



FOOD WASTE DIVERSION GUIDE FOR RESTAURANTS



Starting or Expanding a Food Waste Diversion Program at Your Restaurant

Once you have taken steps to reduce food waste and donate as much of your surplus food as possible, the following describes the process used to set up food waste separation and collection systems for your restaurant:

To Start a Food Waste Diversion Program:

1. Evaluate your current operations and opportunities
2. Set up or expand your food waste diversion program:
 - a. Contact the local health department and your current waste haulers
 - b. Develop a food waste separation system
3. Train employees and begin a food waste diversion program
4. Monitor and maintain your food waste diversion program

I. Evaluate Your Current Operations and Opportunities

Learn about your current waste system

Your restaurant may already have a system in place to deal with waste, which most likely includes a recycling program. In order to add or expand a food waste diversion program, take some time to learn about the current waste system and the type and amount of waste you generate.

Gather all the general information you can from your current hauler: service agreement, waste bills, and weight/tonnage reports. In addition, gather as much specific information as you can about food waste and other materials you generate, which can be composted.

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Begin by asking these questions:

- How much and what types of waste does your business generate?
- Do you dispose of more than one ton of food waste per week, and are, therefore, subject to the commercial organic material waste ban going into effect in 2014?
- Do you currently separate materials for recycling and/or food waste diversion? If so, what is your system – e.g. what materials are collected into what kind of collection containers and who handles the materials? Basic recyclables/compostables at restaurants can be cardboard, bottles and cans, cooking oil, food waste and soiled paper products (such as waxed cardboard, parchment paper, waxed paper and paper towels).
- Who is your current waste hauler? What trash and recycling services do they provide? Could they transport food waste to a food waste processing or composting facility?
- What is the frequency of collection, number and type of collection containers, materials collected, and service costs?
- What is the performance of the current program? Are recyclables still being disposed?
- Who from your organization will be involved in implementing a food waste diversion program?
- Do you have full support of management?

Identify changes required to implement or expand a food waste diversion program at your restaurant
Once you are familiar with the current program and

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service needs, determine how you can expand your program to include food waste and other organic materials. In designing your program, it is important to remember that you are not creating any new waste materials, but rather just diverting material from one container to another. Some common changes include identifying materials to be diverted, changing or adding collection containers, and working internally to increase participation and compliance. Key questions to ask include:

- Are recycling containers for food and organic waste adequate and clearly labeled?
- Do staff members understand the food waste diversion program and its benefits?
- Can separating materials for diversion be made easier to increase participation?
- Can trash services and costs be reduced through increased diversion or reduced waste generation by reducing trash container sizes or trash collection frequency?
- Can you add other compostable materials like soiled paper, waxed cardboard, or biodegradable serviceware to your food waste diversion program?
- Can you save money and reduce waste up front by buying less, switching from disposable to reusable packaging, or eliminating packaging elements?

2. Set Up or Expand Your Food Waste Diversion Program

Contact your Health Department

It is essential for the local health department to understand and support your restaurant's food diversion program since they have a direct role in permitting and inspecting food establishments. RecyclingWorks in Massachusetts has worked with local health officials to develop recommended **Best Management Practices (BMPs)** for use by health agents in supporting and informing local oversight of commercial food waste collection programs.

Following the **Best Management Practices** noted below will help ensure a successful program. An un-supportive official can shut down any problematic food diversion program very quickly. On the other hand, health inspectors will welcome and support a well-run program.

For practical, up-to-date information on setting up a food waste separation system, including types of acceptable materials, recommended container types, and preferred frequency of hauler waste pick-ups, view the

Local Health Department Guidance for Commercial Food Waste Separation at

www.recyclingworksma.com/local-health-department-guidance-for-commercial-food-waste-separation

Contact your waste hauler

If you already have a trash and recycling hauler, call your account representative to discuss ways to modify existing services. Before you make any changes, learn about your existing contract and when the contract is scheduled to expire.

When you call your hauler:

- Know the materials you want to divert and estimate the waste volume. If you don't know this directly, other related information, such as amount of trash disposal, may help in estimating this indirectly.
- Ask how your items need to be prepared.
- Find out if the hauler offers onsite waste audits, signage, educational materials or trainings to help improve your program. If not, RecyclingWorks can help.
- Make sure the hauler can assure you that the materials will be properly handled once collected.
- Find out where the hauler takes your waste materials and include that information in employee and customer education. Your hauler may want flexibility to deliver food waste to more than one facility. If so, ask for all of the facilities that the hauler will potentially deliver to.

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- Ask how your hauler can help you save money through reduced disposal costs – i.e., by adjusting disposal services.

Work with your hauler to design

Make sure you know your pick-up schedule and any other details about removing food waste from your restaurant including the type, quantity, and location of the collection containers (see page 4). All container types should be placed in a location convenient to restaurant staff and accessible to your hauler. Know when the first food waste collection will take place and schedule an employee training session at least a week in advance.

To ease future program communications, it may be a good idea to meet your hauler in person if you do not already know each other. Coordination with your hauler cannot be overemphasized. Lack of communication and coordination on either end could result in program failures and the hauler losing you as a customer.

Design the food waste diversion program

Who's in charge? It is important to have a point person for the program, as well as full support from management throughout the design and implementation of your food waste diversion program. The champion of this effort should either be the person currently in charge of contracting for waste and recycling services or someone who works closely with management. Larger restaurants may have a Green Team in place with a diverse cross section of employees engaged in implementing environmental initiatives. In those instances, Green Team members should be included in starting or expanding food waste diversion programs. Food waste diversion program guidelines need to be clearly communicated to staff and identified on signage displayed in employee areas and on waste containers.

Work with the management to develop a food waste collection system for the kitchen and waste collection areas. Keep it simple and incorporate kitchen and custodial staff input on the system layout and suggested signage.

Kitchen waste separation

Source separation of food waste starts in kitchens and dish washing rooms. Recommended back-of-the-house practices are as follows:

- Kitchen food waste should be collected in dedicated receptacles (see above) such as bowls, buckets and barrels in the same area that trash receptacles are currently collected.
- Containers should be leak proof and covered when not in continuous use, or when full. They must be intended only for the purpose of food waste collection and clearly marked.



- Food waste should be collected and removed from the kitchen/dish room at the same frequency as trash is removed from these areas.
- One option, if you have the extra space required, is to store the collected food waste containers in a walk-in refrigerator prior to the hauler pick up. This helps to cut down on any odors.
- Once collected, food waste should be brought to a storage area near the trash dumpster or compactor where the hauler will pick it up.

Back-of-the-house food waste removal/relocation practices are dependent on the volume produced. Food waste removal from the kitchen to the hauler's collection containers at the same frequency as trash is reasonable for most establishments and seasons. At a minimum, food waste relocation by custodial or kitchen staff from kitchen areas should be completed every shift. The guiding principle is that food waste should be removed as often as necessary to keep the kitchen area sanitary and to prevent odor as well as vermin and vector harborage.

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Plate scrapings

In full-service or sit-down restaurants, plate scrapings can generate a large portion of the food waste stream. If sending to an off-site composting facility, garnish, paper napkins, and uneaten food can all be collected together. This is one area that requires special attention due to the need for staff to separate out non-organic materials, like straws, creamer packets, etc. However, in most cases, the extra separation required is minimal and is outweighed by the benefits. It's recommended that you monitor the food waste containers for non-organic material contamination and gently remind employees of food waste separation guidelines when needed.

At the start of your program, we advise against collecting plate scrapings in areas where customers bus their own tables. Even with clear food waste separation signage, there tends to be high levels of non-organic materials found in the food-waste specific containers due to human error. This creates a big problem for the processing or composting site.

It is better to start with a pilot or scaled-down food waste collection at the beginning of your program and keep the food waste stream clean, than to have an all-encompassing food waste diversion program that is regularly mixed with non-organic materials. If you have a well-established program and choose to tackle front-of-the-house customer waste, invest in customer education and make sure to monitor the quality of material collected regularly.



Kitchen collection containers

The type of containers used for separation in the kitchen is very important, and can make it easy for staff to handle food waste while helping to minimize concerns from the local Health Department. A 4- to 6-gallon bucket with a handle and sealing lid is ideal. These containers are big enough to handle a good volume of food, while remaining easy to carry when full, and two can be stacked to provide the preferred height in your work area. They can be closed and set aside without concern about contaminating raw food, and best of all, these sizes fit through most commercial dishwashing systems.

In some places, this collection system is actually more sanitary than the traditional trash containers due to the closeable lid and ease of cleaning. Extra or empty buckets nest and are inexpensive (about 50 cents each). Another option is to reuse bulk food containers or obtain used buckets from local food processing/manufacturing companies.

Tip: There are many household products that come in reusable containers, like kitty litter, soap, deicers, etc. Ask staff to bring these empty containers in so they can be used for your food waste diversion program. These containers are very effective and help to engage staff in the process.

Hauler collection containers: compactors, dumpsters and totes

The type of waste container you obtain from your hauler depends on several factors, including space requirements, accessibility to staff and your hauler, capabilities of the hauler's trucks, the amount of waste collected, and the frequency of collection. There are advantages and disadvantages to all types of containers. Call your hauler to discuss what choices are available as well as the pros and cons of each.

A compactor can be a very cost-effective solution for collecting large amounts of waste, but they may be too big for certain locations. Siting of a compactor can require significantly more up-front cost compared to other options. In addition, compactors must be

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emptied off-site, so it is recommended that you talk to your hauler about the possibility of swapping out compactors during pickups rather than having to wait until the compactor returns empty. If you choose to install a compactor, be sure to set a pickup schedule that doesn't leave the food waste sitting too long, while maximizing the compactor's capacity.

Dumpsters come in a variety of sizes based on volume of material needs and can be emptied on site by the hauler's truck. Some limitations include the need for the dumpster location to be accessible by the hauler's truck and the relative difficulty of cleaning dumpsters. However, dumpsters come in a variety of sizes allowing their collection capacity to be flexible and adjust to your restaurant's needs. In addition, one truck can easily pick up waste from several dumpsters along their route, maximizing efficiency for the hauler.

Totes and wheeled carts are very mobile, versatile, and come in a variety of smaller sizes as compared to dumpsters. A 96-gallon wheeled cart can be too heavy when full of food waste, so the recommended size is generally a 64-gallon one. Wheeled carts are easy



to keep clean and their versatility means that adding or subtracting collection capacity is simple. They can clutter an area and possibly limit the efficiency of your loading dock if you are using a large number of wheeled carts. In this case, you may want to consider

replacing these wheeled carts with a small dumpster. Wheeled carts are more labor-intensive for the hauler and may warrant more expensive service options, depending on the hauler's equipment and your restaurant's specific situation. In some cases, you may elect to use a biodegradable liner to help keep your wheeled carts clean – discuss possible liner types and best practices with your hauler before using them in wheeled carts.



Location, location, location

Placement of containers inside as well as where the hauler will collect them from is very important. If restaurant staff has to walk a distance to the food waste container, while the trash is in a more convenient location, the food waste diversion program is not likely to work smoothly. Many restaurants and bars clean after closing, which can be very late at night. If it's dark and the weather is bad, there's a chance the long walk to food waste containers will not happen. It is imperative to design a program for success by diminishing the possibilities for failure.

Hauler collection frequencies

As a rule, food waste should be collected by the haulers at a frequency that minimizes odor, insects and other pests - just like your trash now. Collection frequency will vary based on hauler routes, truck capabilities, collection container types, and your restaurant's food waste generation rate.

Variations on the following recommended practices should be agreed upon between your restaurant, your local health department, and your hauler:

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- In summer months (April-September), it is recommended that food waste collected in wheeled carts or dumpsters be picked up by your hauler at least twice per week.
- In winter months (October-March), it is recommended that food waste collected in wheeled carts or dumpsters be picked up by your hauler at least once per week.
- Year round, it is recommended that food waste collected in compactors be picked up by your hauler at least once per week.

Certain situations may require more frequent hauler pickups or removal, such as the types of food waste generated and the proximity of your collection container to other establishments or residences. Most establishments will be fine with the recommended twice a week collection schedule, while restaurants generating high-odor food waste, such as seafood restaurants, may need more frequent pickups. In general, food waste should be collected as often as necessary to prevent a nuisance, which includes odor generation and pest attraction. Commercial food waste collection is often picked up more frequently than traditional trash programs thus removing the odor causing material sooner. Once food waste is removed from trash, trash collection frequency may be able to be reduced.

Waste container storage practices

There is considerable variability in outdoor waste collection requirements, space availability, and types of containers. This is especially evident when comparing restaurants located in dense urban centers with those located in suburban or rural areas that have less spatially constrained footprints. Some waste containers are stored inside due to space constraints.

- **Storage:** Outdoor storage surfaces should be nonabsorbent (concrete or asphalt), smooth, durable, and sloped to drain. Some communities require waste collection areas to be fenced in or otherwise out of view. You should check with your local health department to determine requirements specific to your area. The waste storage area must be maintained in good repair, clearly marked with no-parking signs, easily clean-

able, and if possible, fenced in to prevent trash materials from blowing outside the collection area. No food debris/residue should be outside of the containers, and no unnecessary items should clutter the storage area.

- **Container maintenance:** Dumpsters, wheeled carts, and compactors should have the ability to be closed and cleaned, leak-free, water tight, and capable of being locked. All doors, hatches, and tight-fitting lids should be closed or in place when not in immediate use to prevent pests from entering the container. Biodegradable, plastic, or wet strength paper bags may be used to line closed wheeled carts (plastic bags must be disposed of as trash once emptied).
- **Cleanliness:** Wheeled carts, dumpsters, compactors, and other bins should be cleaned often enough to prevent odor and other pest attractions. Use pressure washers, hot water or steam, with detergent to clean waste containers as necessary.

3. Train Staff and Start Diverting Food Waste

The importance of regular communication, clear signage, and proper employee training cannot be emphasized enough. Involve staff members who will be handling food waste early in the planning stages, and bring any food service contactors into the process as well.

Develop training materials and signs

When developing your training materials and signage make sure you talk to your hauler or the waste processing facility to determine which materials are acceptable and which are not.

Signs need to be replaced if they become illegible, damaged, or if the acceptable materials change. Be sure to keep extra copies on hand to switch out quickly and if possible, obtain a digital file that can be modified when necessary.

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Tip: Lamination lasts. If your budget allows, laminating the signs will make them last much longer. You can also check with your hauler or municipality to see if they have already developed signs or have laminating capability.

Translate signs into other languages as needed and appropriate for your staff. Include clear photos of acceptable and unacceptable materials.

Conduct staff training

Conduct brief training sessions on the food waste diversion program at ongoing staff meetings. The trainings should be short (5-10 minutes), cover all changes in staff tasks, and emphasize that staff will be separating the same waste materials into different containers. Go over the new signage, show staff waste container locations, and set aside time to answer questions about the program as they come up.

Training programs will vary according to the specific guidelines and priorities of the restaurant. Your restaurant, for example, may be primarily interested in compliance with new regulations, while others may want



to focus on cost reductions or positive environmental impacts of food waste diversion.

It is very important that the manager and employee trainer know what materials are acceptable in your program. Since, turnover in restaurant staff can be high, a manager who really understands what materials are acceptable is essential to the longevity of the food waste diversion program.

When you have completed your training and are ready to begin, contact your hauler to have the food waste compactor, dumpster, or wheeled carts delivered. Let your hauler know that your staff is trained and that you have the back-of-the-house food waste separation system in place, so your restaurant can be added to your hauler's food waste collection route.

Tip: Engage your staff by linking successful participation in the program to incentives. Create a worksheet that lists your goals and related savings so they know what the impact is on your business. Posting the before and after volumes of waste will show staff how they are doing. Involving staff to make it work may help the restaurant save money, comply with the regulations and improve the environmental performance of the business. Popular rewards for staff have been pizza or ice cream parties, longer breaks or being able to leave early.

4. Monitor and Maintain the Program

In the first few weeks of the program, regular monitoring to avoid trash or unacceptable material contamination in your food waste collection is absolutely essential. In all likelihood, there will be questions about the food waste diversion program no matter how thorough the initial training. The first few months of a food waste diversion program is a good time to answer questions and assess if food is being separated properly. Continued attention and encouragement will help the staff get on board and ensure that all the hard work up to this point is not wasted. Ongoing contamination of the separated food waste will make it difficult, if not impossible, for the program to succeed. On the other hand, celebration of successes and continuing communication of the benefits of a successful program can go a long way in sustaining and improving the program. If possible, let staff know how much waste has been diverted at milestones along the way and thank them for their role in making the program a success. Talk to your hauler for help in quantifying your program's success.

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Container assessment

At the beginning of your program implementation period, you may realize you underestimated or overestimated the volume of food waste your restaurant generates. To correct this, you can conduct some follow up monitoring, which should include a quick assessment of the number of kitchen containers in use and the suitability of the hauler's collection container(s). Inspect for contamination in food waste containers both in the kitchen and in the hauler's containers by looking for plastic, glass, or other contamination. In addition, you should ask your hauler to provide feedback about the material collected from your restaurant. When you find contamination issues, communicate these findings to staff, informing them of what specific materials or locations contributed to the contamination findings. Let them know you are going to be looking at the separated food waste containers and set up a method of communication to easily and effectively field staff questions and provide feedback on contamination findings.

Encouragement

The initial monitoring results can be discouraging if you are not getting full participation from staff members or if you are consistently finding trash materials mixed in the food waste containers (i.e. contamination). You may need to offer additional training, remind staff of the regulatory requirements and benefits of food waste diversion, or ask for back-up support from your waste hauler or RecyclingWorks. Staff training and education as well as encouragement can pay off.

Continuous contamination

Some staff members may need additional help and training before they consistently separate the food waste properly. Remember that behavior changes can be difficult to implement, old habits are hard to break, and that everyone learns at their own pace.

You will be more successful when separating the food is easier than trashing it. Look at the kitchen set-up to start. If the compost container is right next to the trash, and/or there are no clear signs, it could be an easy fix. Have another conversation with staff to assess their commitment and understanding of the

food waste diversion program. Highlight the benefits of food waste diversion and showcase program successes. Sharing a story about where the waste is going (e.g. to a local farm) and how it is being used in your community can be motivating to staff. Fixing contamination problems takes time, regular staff communication and training, and an open mind.

Tip: You can also reduce the chance of contamination by eliminating the contaminants to begin with:

- Switch to reusable utensils and wares.
- Purchase only BPI certified biodegradable disposable items like straws, cups, silverware.
- Switch from single serve packets to bulk dispensing for items like ketchup, crackers, butter, etc.

Odor

During the maintenance phase of the project, make sure you monitor odors and address them before they reach unacceptable levels. Use your nose - check frequently to catch any odor problems early and be sure to address these issues immediately.

When a food waste diversion program is designed correctly and working properly, odors should not be an issue. There is no new waste being generated, since the same food waste material was going in the trash before initiating the food waste diversion program. In fact, since the food waste is stored in separate containers that receive periodic cleaning, many managers may notice an improvement in the waste collection area odor. Food waste will produce an odor if it sits for too long, whether it is mixed in with trash or collected separately. The key will be removing it from the site before the odor builds to unacceptable levels.

Consistent and frequent pickups are essential, and the hauler may need to plan for additional pickups in the warmer months. In the case of a missed pickup or other hauler issue, contact the hauler imme-

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diately. Placing wood chips or shredded paper in the bottom of the wheeled cart or dumpster can help to remove the majority of the food waste when it dumps. Some restaurants have found that lining the bottom of a wheeled cart with waxed cardboard, a common restaurant waste that is organic but not recyclable, can reduce odors by helping to decrease water content

of the food waste. Some haulers may also use sprays or perform periodic bleaching of the containers, so be sure to discuss odor issues with your hauler.



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