

5. Application Question

Q1: How is your hotel's waste management program structured? How could that structure be improved?



6. Reduce

Waste management programs have three components: Reduce, Reuse, and Recycle. Reducing waste often benefits hotels more than the other two because it lowers both purchasing and disposal costs.

a. Reduce > Food Waste

Forty percent of the food grown or harvested in the US goes uneaten. Food waste creates considerable pollution because the agriculture sector burns a sizable fraction of the nation's fossil fuel, pollutes our waterways with fertilizers and pesticides, and takes up land that would be a better carbon sink if it were forested. Food that is discarded and then buried in landfills creates methane, which is a potent greenhouse gas. Lastly, when we waste food, it does not feed hungry people.



Some states (such as California, Connecticut, Massachusetts, Rhode Island, and Vermont) and cities (such as New York, San Francisco, Seattle, Austin, and Boulder) prohibit businesses and institutions from putting excessive amounts of food waste in the trash. For example, Massachusetts businesses can be fined if they send more than one-half ton of food waste to a landfill or incinerator in any week.

This section, *Reduce > Food Waste*, describes strategies hotels use to reduce food purchasing while feeding the same number of people. Subsequent sections in this chapter will address food reuse and recycling.

In recent years, governments and businesses have shown great interest in food waste prevention. New tools, articles, and videos have been created to help organizations address this problem—with considerable success.

Some organizations have cut their food purchasing bills by 2 to 8 percent and their post-consumer food waste by 50 percent. A 2018 study of 42 hotels in 15 countries with food waste prevention programs found that the hotels saved, on average, \$7 in operating costs for every \$1 they spent on the programs.²¹

Marriott International set a goal of reducing food waste by 50 percent by 2025, using 2016 as the baseline year. Denise Naguib, Marriott International's Vice President for Sustainability & Supplier Diversity, said, "We are developing a full suite of resources for our hotels—including baseline awareness, how to get started, best practices, source reduction, technology, donation, landfill diversion—to jumpstart them toward this commitment. We are also working with some of our largest customers who really want to be part of the solution to better understand and test what we can do together on this."²²

The US Environmental Protection Agency's Food Recovery Hierarchy describes "[t]he best ways to prevent and divert wasted food because they create the most benefits for the environment, society and the economy."

The hierarchy lists, in order of priority:

- ✔ Food waste prevention.
- ✔ Feeding hungry people.
- ✔ Feeding animals.
- ✔ Industrial uses (examples: converting fat to biodiesel fuel; and sending food waste to anaerobic digestion plants where it is converted to fuel and fertilizer).
- ✔ Composting.²³

Create a Food Waste Management Task Force

Hotels can create a task force that identifies food over-purchasing and strategies for addressing it.²⁴ The responsibilities of such a team could be to:

- ✔ Create reports that track the property's progress.
- ✔ Set goals.



LinkedIn Sales Solutions, Unsplash

- ✔ Determine strategies to prevent food waste in menu planning, food purchasing, food handling, and service to guests.
- ✔ Oversee staff training.
- ✔ Create incentives.
- ✔ Organize the food donation program (*reuse*).
- ✔ Optimize food waste diversion (*recycling*).

Measurements: Assess Food Waste, Track Progress

There are low-tech and high-tech tools that help restaurants engage their staff in food waste prevention, identify over-purchased items, and track their progress. Some good ones are the US EPA Food Waste Logbook and programs established by Leanpath, Phood, and Winnow.²⁵



Marc Chouinard, StockSnap

The 296-room Novotel Brisbane in Australia used the Leanpath system to cut its breakfast buffet food waste by 66 percent. The system helped it recognize that it was overproducing croissants and cold cuts. It adjusted the buffet, thereby cutting its food purchasing costs and enabling it to add new, high-value items.²⁶

The 1190-room Hilton San Diego Bayfront Hotel asked Leanpath to analyze their food service and make recommendations for reducing food waste. Per Leanpath's advice, the hotel streamlined its event banquet menus; studied the eating patterns of the guests for each conference, so they could better match the preferences of each group; started repurposing food not served at events by using it to create meals for employees; and improved their food storage practices. As a result, the Hilton cut its food waste per meal served from 0.65 pounds to 0.20 pounds.²⁷

InterContinental Hotels Group (IHG) decided to use Winnow Vision AI technology to track, measure, and reduce food waste for its restaurants and bars. IHG set a goal to cut food waste by 30 percent.

Winnow uses “an intelligent camera, smart scales, and AI-based smart meter technology [to analyze] ingredients during food preparation, as well as plates returned to the kitchen, to assess which food items are most wasted and in what quantities. This builds up a bank of data which in turn informs buying decisions, shapes menus and hones food preparation techniques.”

After using this technology for six months, the InterContinental Fujairah Resort in the United Arab Emirates reduced its food waste by over 50 percent.²⁸

Menus

Here are some ways restaurants adjust their menus to reduce food purchasing costs.

- ✓ Eliminate less popular dishes.
- ✓ Cross-utilize ingredients among menu options.
- ✓ More fully use the entire animal (nose-to-tail) and plant (root-to-stalk).
- ✓ Repurpose surplus food into new meals and food for employees, or donate it.
- ✓ Use mostly low-waste ingredients.
- ✓ Adjust the portion size for dishes that often go partly uneaten.



Prawny, Pixabay

Buffets

Studies show that almost one-half of buffet food goes uneaten.²⁹

Here are some approaches that enable restaurants to reduce food waste at their buffets:

- ✔ Track the food waste associated with each item, and adjust the serving volume accordingly.
- ✔ Use shallower containers--from the beginning of meals or towards the end of them. The staff might have to refresh the containers more often, but less food will be wasted.
- ✔ Serve food in individual dishes rather than chafing dishes, or replace the chafing dishes with individual dishes as the meal winds down.
- ✔ Resist the urge to refresh buffets too soon—particularly for high-value items like meat, cheese, and fish.
- ✔ Use smaller plates, smaller serving utensils, and no trays. Guests will put less food on their plates and waste less food.



Guvo59, Pixabay

The 1,641-room Hyatt Regency Orlando cut the food waste at its buffet by 25 percent. Some of its strategies:

- ✔ Analyzing how guests at multi-day meetings eat on day one, so the hotel can better plan for the remaining days.
- ✔ Discussing waste reduction at staff meetings and asking staff for recommendations about preventing waste.
- ✔ Switching to smaller plates and offering fewer items at any one time.
- ✔ Closing one side of the buffet towards the end of the meal.³⁰

Events

Hotels often produce far too much food at events because it is challenging to predict the right amount of food, and hotels do not want to come up short.

These practices help hotels reduce over-purchasing.

- ✔ Track the attendance, the amount of food prepared, and the amount of food wasted for each event. This data will help staff plan for the type and quantity of food to order for future events, especially for those that are repeated periodically.
- ✔ Get an accurate headcount for each event. Ask the customer for updated counts once or twice before ordering and cooking the food. Find out the age and gender of the event participants, and adjust the food volume accordingly.
- ✔ Create a menu that can be used for more than one event and with ingredients that are used in the restaurant.
- ✔ When possible, use pre-plated and portioned meals rather than buffets.
- ✔ Consider using a metric called FRESH, the Foodservice Impact Rating for Environmentally Sustainable Hospitality Events, which is used to evaluate the sustainability performance of any meal or event. It measures food waste, the number of no-shows, the number of over-shows, the per-guest consumption versus expectations, and several other measures. By evaluating past events with FRESH, managers can plan more effectively for future ones.³¹



Rachel Claire, Pexels

b. Reduce > Bottled Water

Relying on bottled water is wasteful because it must be trucked to the property, often over a great distance. Moreover, the bottle itself is a single-use plastic.

Hotels can avoid bottled water by producing still and sparkling water on-site with filtering and dispensing equipment.³² Some hotels offer guests a refillable bottle with the hotel's branding, which guests can fill at water bottle filling stations.



Mrganoso, Pixabay

Many hotels serve pitchers of water at meetings and events rather than bottled water.

Some properties offer non-plastic water containers, such as aluminum and cardboard.³³ They are supposed to be environmentally-friendly, because they are much more likely to be recycled. However, some boxed water bottles have a plastic liner and thus cannot be recycled.

The most sustainable option is to avoid pre-packaged and transported bottled water whenever possible.

c. Reduce > Restaurant Supplies

Here are strategies that enable hotels to buy fewer restaurant supplies and generate less waste.

- ✔ Use washable linen or no table covers at all rather than single-use table covers.
- ✔ Provide cloth napkins instead of paper ones.
- ✔ Do not offer plastic straws and stirrers unless requested by guests.³⁴
- ✔ Use washable dinnerware rather than plastic utensils and paper plates.
- ✔ Use reusable coffee filters instead of paper ones.
- ✔ Dispense condiments in bulk rather than individual packets.
- ✔ Provide guests with recyclable or compostable takeout containers and drinkware. Choose compostable containers that are third-party certified. Avoid containers made of molded fibers that contain PFAS chemicals.³⁵
- ✔ For takeout, consolidate food in a single container when possible. Train staff to ask customers whether they want utensils, condiments, napkins, and straws instead of providing them automatically. Avoid double-bagging.³⁶



Skitterphoto, Pexels

In 2018, the following hotel chains announced that they would eliminate plastic straw use: Marriott, Hilton, Hyatt, MGM Resorts, Four Seasons, Taj Hotels, AccorHotels, Royal Caribbean, and Carnival Cruise Line. So did other businesses—like Starbucks, American Airlines, Ikea, and SeaWorld—and cities like Seattle, Miami, and Oakland.