

# Composting The Problem



Effective waste diversion for a greener restaurant.

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Recent data from the U.S. Environmental Protection Agency (EPA) indicates that America as a whole generated 251 million tons of waste in 2006. For businesses this means every employee creates about 4.6 pounds of trash each day. This is certainly a significant amount of trash for any organization regardless of its type or size and presents a wide array of challenges, ranging from what tactics to take in reducing the waste stream to how best to dispose of waste in general.

The challenges for the food services industry, and restaurants in particular, are the same if not compounded by the amount of organic waste generated each day. According to the Green Restaurant Association, 24% of a restaurant's waste stream is organic in nature and is comprised of non-contaminated edibles (that can be donated), as well as food scraps and leftovers. When other biodegradable byproducts such as soiled paper products, milk cartons, waxed or wet cardboard, wood and decaying flowers or plants are added to this, waste studies put that number closer to 70%.

While the cost of managing waste has always been a significant line item, over the course of the last decade businesses across all industries have begun to concentrate on bringing expenses under control as environmental concerns continue to grow in the U.S. and around the world. The question, of course, is

how best to do this. And many are finding the answers in a well thought out, comprehensive waste logistics strategy that focuses on their evolving business needs and challenges, as well as their overall environmental goals.

## A CLOSER LOOK AT ORGANICS IN THE WASTE STREAM

With current studies indicating a large portion of a restaurant's waste is organic, it is critical to start with a clear understanding of what exactly qualifies as organic and what your options are for disposing of it most efficiently and cost-effectively. By definition, organic waste is any biodegradable matter (see inset for a detailed list), and restaurants have several viable options for diverting these materials from their waste streams.

### Food Donation

Restaurants have been donating edible foodstuffs that would otherwise go unused to local food banks and soup kitchens for decades. This approach is widely accepted, but is somewhat limiting in that donations must be safe to consume. While meeting an important community need, this practice accounts for a relatively small percentage of waste diversion and restaurants need to explore alternative solutions that continue to deliver good will, but also result in cost efficiencies.

### Animal Feed

Some organics can also be used for animal feed year round, most

## BIODEGRADABLE WASTE MATERIALS

- Non-contaminated edible food.
- Outdated or expired food products, as well as frozen foods.
- Leftovers and plate scrapings that cannot be served.
- Fruits and vegetables.
- Grain, as well as day-old breads and pastries, including excess batter.
- Meat, seafood and poultry scraps and bones.
- Fish and animal byproducts.
- Dairy products such as cheese, yogurt, milk and ice cream.
- Eggs and egg shells.
- Coffee grounds, filters and tea bags.
- Plant trimmings and florals.
- Soiled paper products, including milk and egg cartons, wet or waxed cardboard, napkins and biodegradable food containers.
- Soups and consumable liquids such as beer, wine, liquor, juice and soda.
- Wood chips and shavings.

specifically pig feed. Pig farmers typically use vegetables, fruits and grains while others also use meat or eggs. In the latter case, the food scraps are cooked and farms must obtain a license from the Department of Food and Agriculture (DFA), as well as the USDA. In addition to pig feed, some dairy and cattle farms also use food waste to supplement feed at certain times of the year.

### Renewable Energy

In recent years, more attention has been paid to turning organic waste into renewable energy using anaerobic digestion to produce a methane and carbon dioxide gas known as biogas, which can be used in virtually any way natural gas is. The solids remaining after the digestion process are rich in nutrients and can also be used for fertilizer. However, current processes are more complicated and expensive than other renewable energy solutions and, as such, the primary benefit of anaerobic digestion today is more about reducing the amount of waste going into landfills than producing energy. In addition to this, other organics such as paper products and wood, considered biomass, can also be burned to generate electricity.

### Composting

The most significant reduction strategy for those in the food services industry is composting — which can literally convert 100% of biodegradable waste into a much needed resource while also helping to offset a company's waste spend.

### COMPOSTING — FEEDING THE LAND CAN FEED YOUR BOTTOM LINE

Essentially, composting is nothing more than the biological decomposition of organic matter with an end result of producing a very nutrient-rich soil amendment byproduct known as humus. What seems to stop restaurants and others in the food services industry from adopting full-scale composting programs is a lingering set of preconceived notions. In a recent report by GREEN (Global Renewal Energy and Environmental Network), respondents that said composting was not right for their organization cited that they felt it took too much time and effort, required too much space, involved bad odors and, to a lesser extent, was too expensive. At the same time, 57% of these same respondents said they believed composting was environmentally respon-

sible. However, new technologies and streamlined processes have largely eliminated these concerns. The most viable options available for composting include:

#### On-Site Composting

In-vessel composting systems, which come in varying sizes to fit easily in any restaurant kitchen, are designed to handle large amounts of waste year-round. In this case, you feed your organics into a concrete-lined, sealed container to minimize odors. To be successful, this process does require more attention and training than other types of recycling programs since conditions pertaining to temperature, moisture content and aeration must be monitored and

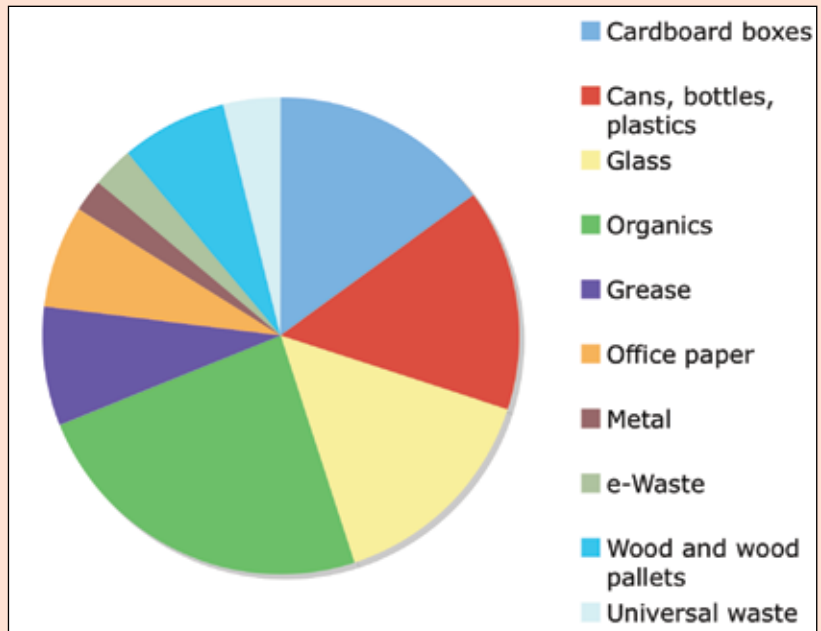
controlled. In-vessel systems can also be cost-prohibitive for many facilities and do require regular maintenance to ensure all gauges are working properly. In addition, local and state regulations may require that you obtain a permit based on the type and amount of biodegradable matter being composted.

#### Off-Site Community Composting

In some communities, restaurants and other food services establishments are working together to collect and deliver their organic waste to community composting sites for use locally. This requires a good deal of labor and coordination from a restaurant's perspective, including sorting and storing its biodegradable matter,

## REDUCTION, REUSE AND RECYCLING — THE TREASURE IN YOUR TRASH

Comprehensive reduction, reuse and recycling strategies are proven to lower a business's overall waste management costs. As an example, the EPA cites recycling just one ton of aluminum cans saves the energy equivalent to 36 barrels of oil or 1,655 gallons of gasoline. Here's a look at the commodities you could be taking out of your waste stream and diverting for alternative uses.



NOTE: "e-Waste" includes old computers, printers, fax machines and other electronics while "universal waste" refers to batteries, lamps, mercury-containing items (including some light bulbs) and other potentially hazardous materials.

as well as arranging for transportation. Additionally, like all community projects, a group composting program needs to be overseen and managed, and may come with restrictions based on local regulations that limit the type and amount of organics that are accepted. In the end, this may not be a viable, large-scale waste diversion strategy.

#### *On-Site Collection*

Many restaurants find an easier and most cost-effective solution is to separate organic waste appropriately and contract with a specialized hauler to transport it to a licensed commercial composting facility. The removal of organic waste typically costs less than general waste hauling and, depending on your needs, requires relatively inexpensive equipment since biodegradable matter can be stowed in rolling bins or totes, with or without biodegradable liners, compactors and/or old cardboard boxes.

To keep odors to a minimum, bins or totes should be tightly covered and, if feasible, refrigerated until pickup and washed regularly. Some restaurants that are not in areas that recycle cardboard have also opted to use waxed and unwaxed boxes to collect organics to make full use of

### THE BENEFITS OF COMPOSTING

#### *For Restaurants*

- Reduction in true disposal costs.
- Lessens environmental footprint.
- Enhances public image and corporate stewardship.
- Creates a sustainable closed loop waste waste-to-market application.

#### *For the Environment*

- Improves soil structure and water retention.
- Reduces need for chemical fertilizers and pesticides.
- Diverts waste from landfills and reduces greenhouse gases.

## Even if you've already taken steps toward reducing your waste stream, chances are you could be doing more to cut costs. Consider conducting a full waste audit that analyzes how much trash you generate overall.

an item that might have otherwise entered the general waste stream.

Regardless of the type of containers you choose, all should be clearly labeled and/or color-coded as to exactly what types of waste can go into them. For ease, compost bins should be kept near prep stations and dishwashers, as well as pantries and refrigeration and freezer equipment to facilitate cleaning out expired food items.

As an added benefit, composting in general creates a “sustainable closed loop” application. Essentially, this means you are able to achieve a true waste-to-market situation whereby the waste you divert becomes a much-needed commodity. Your local community benefits in that it has access to quality compost at fair market prices, as does the larger global community since you have succeeded in reducing the amount of waste being hauled to landfills. And, depending on your location and grounds upkeep needs, you can also take advantage of the end product by purchasing mulch from the same composting facility to which you feed your organic material.

#### **GREENING YOUR RESTAURANT: GETTING STARTED**

Even if you've already taken steps toward reducing your waste stream, chances are you could be doing more

to cut costs. Consider conducting a full waste audit that analyzes how much trash you generate overall. You already know first-hand that organic materials make up a large portion, and perhaps the majority, of your waste, but a thorough assessment will give you the specifics you need to understand exactly what and how much you could be diverting.

While it's certainly possible to do this on your own, to devise the most effective strategy it is best to find a waste logistics provider that has the expertise and resources to help you uncover your best options for lowering your overall disposal costs — whether you operate one establishment, dozens or even hundreds. A proper evaluation will uncover how your waste stream impacts your organization and the environment location-by-location, helping you work toward overarching global green solutions.


As such, look for a provider that has experience in your industry, as well as the proven processes in place to gain an in-depth understanding of your individual operational needs. This encompasses everything from the type and frequency of collection based on year-round and seasonal activity, to composting options that fit your organic waste volume, to other reduction, reuse and recycling strategies, to onsite staff training, to

owning versus leasing equipment, to maintaining onsite equipment, to handling last minute or planned construction and demolition projects and more. Ultimately, you need a provider that can not only help you determine what's right for you, but also has the internal resources and external vendor relationships to successfully implement and sustain your strategy.

As it specifically relates to your biodegradable matter, be sure the company you choose has a national network of reliable vendor relationships to ensure you the lowest cost and peace of mind that the waste you are diverting is actually being routed to a licensed food composting facility. This is a critical factor as there are currently about 120 such facilities throughout the U.S.

Managing waste today is not as simple as it once was. For one thing, the EPA cites that as of 2006 there were 1,754 landfills in the U.S. com-

pared to around 8,000 in 1988. At the same time, our waste production has remained steady — making the concepts of reduction, reuse and recycling no longer just a nice thing to do, but an absolute necessity for protecting the global environment. And since each organization's waste production is unique even within its own industry, it is essential that both small, local proprietors as well as large, national chains team up with a waste logistics provider that goes beyond the traditional role of "vendor" to become a business partner.

In the end, choose a partner that takes the time to get to know you and the way you do business to deliver a total, long term waste logistics solution that meets your financial goals and your environmental objectives as well. 

#### RESOURCES:

Earth 911  
<http://www.earth911.org/>

America's Second Harvest  
<http://www.secondharvest.org/>

A Guide to Commercial Food Composting (EPA)  
<http://www.epa.gov/epaoswer/non-hw/organics/fd-guide.htm>

BioCycle Magazine  
<http://www.jgpress.com/biocyclus.htm>

Food Diversion Through Animal Feed  
<http://www.ciwmb.ca.gov/FoodWaste/AnimalFeed/>

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