURCE RECOVERY

## Guiding Principles For Recovering Value From Commercial Food Waste

Preamble: The following is the first in a series of documents designed to establish a common framework for accelerating the development of collection and recovery systems for source separated food waste. Increasing food waste recovery is an integral component of creating healthy communities as part of a global shift towards a sustainable future.

Food waste is the third largest waste stream in the United States, with about 34 million tons generated each year. Of that, less than 3% is recovered, resulting in approximately 33 million mtCO<sub>2</sub>e of greenhouse gases emitted per year.<sup>1,2</sup> Given the relative volume of food waste generated by businesses per location as compared with individual households, the commercial sector has the opportunity to play a leadership role in the development of a food waste recovery infrastructure that will benefit communities and regions across the US. For this reason, these guiding principles and Global Green's initial work on organics recovery infrastructure development is geared toward the commercial sector.

The following principles guide Global Green's work on commercial food waste recovery and serve as an ideal for which to strive. These guiding principles are intended as a living framework that reflects long-term needs and will be modified to incorporate new information and changing conditions. These guiding principles are - source reduction first; cost-effective for restaurants and grocers; benefits local communities and regions; effectively recovers the value of food waste; and operationally and environmentally sound.

### Source Reduction First

Source reduction, or preventing food waste in the first place, is the foundation of a sustainable food waste recovery system. It is by far the most environmentally sound and economical manner for grocers and restaurants to recover food waste. Avoiding the purchase of excess food creates significant cost-savings for waste generators and reduces greenhouse gas emissions from upstream supply chain activities such as growing, shipping, and distribution. After source reduction efforts are taken, a plan is needed for recovering the food waste that remains.

### Cost-effective for Restaurants and Grocers

To achieve resource recovery rates needed to dramatically curb greenhouse gas emissions, every effort should be made to design waste diversion and recovery systems which will provide cost savings, or at a minimum, no additional cost, to the restaurant and grocer compared to its existing waste management practices. These goals can be achieved through a continued focus on source reduction along with innovations and market development that result in material handling and collection efficiencies, and reductions in tip fees.

### Benefits Local Communities and Regions

To achieve greater success in siting and the timely deployment of infrastructure, and to be truly sustainable, a food waste collection and recovery system will benefit the communities and regions of which it is a part - environmentally, socially, and economically. To build trust and ensure solutions meet the needs of the local environment, community groups will be engaged early on in the project development process in an informative and collaborative manner.

Collection and processing infrastructure will complement existing land use and support future changes in land use. Recovery facilities will be designed to technically, aesthetically, and culturally match the needs of communities, whether they are manufacturing districts or residential neighborhoods.

<sup>1</sup> US EPA WARM Model Web-based Calculator, Version 12 (Updated February 2012). US Environmental Protection Agency. Web. [Accessed 20 June 2012]

<sup>2</sup> "Basic Information About Food Waste." US Environmental Protection Agency. Web. [Accessed 20 June 2012]

Specific benefits to the local community can include:

- Jobs (local hiring)
- Neighborhood resources and facilities (cleaning up polluted properties on which facilities are subsequently sited, or offering connected amenities such as parks or greenhouses that grow food year round utilizing the food waste processing facility's waste heat), or
- Environmental and human health benefits (e.g. altering truck trips or using biogas or electric powered vehicles)

### Effectively Recovers the Value of Food Waste

Effective recovery is the collection and recovery of material at the highest environmental life-cycle value that is economically feasible, including any resulting by-products.<sup>3</sup> For these reasons, US EPA's value recovery hierarchy for food waste begins with source reduction, followed by re-purposing food to feed people, and then re-use as animal feed.<sup>4</sup>

After reducing and re-purposing as much food waste as possible, a food waste recovery system can provide a valuable service to both society and the economy by creating valued materials and products. Food waste recovery systems can help meet regional needs for creating and replenishing soil by generating products such as compost. Additionally, they can help meet the needs of communities through producing electricity, heat, natural gas, chemicals, biofuel, and fertilizer.

Environmental value and the local economic benefits are maximized when food waste is recovered locally. Local recovery results in greater independence from imported fuels used in transit and in corresponding cost-savings and an improved greenhouse gas footprint. Committed local buyers - whether they are governments, utilities, or businesses - can help ensure the success of diversion programs by providing close and reliable outlets.

### Operationally and Environmentally Sound

An operationally sound recovery system will meet today's demands for environmental performance as well as the age old need of getting rid of putrescible waste in a timely, clean, and reliable manner. To build widespread confidence in the shift toward recovery over landfill, this system will be reliable and open for business daily.

An operationally sound food waste recovery system will be able to accept the level of contamination generated by the commercial sector undertaking best practices in source separation and customer and employee education. Over time, the purity of the source separated food waste stream will be improved with increased education, awareness, and participation.

In addition to improving global environmental health and being consistently open for business over the long-term, a sustainable food waste recovery collection and processing system will be equal to or improve upon local conditions for both worker safety, and air and water emissions.

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<sup>3</sup> This definition as well as the structure and approach of this framework was informed by GreenBlue's vision and framework of sustainable packaging. "Definition of Sustainable Packaging." Revised August 2011. GreenBlue's Sustainable Packaging Coalition. [Accessed 20 June 2012]

<sup>4</sup> "Food Hierarchy." US Environmental Protection Agency. Web. [Accessed 20 June 2012]

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