



MANAGING FOOD WASTE IN RESTAURANTS

How **small steps** can
have a **big impact** on
reducing waste and
protecting the planet

A combined effort with





SUSTAINABILITY IS WHAT'S HOT IN THE RESTAURANT INDUSTRY — and has been for years — and minimizing food waste is no exception.

The restaurant industry is in a unique position to help reduce the amount of food that goes into the trash in the United States. By managing how restaurant operators order supplies, prepare foods, plan quantities and donate or divert unused food, the restaurant industry can champion food waste reduction efforts in their communities.

Each year, American consumers, businesses, and farms spend \$218 billions a year (or 1.3% of GDP) growing, processing, transporting, and disposing food that is never eaten, according to [ReFED](#). Meanwhile, one in seven Americans is food insecure. U.S. restaurants only generate about **18% of this wasted food**, but that is still billion of pounds of food that could feed hungry people or be reused to make energy or compost. **It could save an estimated \$25 billion annually, as well, according to ReFED.**

A portion of this \$25 billion is pre-consumer food waste. It's generated in the kitchen when the staff over-orders supplies, over-produces the amounts needed, trims food poorly or lets it spoil in storage.

An operation can end up throwing out **4% to 10%** of the food it purchases, and that percentage can rise in buffet-style concepts and at restaurants with diverse menu offerings requiring large and varied food inventories.

BUSINESS BENEFITS

Reducing food waste improves your bottom line. Investing in food waste reduction efforts has shown to have a **7:1 benefit-cost ratio**, meaning for every dollar invested to reduce food waste, restaurants could see as much as \$6 in return on the investment.

ReFED's [A Roadmap to Reduce U.S. Food Waste by 20%](#) estimates that the restaurant industry has the potential to gain \$1.6 billion in profits annually from food waste reduction tactics; \$620 million of it just by tracking and analyzing food waste.

Since **food costs typically account for 28% to 35%** of a restaurant's operating budget, preventing food waste can have a big impact on any operation's financial performance. Some studies have put the cost of food waste at as much as **4.2% of total sales**. Preventing food waste not only saves on food costs, in some restaurant concepts, it also can reduce labor costs from food preparation and cut down on waste-hauling costs (less trash to haul).

COURTING CONSUMER SENTIMENT

Consumers look very favorably on any effort a restaurant makes to reduce, reuse and recycle.

Approximately 55% of consumers say they consider a restaurant's food waste reduction efforts an important factor when they choose a restaurant, according to the National Restaurant Association's report [The State of Restaurant Sustainability, 2018 edition](#).



DEFINITIONS

BACK-OF-HOUSE (BOH) includes all the behind-the-scenes areas that customers will not see, such as the kitchen, dishwashing area, and storage.

FOOD WASTE is any solid or liquid food substance, raw or cooked, which is discarded. Food waste is made up of all the organic remnants that can be generated when food is processed, handled, stored, prepared, cooked, and served.

FRONT-OF-HOUSE (FOH) is where customers engage with restaurant staff to order food and beverages, whether they're dining in or taking out.

INEDIBLE PARTS are components associated with a food that, in a particular food supply chain, are not intended to be consumed by humans. Examples include shells, bones, rinds, pits and stones.

POST-CONSUMER FOOD WASTE is food discarded by customers after they've purchased it. This waste is not in control of the foodservice operator.

PRE-CONSUMER FOOD WASTE is food discarded by staff in the kitchen. This waste is in the control of the foodservice operator. It includes all waste generated in the back-of-house due to overproduction, trim waste, expiration, spoilage, overcooking, contaminating or dropping items.



Read on for some **GREAT FOOD WASTE MANAGEMENT EXAMPLES...**

EXAMPLE 1: Restaurants are getting very creative when it comes to reuse.

Salt & Straw, a Portland, Ore.-based ice cream company, steeps cream with spent rum spices from nearby East Side Distillery and blends in locally grown (but bruised) apples for a specialty flavor based entirely on food rescue. Co-founder Tyler Malek noted in a [Fast Company article](#), “There’s money to be made in rescuing food; that’s the proof of concept.”

EXAMPLE 2: The chefs at 21 Greenpoint in New York City have found a way to bring in a crowd by offering their seven-course Sunday Night meals for \$21 per person.

Made up entirely of leftover foods from dishes cooked earlier in the week (and edible food scraps), courses are served family-style. The delicious and creative dinners wow the guests and leave the refrigerator and trash emptier at the end of the week.

EXAMPLE 3: Trends that embrace good causes attract customers and generate profit.

Food waste reduction and sustainability can open the door on creative new dining experiences (following the footsteps of Dan Barber’s gourmet [WastED pop-ups](#) in New York and London back in 2015.)

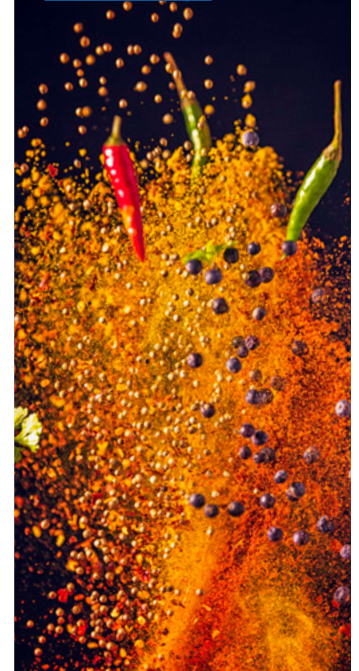
In addition, when food costs rise, restaurant owners and operators express the need to take steps to reduce food waste and save on operating costs. See the breakout **“Making Up The Difference”** from the National Restaurant Association’s [2020 State of the Restaurant Industry report](#) (and see chart on page 3).

what's hot

2020 CULINARY FORECAST

Each year, the National Restaurant Association surveys hundreds of chefs to identify top culinary trends. In the Association’s past three [What’s Hot](#) surveys, food waste reduction and sustainability efforts such as local sourcing, zero-waste cooking and eco-friendly initiatives have ranked high.

In 2020, eco-friendly packaging was the top trend overall. In 2019, using more “ugly” or imperfect produce made the top 25 list along with locally sourced meat, produce and seafood, and [seafood raised sustainably](#).





A WASTE REDUCTION PILOT PROGRAM

The U.S.'s more than one million restaurants serve an estimated 170 million people a day, providing great food and beverage options round-the-clock when, where and how consumers want them.

For smart operators, meeting the heavy customer demand also means finding ways to minimize waste created as a byproduct when food is prepared and served.

The National Restaurant Association partnered with [World Wildlife Fund](#) on the [86 Food Waste](#) project. Reducing food waste is a key initiative for WWF, which began working with the Association in mid-2019. The resulting 86 Food Waste project included 30-day programs to reduce food waste in a test group of participating restaurants with support from [The Rockefeller Foundation](#) and [Tork](#), a brand of [Essity](#).

The Association and WWF recruited both national and independent restaurants to participate. Experts collected food waste data from the restaurants at the start of each 30-day pilot, audited each location's food waste, and analyzed the results. One additional case study, from a

restaurant company in Colorado, came to the project runners' attention and results were included in the report.

Once the WWF experts understood each restaurant's current approach to reducing food waste and the effectiveness of that approach, it created a roadmap to help participating restaurants more effectively reduce waste.

The roadmap focuses on three areas:

- **Source reduction/waste prevention**
- **Food donation**
- **Diversion to resource recycling options such as composting.** The study showed this area can be the most difficult to undertake because municipalities often lack infrastructure to support it.

WWF provided the restaurants with tools, including a training video for employees and [guidance](#) on everything from employee engagement to menu design to donation practices. Employees at participating restaurants also were surveyed before and after the project.



FOCUS ON FOOD WASTE

To help cut costs and enhance the efficiency of their operations, a solid majority of restaurant operators plan to improve food waste management in 2020.

MAKING UP THE DIFFERENCE

Actions that restaurant operators plan to take as a result of higher food costs in 2020*

ACTION PLANNED	FAMILY DINING	CASUAL DINING	FINE DINING	QUICK-SERVICE	FAST CASUAL	COFFEE & SNACK
Increase tracking of food waste	71%	79%	67%	68%	67%	63%
Increase menu prices	72%	68%	67%	74%	72%	58%
Cut costs in other areas of operation	66%	57%	64%	61%	55%	67%
Shop around for other suppliers	53%	66%	72%	27%	37%	63%
Purchase more items from local sources	49%	57%	61%	34%	27%	46%
Adjust portion sizes	30%	43%	33%	28%	14%	17%
Substitute lower-cost items on the menu	25%	28%	19%	28%	15%	25%

Source: National Restaurant Association, *Restaurant Trends Survey*, 2019

*Base: Restaurant operators that anticipate having higher food costs in 2020



Case Study 1

MANNA & MILK + HONEY CAFÉ AT MUSEUM OF THE BIBLE

Manna and Milk + Honey Café, both located in the Museum of the Bible, Washington, D.C., are operated by Chef Todd Gray and Ellen Kassoff Gray. The husband-and-wife team also own and operate Equinox, which focuses on sustainable and seasonal food. They are active participants in the [#notwasted](#) movement.

The menu concept for both [Milk + Honey Café](#), a coffee shop, and [Manna](#), a fast-casual option, is plant-oriented and inspired by Mediterranean cuisine. The Grays have always worked to operate sustainably and saw the 2019 food waste pilot program as an opportunity to examine additional ways to prevent and manage food waste in these two outlets. Their efforts included staff training, customer messaging and partnering with local compost hauler [Pluvr](#).

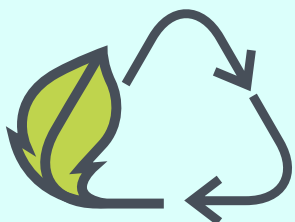
The team spent five hours training the 60 employees at Manna and Milk + Honey Café on proper back-of-house composting techniques. The owner trained the managers who then trained staff members. Training included hanging posters in production areas, discussing composting and the importance of reducing food waste at pre-shift meetings, and monitoring how employees adopted the new behavior.

Managers hung posters with food waste statistics and facts in FOH dining areas to educate customers, as well. For the duration of this project, customers were prompted to sort their meal waste for composting.

Customer reactions to these prompts ranged from strong support to stress about sorting items incorrectly. Often customers chose to ignore the messages about how to sort their own waste items, the restaurant reported.

The team said every restaurant needs to explore how best to reach their own staff and customers, adding the need to get buy-in quickly. They recommended that messaging should be less than two paragraphs with bullet points and great photos.

PROJECT FOCUS



COMPOST



BIGGEST SUCCESS

According to Kassoff Gray, **teaching young culinary staffers who are new to the industry about food conservation and waste reduction** was the most gratifying – and challenging – aspect of the 30-day program. Staff opinions turned from skeptical to positive during the pilot. Team members mentioned that they “can’t believe [they] used to throw so much food in the trash.”

Staff said that it felt good to contribute to a larger cause. This **increased awareness led to significant reductions in both absolute food waste and waste per guest**. The hope is that introducing these topics early in their culinary careers will lead to wider proliferation of sustainable practices.



Case Study 2

MANHATTA

**New York City's
Manhatta is
part of the
Union Square
Hospitality
Group operated
by CEO Danny
Meyer. Chef
Jason Pfeifer
and his team
serve up a menu
of seasonal
cuisine.**

Angel Veza, former sourcing and procurement supervisor at [Union Square Hospitality Group](#), is passionate about cutting food waste. Veza came to Union Square Hospitality Group from [ReFED](#), one of the nation's leading groups working to reduce food waste.

An initial audit of [Manhatta's](#) waste stream found that a popular dinner entrée that included lobster tail created a significant amount of organic waste in the form of lobster shells and claw and knuckle meat. The restaurant procured whole, live lobsters for this dish.

The team aimed to fully use the lobster; they used the tail for the dinner entrée, the knuckle and claw meat in a lobster salad offered at lunch and made lobster jus from the shells.

Dividing up lobster meat for lunch and dinner didn't stay balanced, though, since higher cover counts at dinner created an oversupply of knuckle meat for lunches, and the restaurant ended up having to compost these unused portions of edible lobster meat. The shells — although used to make lobster jus — were an inedible by-product and accounted for 40% of Manhatta's organic waste stream.

The restaurant had conversations with its supplier, [Greenpoint Fish and Lobster](#) to discuss alternative supply strategies. Greenpoint provided Manhatta sample lobster tails to test in their kitchens and the chefs eventually changed their purchasing strategy.

THE RESULT

By buying lobster tails rather than full lobsters, the restaurant reduced its seafood waste by 62%. The team saved two hours of staff time a day by not having to butcher and prep whole lobsters. The total price per pound for lobster tails was slightly more than sourcing the live lobsters, but the savings in labor costs made the change an overall win.

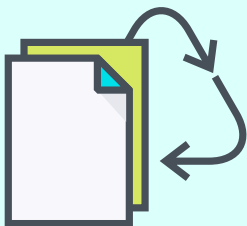
Because the supplier kept the rest of the lobster parts, other local restaurants were able to source the remaining lobster body, shells and legs for bisques and other menu items, thereby minimizing the amount of lobster going into the trash.

The 30-day project yielded other interesting insights:

- **Chefs began to look at how line cooks prepped ingredients and explored making use of trim waste** in other menu items, such as using carrot greens in their salad mix and the trimmings from a Wagyu beef dish for skewers.
- **The team worked to eliminate high-waste items from its menu**, especially protein waste from beef and seafood. By removing items that resulted in poor yields after prep, Manhatta was able to reduce its total protein procurement costs by 13.6%.
- **The pilot program is helping to shift the culture**, said Veza. The team is more forgiving when the restaurant runs out of items, considers full ingredient utilization when designing menus, and understands that food waste should be treated differently than other waste, she notes.

As just one example she noted of the shift, the restaurant began a composting program that collects food from the pastry production area as well as the service dish pit, which captures coffee grounds, and waste from customer plates.

PROJECT FOCUS



PROCUREMENT



BIGGEST SUCCESS

By improving its overall food waste practices, Manhatta made each of its food purchases more valuable. **Food cost as a percentage of revenue decreased by 4%**



Case Study 3

URBAN FARMER

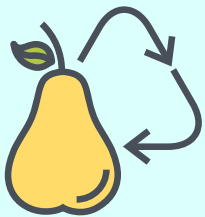
Urban Farmer is a farm-to-table concept located within The Nines hotel in Portland, Ore. Sustainability is one of the restaurant's core values.

Jeff Brown, general manager, food and beverage, for [Sage Restaurant Concepts](#), works with the City of Portland on sustainability. He and his team have reduced food waste by using beef trimmings to make candles, using up vegetables that might otherwise go to waste, raising tilapia in the restaurant's basement and harvesting honey from bees housed on the roof.

Brown said the 86 Food Waste pilot program reinvigorated [Urban Farmer's](#) food waste efforts in general. It highlighted what team members should be doing with food, where it should go, and how important it is to not waste food. Currently, the restaurant composts and it uses infographics and pictures around the building to show customers and employees where to dispose of food, plastic and trash.

These programs not only prevent food waste, but also save money and offer a unique dining experience that customers appreciate. The menu concept incorporates nose-to-tail butchering and is focused on local-sourcing beef. In addition, the company pickles many of its edible food scraps or leftover vegetables to help reduce food waste. To ensure success, Urban Farmer staff are constantly training and reinforcing their food waste reduction procedures.

PROJECT FOCUS



**REPURPOSE
& REUSE**



BIGGEST SUCCESS

Have a plan when ordering food – and be sure to measure your waste, because it shows what customers are buying. Once you have that information, you can adjust the menu and eliminate food items your guests are not ordering.





Case Study 4

SUBWAY®

Waste reduction is important to Milford, Conn.-based Subway® restaurants. The company understands that sustainability results in cost savings and improves productivity for its franchisees. Environmentally, waste reduction efforts reduce each store's footprint, a key part of being a good neighbor in the communities the brand serves.

When **Subway®** restaurants were reviewing opportunities to cut food waste during ingredient preparation, they observed that an edible portion of the tops and bottoms of green peppers were being discarded. They piloted a new prep technique that made use of a pepper's entire edible yield to ensure the adjustment didn't significantly impact the time it took for staff to prep ingredients or the quality of the sandwich build.

Steps were taken to revise this procedure company-wide. Once changes were approved and prepared for rollout, the company updated all training materials and resources to communicate the change to all restaurants. Consistent and repetitive training were integral when adopting the new practice.

Through this project, the Subway® Sustainability Team found that the largest component of food going to waste was veggie trimmings during ingredient prep. By refining training materials and retraining staff on prep methods, green pepper yield increased by 9.5% or 2 lbs. per case – an example of how a small change can make a huge difference.

The Subway® Sustainability Team identified that leftover baked goods were the second largest contributor to food waste during the 30-day pilot program. They established a protocol for freezing and donating day-old cookies to a food bank.

However, due to a lack of demand from the local food bank, the cookies were unable to be donated within the 30-day trial. This work did, however, set off a few lightbulbs internally, which the Team is continuing to explore. The cookie donation pilot expanded the conversation to possible donations of other items, especially those with a shelf-life constraint. The experience of working through how to separate, preserve, handle, and catalogue items for donation was critical and sparked further discussions for how donation guidance can continue to be optimized.

PROJECT FOCUS



EDUCATING & EMPOWERING EMPLOYEES



BIGGEST SUCCESS

By clarifying training materials, employees learned to trim peppers more efficiently, **gaining back 2 lbs. per case and reducing trim waste.**





PILOT PROGRAM OUTCOMES

At each of the formal pilot test sites, program auditors collected food waste data in specific areas: FOH and BOH. BOH included waste generated behind the bar if there was one.

When researchers analyzed the data from the pilot projects, key trends arose:

- You can't manage what you don't measure; separating and measuring waste drives in-house reduction efforts
- Discovering differences in BOH and FOH food waste amounts is typical (depending upon the concept)
- You will identify the similarities and differences between restaurants' most wasted foods

How much food was wasted and what kinds of foods were wasted differed due to differences in each test site's location, size, customer demographic, service level (full or limited), management style, and goals.

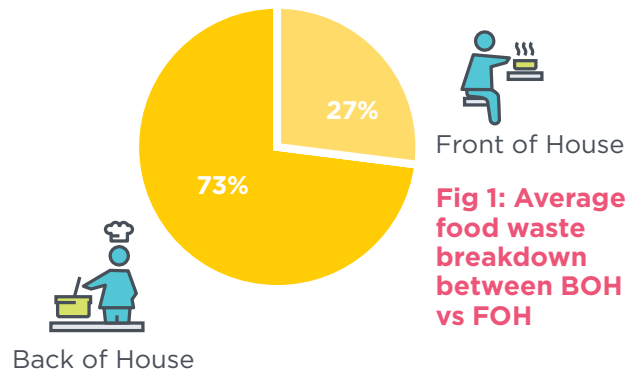
By collecting data on the number of meals served and number of employees in each location, however, the auditors were better able to compare data across the sites.

The audit data revealed some interesting common points:

- BOH waste on average accounted for 73% of the total food waste by weight at the participating restaurants (Figure 1).
- A third of the overall food waste was trim and inedible parts such as citrus peels, seafood shells, and eggshells (Figure 4).

There are opportunities to reduce overall waste, but for inedible trim, diversion to industrial uses (e.g., anaerobic digestion) or composting is the only option. In cities where these services are not available, the waste goes to a landfill.

This pilot study found that waste per employee (Figure 2) ranged from 7.3 lbs. - 8.9 lbs. and waste per meal (Figure 3) ranged from 0.8 lbs. to 1.3 lbs. These amounts are very much in keeping with those found in broader food waste research projects by a Natural Resources Defense Council's food waste baseline [study](#) and ReFED.



Waste per Employee Fig 2: Average breakdown of food waste at participating restaurants (lbs/day)



Waste per Meal Fig 3: Comparison of food waste per meal across studies (lbs/day)

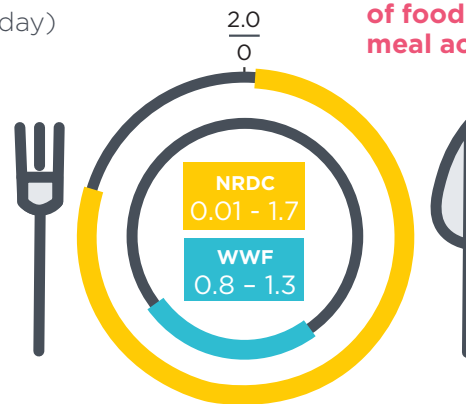
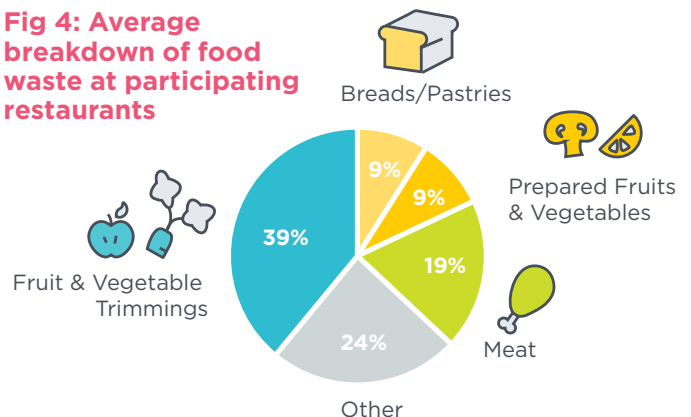


Fig 4: Average breakdown of food waste at participating restaurants





APPLYING THE LESSONS LEARNED



START BY AUDITING YOUR FOOD WASTE

No restaurant can identify exactly what it is wasting unless employees separate, identify and weigh the restaurant's waste. Again, if you do not measure it, you cannot manage it. The WWF pilot project's baseline audit:

- **Exposed where the largest sources of food waste were generated internally.**
- **Underscored areas in the restaurant where staff can most effectively reduce food waste as a team.**
- **Revealed the size and scope of an “invisible food waste problem” and made it more “visible” and understandable.**
- **Highlighted that food waste reduction can save money.** (See Appendix II for a step-by-step guide to perform your own food waste audit).

TAKE A CLOSE LOOK AT YOUR PREP AND YIELDS

As part of this project, a few participating restaurants focused on their prep waste as an opportunity to:

- **Reduce their overall waste**
- **Increase their yields**
- **Improve the bottom line**

As mentioned in Case Study 4 (p. 7), one pilot, Subway®, found that by refining its training materials and retraining kitchen staff on prep methods the kitchen was able to increase the yield on green peppers by 9.5% or two lbs. per case – an example of how a small change can make a big difference.

Another participant, a full-service grill concept, uses its meat and seafood trim in the restaurants' salmon and bison burgers. By repurposing edible prep waste in house, they reduce procurement costs and prevent food waste, which results in additional revenue.

ELIMINATING EVEN ONE HIGH-WASTE TARGET ITEM CAN HAVE RIPPLE EFFECTS LEADING TO BIG SAVINGS.



APPLYING THE LESSONS LEARNED

WORK WITH SUPPLIERS

Your supplier can be an excellent information source when you're looking for ways to reduce your food waste. For example, your waste audits might show that case sizes are too big for what you serve, or that pre-prepped produce would be 100% usable vs. product you buy whole and trim yourself. A great place to start is [ReFED's supply chain mapping graphic](#) (see below).

Your suppliers have other customers who might be able to use what you do not, as in the case of Manhatta and its lobster tail leftovers. Some suppliers specialize in sustainability, such as [FoodMaven](#), an organization that finds markets for ingredients that would otherwise be wasted. Baldor Foods, which created a program called SparCs, ensures all supply processing leftovers go to feed people or animals.

RECEIVE AND STORE FOOD CAREFULLY

Check orders when they're delivered to confirm they're what you ordered, that

they're fresh, undamaged and at the right temperature. If you accept a bad order, that food will likely go to waste.

Food also can go to waste when it's kept in unlabeled containers that aren't see-through (metal, opaque plastic). Cleaning and organizing your walk-in are the first steps you should take after a food waste audit.

Adopt and use a simple organization arrangement that allows everyone to easily identify items that need to be used up or are running low and need to be reordered. Clear plastic containers help.

Store foods within reach, and in a first-in, first-out order. Clearly label prepared food stored in clear containers in the refrigerator with the following information:

- **Name**
- **Use-by date**
- **Food safety information**
- **Temperature standards for storing and cooking**

A great way to identify foods that spoil frequently is to put a garbage bin nearby to collect waste generated in storage areas and conduct an audit on them.

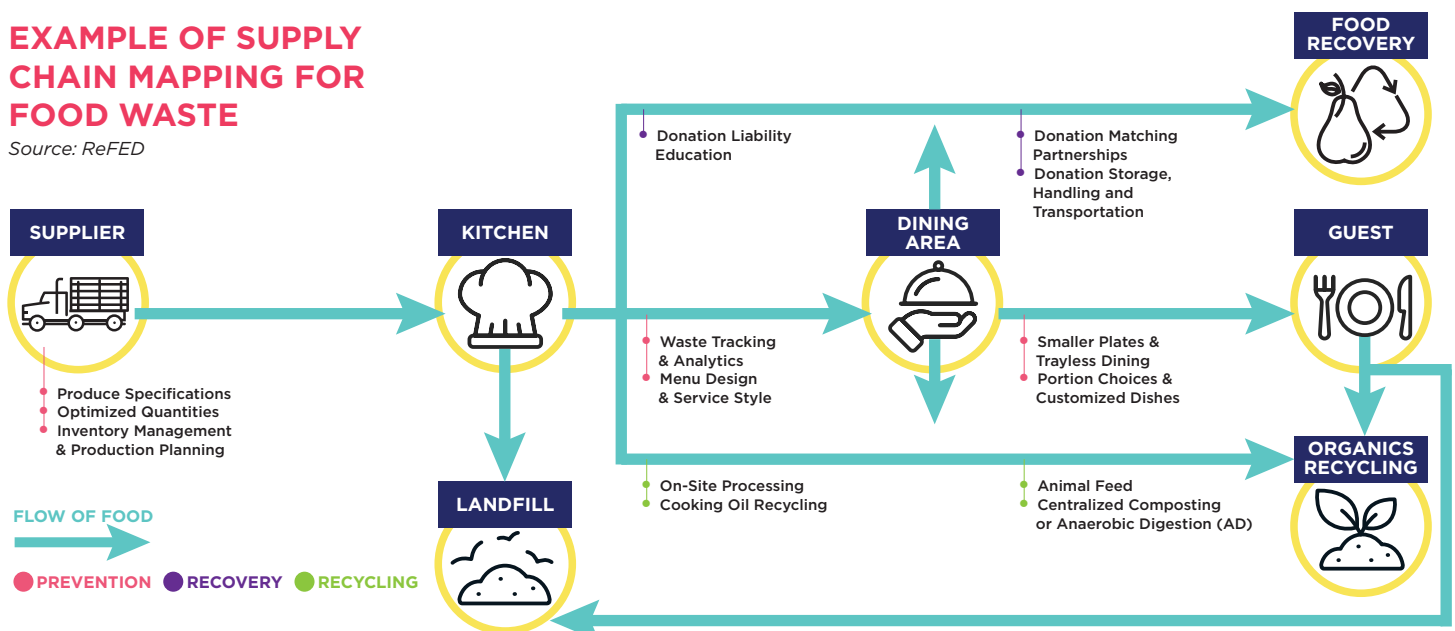


WHEN WORKING WITH YOUR SUPPLIER

1. Ask about the company's sustainability efforts to identify opportunities for your restaurant.
2. Look into smaller case or pack sizes if the quantities you're currently buying are larger than you need.
3. Look into pre-prepped items to minimize the amount of trim waste in your restaurant.
4. Buy imperfect produce.
5. Buy frozen when appropriate; it has a longer shelf life and current flash-freezing technology locks in flavor at its best.

EXAMPLE OF SUPPLY CHAIN MAPPING FOR FOOD WASTE

Source: ReFED





APPLYING THE LESSONS LEARNED

DESIGN MENUS TO REDUCE WASTE

Limited-service restaurants have mastered the art of right-sizing by giving their customers the option to order various sizes of sides, drinks, and sometimes main meals. In full-service and fast-casual restaurants, portioning has to hit the sweet-spot between being too large and too small. What's a small enough portion that's still perceived as a good value?

Try these menu methods to right-size portions:

- Offer multiple portion sizes such as “full” and “half” so guests can customize based on appetite.
- Let customers split entrees and/or sides.
- Serve smaller portions of side dishes with “bottomless” or “refill” options.
- Let customers choose the sides they prefer and train staff to ask for preferences.
- Accommodate any customer who asks you to wrap up half their meal before it's served.
- Print storage and re-heat instructions on doggie bags or take-home containers to maintain the quality of leftovers when guests take them home to enjoy.

WATCH THE FREEBIES

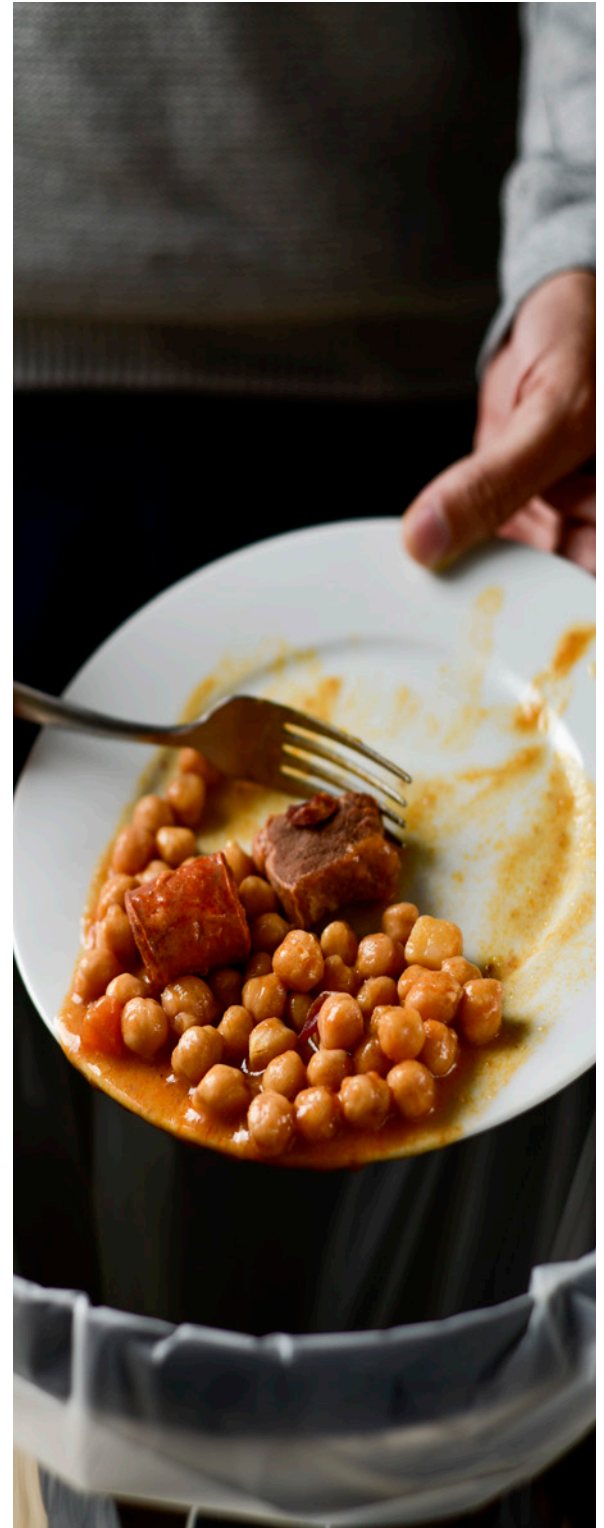
A free basket of bread is a time-honored restaurant tradition but the practice can lead to significant waste, especially when customers have increasingly diverse dietary preferences and restrictions.

Make a concerted effort to collect and measure the free items you're throwing out (bread, dips, salsas, chips, etc.)

To combat freebie waste, start by asking the guest if they would like the item or add a line in the menu to tell guests they can request these items. If they ask for it, customers will likely eat it.

At [Red Star Tavern](#), Portland, OR., servers alerted the chef to the amount of free bread they were throwing out at the end of service.

Instead of providing a basket of free bread to each table, chefs added the breadbasket to the menu for \$2. If a customer complained about it, servers were empowered to give them a basket for free. This small shift saved the restaurant the cost of 65 lbs. of butter and 90 lb. of bread dough each month and resulted in a projected \$5,000 in additional revenue each year.





APPLYING THE LESSONS LEARNED

DONATION: GIVE FOOD A SECOND LIFE

All large cities should have donation partners to help you in your food waste reduction efforts. And some, but not all cities will have a technology partner. They are more rare given the infancy of that space (see Emerging Resources below).

To help identify a donation partner, look at the [U.S. Department of Agriculture, Feeding America](#), and [Further with Food](#) for advice on finding and choosing a food donation partner. National Restaurant Association partner [Food Donation Connection \(FDC\)](#) can help link restaurants with local organizations as well.

TECH PLATFORMS: EMERGING RESOURCES

Technology platforms and other start-ups are helping restaurants sell daily surpluses of prepared food at discounted prices, creating a middle ground between retail sale and straight donation.

This form of food rescue can expand the market to new audiences on a tighter budget: college students, struggling families, unemployed folks, and many more. These companies, which are only available in select markets, could be an alternative or a complement to a food donation program.

Operationally, these technology solutions push out notifications to users on the platforms when meals become available. They allow users to purchase the meals through an online app and pick up the meals at a designated time.

Examples include [Last Call](#) (Washington, D.C.), [Food For All](#) (Boston & New York), and [YourLocal](#) (Brooklyn & Copenhagen). In the end, restaurants will get at least a portion of the money that went into procurement and prep. Guests, some

of whom would otherwise never have opportunity to experience the restaurant, receive meals at a price they can afford.

For either a donation program or discounted surplus program, these steps can help you succeed:

STEP 1: DESIGNATE A DONATION COORDINATOR

For any program to be successful it must have a leader or champion, and a donation program is no different. There should be at least one person, but ideally two or three to help the program continue through shifts and staff turnover.

STEP 2: FOLLOW FOOD SAFETY PROTOCOLS

Remember to keep food out of the temperature danger zone, 41°F-135°F, when bacteria multiply fastest. Hot foods must be brought below 70°F within two hours, and to 41°F or below within the next four hours. Also, always hold refrigerated food below 41°F and frozen food at 0°F or below. Your donation partner might have additional food safety protocols for you to follow.

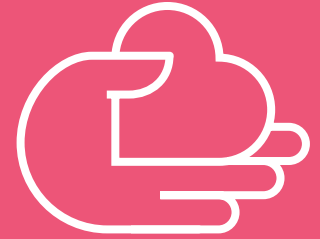
STEP 3: GATHER & ANALYZE DATA

What and how much are you giving away? Tracking the weight and frequency of your donations will help you spot trends that in turn will help you adjust your buying and prep routines. Your local food rescue partner or food surplus technology partner may be able to help in this effort.

STEP 4: INFORM & TRAIN STAFF

Rolling out a new program, especially one that might seem like more work to an employee, is going to take time. Make sure to communicate the new donation program or surplus food partner requirements clearly and often. It may help to schedule a few test-runs to troubleshoot problems before the program officially goes live.

It shouldn't be hard to make employees understand that their participation in food waste reduction is a huge contribution to a very important global crisis. Set goals and celebrate when the team succeeds.



FOOD DONATION CONNECTION

FDC coordinates surplus food donation programs in the U.S. and 26 other countries. It links donors with qualified local charities that collect the food on a scheduled basis. FDC never charges a fee to the charity and provides food-safe transport training to help the charities and their volunteers ensure food is properly transported.

FDC operates a live answer call center to support the process for the donor and recipient. Tracking food donations on its eLog Mobile app enables FDC to provide traceability and deliver detailed reporting for sustainability, operations optimization, and tax savings. FDC considers itself working for the donor and has designed its fee structure to benefit FDC only when the donor partner benefits from its services.



APPLYING THE LESSONS LEARNED

DIVERSION: KEEP WASTE OUT OF LANDFILLS

Even if your restaurant has put in place all the best practices to minimize wasted food and has a robust donation program, you'll still end up with inedible parts and food scraps that just can't be repurposed.

The best option is to keep these items out of landfill by diverting to an alternative waste management solution.

To determine the best end-of-life destination for your food waste, research local regulations. Depending on the region, infrastructure, policy, and capacity, the options for diverting could include:

- **Food scrapping for animal feed**
- **Composting**
- **Anaerobic digesting**

Animal feed is a good option for food waste diversion, if your locality supports it. It's estimated that feeding food waste to pigs saves 20 times more carbon than the next-best recycling method. The [Harvard Food Law and Policy Clinic \(FLPC\)](#) released a guidance document on how to maintain safe standards for animal feed donations.

Early evidence supports a multitude of benefits from diverting food waste to compost, and its subsequent use in gardening and agriculture.

But **composting rules can be tricky to follow**; if plastic utensils or wrappers get into the mix, it's called contamination and it makes the compost unusable. Be sure to learn what types of materials will contaminate the mix and which are truly compostable in your local facility. Not all processors accept bones, napkins, and compostable dishware.

Anaerobic digesters convert waste to methane, which is captured and converted into electrical power. By diverting food waste from the landfill to an anaerobic digesting facility, methane becomes a useful fuel source instead of a greenhouse warming gas. Other industrial facilities can recycle fats, oils, and grease (FOGs) into biofuels.

How the materials get to the end-of-life destinations varies. City, county, and state governments within the U.S. might enact food waste bans or have specific requirements for disposal. The FLPC's *Bans and Beyond*, along with the Center for Ecotechnology, compiled a list of mandates across the country.

Some municipalities include compost or food waste transport with their commercial waste hauling process. Alternatively, private companies in certain regions will collect compost materials on a regular basis. In order to find out the best options in your region, contact your city or state's environmental department for available diversion options. To find your nearest composting facility, go to [FindAComposter.com](#).





MANAGING FOOD WASTE IN RESTAURANTS

How **small steps** can have a **big impact** on reducing waste and protecting the planet

CONCLUSION

Many studies including this one have shown that food waste in the restaurant sector is a sizable challenge, making up about 18% of our national food waste total, but it's a challenge that comes with lots of opportunities to reduce waste and increase your bottom line.

This resource outlines some of the tools available to the restaurant industry as it continues to improve standard operating procedures, looks to engage staff, and develops campaigns and guest-facing messages that unite everyone in the reduction effort.

The pilot projects showed us that tackling this challenge will not be easy, but it is achievable if you can engage the appropriate stakeholders, empower them to take action, and reward them for performance. We challenge you to get started today by making one small change.





APPENDIX I: FOOD WASTE REDUCTION

Check out these [resources](#) and those listed below to help you propel your food waste reduction efforts. From training videos to cooking guides, help is a few clicks away:

• Videos

- [Fighting food waste in restaurants](#)
- [Empower and engage staff with eco-efforts](#)
- [White castle: How to motivate employees with sustainability](#)
- James Beard Foundation's free "[Creating a Full-Use Kitchen](#)" course consisting of 17 videos and dozens of interactive guides

- **Use [Waste Not: How to Get the Most from Your Food](#)** the James Beard Foundation's cookbook and online recipes, or create your own full-use cookbook

- **Join the [Chef Action Network](#)** and highlight your fight for food system change

• Explore behavior change resources like

- [Tools of Change](#), a free online behavior-change resource for environmental, health, and social efforts
- UC Berkeley, [Promoting Sustainable Behavior: Words, Psychology and Communication](#)
- [Made to Stick: Why Some Ideas Survive and Others Die](#) (book), by Chip Heath and Dan Heath.

APPENDIX II: SELF-DRIVEN FOOD WASTE AUDIT A STEP-BY-STEP GUIDE

STEP 1: DEVELOP AUDIT GOALS

For this project, WWF wanted to understand the volume difference between FOH and BOH, and the largest sources of waste. Therefore, for the project audits, consultants provided total weights for FOH and BOH waste in addition to breakdowns by the following categories:

- fruit and vegetable trimmings (BOH only)
- bread, pastry, and baked goods
- prepared fruit and vegetable waste
- meat waste
- other/unidentifiable (i.e., foods that are no longer identifiable — "sludge")

STEP 2: SET UP A SORTING AREA

Audits require a few materials:

- buckets or bus bins for each category
- a scale
- disposable gloves
- bags of restaurant waste to be sorted
- a big space for sorting
- extra bags to collect non-food waste including recyclables

STEP 3: SORT & SEPARATE FOOD WASTE

Open bags and sort waste into the predefined categories. We highly encourage using the separation guidelines as outlined under Develop Audit Goals as they result in a very actionable data set. Be consistent in your audit approach across restaurants to get meaningful comparisons.

STEP 4: WEIGH & RECORD

Weigh each category of waste and record the weights using an Excel template (available [here](#)). During the weighing process, take detailed notes and photos; these give team members a visual picture of all the food that's being thrown out; it makes the invisible visible.

STEP 5: ANALYZE & ACT

Review results with the restaurant team. Running a food waste audit is the first step to understanding the waste your operation produces.

For a more in-depth approach, you can enlist the aid of professional food waste auditors such as [Leanpath](#) and [Winnow](#). The U.S. Environmental Protection Agency also lists a number of useful resources on their [Tools for Preventing and Diverting Wasted Food](#) webpage.

