

PLASTIC PACKAGING

RESOURCE GUIDE



Overview

Foodservice packaging makes it possible for restaurants to serve guests in a sanitary, convenient, and economical manner. However, packaging can also raise environmental considerations, thus many restaurants are focusing more on their packaging materials and responding to consumers' desires for more eco-friendly options.

Additionally, as interest in sustainable packaging continues to grow, a dramatic increase in policy initiatives at the state and local levels regulating plastic packaging have emerged. The anti-plastic movement has altered consumer sentiment around plastic and helped spread legislation regulating the material.

The good news is that packaging suppliers have increased their offerings and consumers are responding to restaurant actions in this area. According to a Nielsen survey, 48 percent of Americans said they would change their spending habits to reduce their environmental impact.



Consumers are increasingly concerned about the *environmental impact of packaging* and want the brands they frequent to align with their values.



Restaurant Progress

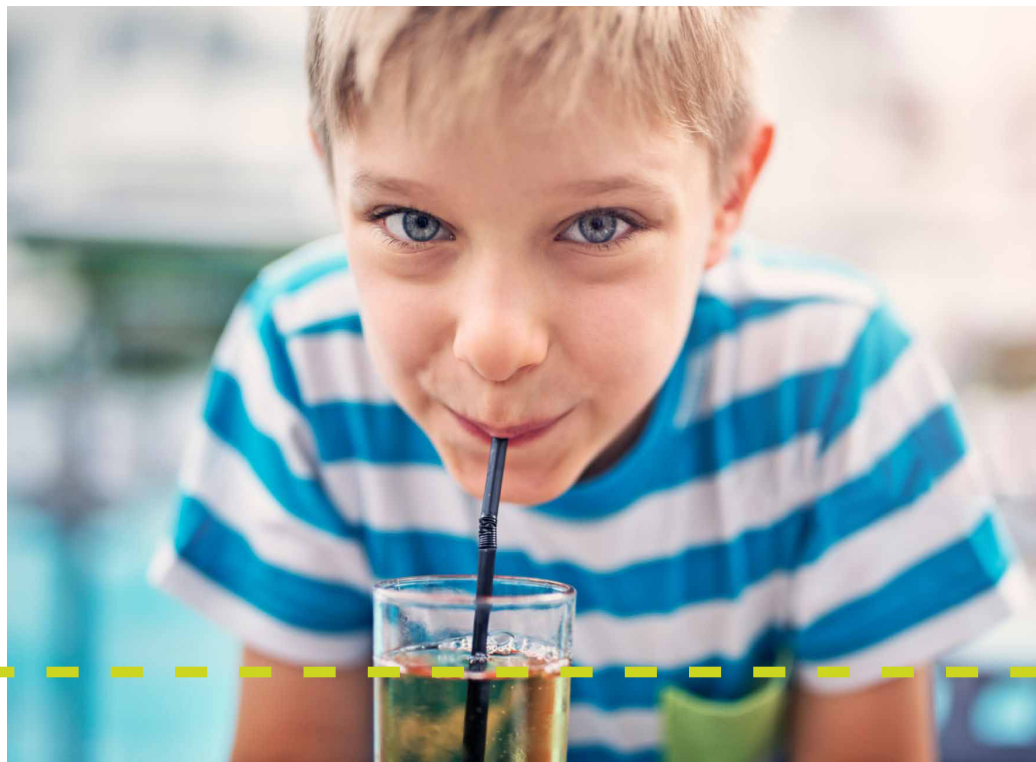
The National Restaurant Association's recent *"State of Restaurant Sustainability"* report found that restaurant and foodservice operators are integrating sustainability practices into their daily business operations. The report shows that the majority of operators engage in recycling and are more focused on packaging.

The report found that a majority of restaurant operators source at least some packaging and supplies made with recycled content or certified as compostable. Nearly three in four operators (72%) report that they buy at least some packaging and supplies that contain recycled materials. More than half (56%) say they buy at least some packaging and supplies that are certified as compostable.

Given the calls for less plastic, as well as recent legislative efforts, both businesses and cities are reconsidering plastic packaging use. This resource guide is designed to answer questions about plastic packaging, distinguish myths from facts, and assist you in working with policymakers on legislation in this area.

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General Messaging Points

- Restaurants are an integral part of the communities they serve. As such, they strive to be good stewards of those communities and the environment. Now, more than ever, restaurants are aware of the importance of reducing their environmental impact and increasing their sustainability practices. That includes packaging.
- Consumers are increasingly concerned about packaging's environmental impact and want the brands they frequent to align with their values. Restaurants are working with their suppliers to choose packaging that works for their businesses and aligns with customers' values.
- State Restaurant Associations, local restaurateurs, restaurant suppliers and community groups are working to ensure new policies are workable for restaurants and helping regulators understand the availability and impact of alternative packaging options.
- The Association is working to educate our members about packaging issues and help provide the tools and information operators need to make the appropriate decisions for their brands.
- Ultimately, foodservice operators and their customers should base their decisions on whether to offer/use a particular type of packaging on their own individual business and customer needs.
- Foodservice packaging is also a health and safety issue that the industry takes very seriously. Federal and state food codes require that food be protected from contamination during transportation.
- The Food and Drug Administration (FDA) conducts rigorous testing and reviews the safety of all packaging materials that come into contact with food.
- A robust and efficient recycling and composting infrastructure that accepts foodservice packaging should be present locally before mandates are imposed on businesses and consumers.
- To grow business and loyalty, restaurants strive to be transparent with their customers as they work to deliver the quality and type of packaging that customers want and use.

Plastic Packaging

Restaurants continue to use plastic packaging for a number of reasons, including **plastic's functionality, performance, and cost.**

According to the Foodservice Packaging Institute, the U.S. restaurant industry uses approximately 50 percent paper and 50 percent plastic for its foodservice packaging needs. Banning single-use plastic packaging could cause significant market disruptions, in addition to having substantial cost implications for operators.

While some restaurant operators are choosing to reduce their plastic packaging, **alternative products present new challenges and opportunities.** Some alternative products may be new in the marketplace and availability may be limited. If most restaurants decided to switch to other materials overnight, the supply simply may not exist to meet the demand of the U.S. restaurant industry.

Additionally, in some markets, it can often take time for customers to accept and adjust to alternative packaging materials.

Americans' use of single-use plastics packaging is often associated with global marine debris, but **over half of marine debris comes from six countries: China, Indonesia, the Philippines, Vietnam, Sri Lanka and Thailand.** Approximately 10 rivers (all outside of North America) are responsible for 90% of all plastic marine debris.

Some legislators believe that regulating or banning plastic packaging will reduce litter. However, littering is a human behavior that won't be altered through product fees or bans. Keep America Beautiful notes that the vast majority of litter is created because someone chooses to litter purposely.

While bans and fees can affect plastic waste, **better waste management systems, and changing human behavior, can help achieve long-term impacts** and address the problem.



Plastic Straws

Straws may be needed to prevent spills in cases of use by **people with physical impairments or children**.

Straw **bans can discriminate against people with disabilities**, many of whom depend on plastic straws to consume beverages of all types.

Straws are also convenient when consuming a beverage on the go. For example, when drinking a beverage in a moving vehicle, the use of a straw allows for one's eyes to stay focused on the road.

It's estimated that anywhere **between 100 and 390 million straws are used daily**. Research shows that where plastic straws do make up debris on beaches they account for about 3% of total trash collected and less than 0.03% of plastic debris in the ocean.



*Human behavior
is the culprit*

when it comes to
plastic straw debris.

A ban won't internalize
the lesson or the
importance of change.



Polystyrene or Styrofoam

Styrene is a liquid that is chemically linked to create **polystyrene, which is a solid plastic** that can be used to make foodservice packaging. Styrene also occurs naturally in some fruits, vegetables, meats, and nuts.

Advocates of bans claim that polystyrene is not safe for use in foodservice packaging because it contains styrene. However, the **U.S. Food and Drug Administration (FDA)** has conducted rigorous testing and **cleared polystyrene foodservice packaging as safe for both hot and cold foods and beverages**. The FDA's tests have shown that the trace amounts of styrene that may migrate into food or drink from this packaging are 10,000 times below the safety limit set by FDA.

There are **two forms of polystyrene that are used for foodservice packaging**, but many legislative proposals do not differentiate. A blanket "polystyrene packaging ban" can target the wrong type of polystyrene. The vast **majority of polystyrene bans just target foam polystyrene** and do not include non-foam polystyrene materials.

- o **Foam Polystyrene:** typically referred to as Styrofoam, includes clamshell takeout containers, foam cups for hot and cold beverages, and foam plates.
- o **Non-foam polystyrene (also referred to as "rigid" polystyrene):** clear takeout containers, straws, plastic cutlery, hot beverage cup lids, and fountain drink cups.



Polystyrene can be recycled.

In 2016, about 118 million pounds were recycled.

POLYSTYRENE



Polystyrene or Styrofoam *continued*

Restaurant operators use polystyrene foam packaging to provide customers with a reliable and safe way to transport food while maintaining the food's properties, quality, and temperature.

Polystyrene foam's insulation qualities help **keep foods at the proper temperatures during transportation**, which minimizes food spoilage and the potential for bacteria growth or contamination. They also do not leak or spill easily, which makes them ideal for transporting food and hot beverages from restaurants.

In some cases, polystyrene foam takeout products can have environmental impacts that are less than or comparable to corresponding products made from alternative materials. For example, some alternative packaging materials are not as durable or insulated as polystyrene foam. If customers are tempted to double-cup drinks in an attempt to reduce leakage, this increases the amount of material used and waste generated.

Finally, polystyrene can be recycled. In 2016, about 118 million pounds were recycled. The challenge is limited access to recycling facilities. Although the number is growing, there are **only a few communities that accept polystyrene foam in their recycling programs**.

*Polystyrene helps
to keep foods*
at proper temperatures
longer during
transportation.



Compostable/Recyclable/ Biodegradable

The following definitions have been provided by the Sustainable Packaging Coalition. More information can be found [here](#).

BIODEGRADABLE: The term “biodegradable” refers to a material’s ability to decompose via microbial activity. Most, but not all, biodegradable packaging materials are biobased.

We generally discourage the use of the term “biodegradable” in legislation because everything is biodegradable given the right amount of time and the right environment. The concern is that consumers can mistake “biodegradable” packaging as something that may be littered on land or in waterways that will simply disappear. Compostability is a more meaningful indicator of a package’s ability to undergo an environmentally beneficial process at the end-of-life. **Therefore, “recyclable” and “compostable” are the more appropriate terms to promote.**

Many people claim that alternative products will biodegrade and thus reduce the amount of waste in landfills. However, waste materials do not readily biodegrade in modern landfills. Today’s landfills are designed to keep waste and its byproducts from leaching into the environment, which minimizes biodegradation of the waste. In reality, there’s little waste (including biodegradable packaging) that actually biodegrades in a landfill.

The truth is that even **compostable packaging needs the right environment to compost** — and even then, it can take weeks and months for compostable packaging to biodegrade.



*Many biodegradable
products are not
compostable,*

and the terms are
not equivalent.



BIOBASED:

This term refers to the feedstock source of the packaging. A biobased material is made from renewable plant or animal feedstocks. The terms “biobased” and “renewable” are interchangeable. Some examples include tree fiber-based packaging materials, wheat straw and bamboo. In addition, there are bioplastics which are plastic like materials produced from renewable sources like corn starch, sugarcane, potatoes, algae, mycelium (mushroom roots), and food waste.

The [ASTM D6866](#) test standard can be used to quantify a material’s biobased content, and guidance for marketing claims of biobased materials is given in section 260.16 of the Federal Trade Commission’s Guides for the Use of Environmental Marketing Claims.

COMPOSTABLE:

The term “compostable” refers to a material’s ability to biodegrade within a sufficiently short amount of time in the conditions of a composting operation. Many biodegradable products are not compostable, and the terms are not equivalent. Parameters including heat, aeration, and carbon-to-nitrogen ratio, are controlled at industrial composting operations, and the time requirements for total biodegradation are very stringent.

- [ASTM D6400 and D6868](#) are the chief testing methods for determining whether or not a package is compostable in industrial operations for compostable plastics and compostable plastic-coated paper, respectively.
- With compostable packaging, you need evidence that it truly breaks down in a composting facility. Ensuring that packaging is truly compostable starts with testing and certifying the products with one of the trusted certification programs like the Biodegradable Products Institute (BPI) designed to verify claims for various materials.

NOTE: It is important to remember that you can’t throw compostable packaging in the trash/landfill and expect it to break down into compost. Compostable packaging will only break down in the proper conditions of a composting operation.

RECYCLABLE:

Packaging is recyclable if it can be collected, sorted, reprocessed, and ultimately reused in manufacturing or making another item. However, just because one local recycling program accepts a material does not make it recyclable and because a material could technically be reprocessed in order to make something new, it isn’t necessarily recyclable.

A package is recyclable if there is a substantial likelihood that it can do all of those things in a substantial majority of the communities where an item is sold. The term “substantial majority,” as used in this context, means at least 60 percent. The Federal Trade Commission sets standards and criteria for these terms, which can be found [here](#).

Finally, just because packaging has recycled content or is made from recycled materials does not mean it is automatically recyclable. For that item to be recyclable, it would still have to meet the definition above.



POLICY CONSIDERATIONS

Many cities and states have enacted laws to target single-use plastic products with the hopes of reducing consumer usage and litter. In 2019, 200 single-use plastics bills have been introduced in state legislatures. The following categories are most often introduced.

Polystyrene foam containers: More than 100 cities have already banned or restricted the use of polystyrene foam containers in restaurants. Several states, including Maine, Maryland and Vermont have also passed legislation banning polystyrene foam cups and containers.

Plastic straws: Over 60 jurisdictions, including Seattle, Washington, D.C. and many in California, Florida, and New York, have banned plastic straws or restricted their use to “upon request” only. On the state level, California was the first to impose a statewide “straws on request” mandate for fullservice restaurants.

Plastic bags: Eight states — California, Connecticut, Delaware, Hawaii, Maine, New York, Oregon and Vermont — and hundreds of local jurisdictions have either banned or imposed taxes or fees on single-use plastic bags, according to the National Conference of State Legislatures. However, restaurants should pay close attention, as many bag bans only impact grocery stores, and not restaurants.

Single-use plastics: In Vermont, a new law takes effect in July 2020 that prohibits restaurants from providing customers with plastic bags, polystyrene foam containers, drink stirrers or plastic straws. In California, the state legislature deliberated on a bill focused on single-use plastics, but in the final days of session, lawmakers broadened its scope to single-use packaging made from all materials.



If plastic packaging regulations are proposed in your area:

- **Educate policymakers on how packaging legislation affects the industry** and work with them to make legislation economically feasible.
- **Encourage a voluntary approach on packaging regulations**, which allows restaurants to implement policies that work for their brands and customers.
- **Talk with legislators about the specific problem** they are trying to solve and whether the proposed legislation will really solve that issue. For example, if the goal is to reduce littering, banning a particular type of packaging might not accomplish that goal.
- **Consider offering some packaging upon request instead of bans** (i.e., straws, cutlery, napkins). Consumers are more environmentally aware and a number of restaurants are responding by offering items only upon request.
- **Encourage policymakers to ensure that there are appropriate exemptions.** In the case of straws, this could include drive-thru areas or restaurants where drinks are intended to be consumed off premises; medically necessary straws; bar areas; and considerations for children’s use of straws.
- **Instead of banning plastic**, businesses should be allowed the opportunity to **source packaging made of alternative plastics** that are not traditionally considered like commercially compostable bioplastics (e.g. Polylactic Acid or PLA straws).
- Consider encouraging policymakers to **incentivize businesses to reduce product usage**, offer a small tax break, or implement a citywide rewards program for those who switch to eco-friendly products.
- **Encourage local governments to invest in recycling and composting infrastructure** to help recover plastic items.
 - **NOTE** — some plastic (straws and cutlery) can be difficult to separate in recovery facilities due to their small size.
- In the case of legislation that requires the business to recycle or compost packaging,
 - **Ensure that a recycling or composting facility be in close proximity** to the mandated businesses.
 - **Ensure that the facility actually accepts the foodservice packaging** that is being mandated to be composted or recycled.
 - In the case of polystyrene foam, consider encouraging cities **to create or expand polystyrene foam recycling programs**. Many cities in California have created curbside recycling programs.

- **To decrease the amount of foodservice packaging that ends up as litter**, the National Restaurant Association worked with Keep America Beautiful and the Foodservice Packaging Institute to develop a **free resource for foodservice operators called “Being a Good Neighbor: A Guide to Reducing and Managing Litter.”** Share this resource with restaurant operators and encourage cities to do the same.
- **Share cost considerations with policymakers.**
 - For example, a study in New York found that alternatives to polystyrene foam can cost three to five times as much as polystyrene containers.
 - Additionally, plastic alternative materials may not be readily available in all markets, driving up restaurant costs even more. Restaurants could be forced to pass on these costs to their customers in the form of higher menu prices or a takeout fee.
- **Encourage policymakers to ensure a gradual and reasonable timeline for phasing in any changes**, along with a reasonable compliance period for restaurants.
 - **Businesses need time to retrain their staff.** In the case of straws, for example, many restaurant employees have been automatically adding straws to drinks for years and it will take time to adjust long-time habits. In addition, ensure that local environmental or health departments have the time they need to develop and publish rules and regulations.
- **Encourage policymakers to ensure that there is not an overly burdensome penalty or fine structure.**
- **Encourage policymakers to ensure that regulations do not limit plastic alternatives to only one choice**, such as paper, and are flexible enough to allow for new innovation and technology growth in the marketplace.
- **Ensure that policymakers understand that training must be taken into account** when switching packaging options. In 2018, the annual employee turnover rate in the restaurant and hospitality sector was approximately 75 percent. This means that restaurants need to consistently re-educate and train both their staff and customers on the benefits of the new packaging and how to properly dispose of it.
- Finally, if you see a patchwork of legislation developing throughout the state, **consider statewide legislation that is workable for restaurants** that would preempt local regulations.



Compostable and Recyclable Packaging

The National Restaurant Association supports the use of compostable and recyclable packaging. However, before regulations are enacted requiring restaurants to use this type of packaging exclusively, policymakers should fully explore all considerations. The use of compostable and recyclable packaging only works when operators, local governments, and recycling and composting facilities all work together. Below are some options to consider when legislation requires recyclable or compostable foodservice packaging.

- One of the **biggest challenges** restaurants face in this area is the **lack of a robust composting and recycling infrastructure**. The infrastructure to compost or recycle packaging is simply not present throughout the country.
- Additionally, **many existing composting and recycling facilities do not accept any foodservice packaging**. Therefore, it is essential to ensure that these facilities will accept the type of packaging that is mandated by the local government. Otherwise, the material will still be sent to trash/landfill and the legislation will not achieve the desired environmental benefits.
- It is also crucial that the **residential** recycling and/or composting programs also accept foodservice packaging. In quick service restaurants and coffee shops that use predominantly **single-use packaging**, **roughly three-quarters of all prepared foods and beverages leave the establishment** via carryout, drive-thru or delivery. This packaging is then disposed of away from the restaurant premises, whether in the home or at the workplace. It is critical that these items can be properly composted or recycled in residential programs that are located nearby.
- Consumers must also understand that these **items should be recycled or composted instead of disposed of in the trash**. This requires restaurant and community education on how to properly dispose of the packaging.
- Explain to policymakers that requiring **the use of only recyclable and compostable foodservice packaging would drastically limit the options** for foodservice operators if these materials are not accepted by recovery facilities.
- Ensure that policymakers understand that instead of adopting legislation that would require recyclable/compostable packaging, the packaging supply chain would welcome the opportunity to work with the local jurisdiction and local recyclers/composters to **ensure that a wide variety of foodservice packaging can be recycled/composted**. The Foodservice Packaging Institute is working with cities to expand the current list of recyclable and compostable packaging.



The use of compostable and recyclable packaging

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MYTH

FACT

DISPOSAL/RECYCLING/COMPOSTING

Foodservice packaging is overrunning our landfills because of high usage and its inability to break down

FALSE: Almost nothing breaks down in a landfill. Landfills were designed to entomb materials. Their lack of air, water and light means items are buried and never degrade. Additionally, very little of what is sent to landfills is foodservice packaging. According to the U.S. Environmental Protection Agency's [annual waste characterization studies](#), paper and plastic foodservice packaging accounts for less than 2 percent of materials discarded by weight.

Plastic bags can't be recycled.

FALSE: Plastic bags can be recycled, but they shouldn't be placed in curbside bins because they can damage the equipment in recycling facilities. Instead, plastic bags should be deposited at special drop-off locations like grocery stores, where the bags will be collected and recycled separately. For more details, go to www.plasticfilmrecycling.org.

Paper cups can't be recycled.

FALSE: Paper cups can be recycled, but in limited locations. Work is ongoing with communities, recycling facilities and paper mills to expand the opportunities to collect and process these materials and recycle them into things like tissue, toilet paper cores and pulp used to make new cups. For more details, go to www.recyclefsp.org. Contact your local municipality or recycler to find out if cups are accepted.

Plastic straws can't be recycled.

That's true...for now. While most straws are made out of a recyclable material (polypropylene), their small size and shape are not compatible with today's recycling facilities. Even if you can't recycle straws, please dispose of them properly in the trash — and not on land or in waterways. Or, if they are made of a compostable plastic, please compost them.

Foam cups and containers can't be recycled.

FALSE: Foam foodservice packages are made from polystyrene. Polystyrene is 100% recyclable. In 2016, about 118 million pounds were recycled. The challenge is limited access. Only a few states and local ordinances have recycling programs.

MATERIALS USED IN FOODSERVICE PACKAGING

Use of paper cups is leading to deforestation.

Paper is typically made from trees, but the paper industry practices "managed forests," which means that for every tree harvested, several more are planted or naturally regenerated in their place.

Plastics are made from oil, a non-renewable resource from half-way around the world.

The vast majority of plastics in the U.S. are made using natural gas found in North America. For more details, visit the U.S. Energy Information Administration's [website](#).

Styrene, found in foam polystyrene cups and containers, causes cancer.

Styrene is a natural, chemical element. When it's polymerized, it gets transformed into a solid foam - polystyrene. Styrene and polystyrene have different chemical properties. It is also found in common foods like cinnamon, beef, coffee beans, peanuts, wheat, strawberries, and peaches. Styrene has been found to cause cancer in rats but under stressful conditions. They continuously inhaled it for months at a high dosage. Foodservice packages have not been found to cause cancer or any other serious health issue. The greatest risk of exposure is daily intake from cigarette smoking or motor vehicle exhaust.

MYTH	FACT
<p>Single-use plastic items in the U.S. are one of the largest contributors to the global marine debris problem</p>	<p>FALSE. According to the report “Plastic Waste Inputs from Land into the Ocean” over half of all marine debris comes from six countries: China, Indonesia, the Philippines, Vietnam, Sri Lanka and Thailand. The U.S. came in 20th on the list.</p> <p>Similarly, the 2017 study “Export of Plastic Debris by Rivers into the Sea” published in Environmental Science and Technology found that 10 rivers (all outside of North America) are responsible for roughly 90 percent of the global input of plastic into the sea.</p>
<p>The Great Pacific Garbage Patch is the result of plastic packaging, including bottles and straws.</p>	<p>FALSE. According to a 2018 study published in Scientific Reports, fishing nets account for 46 percent of the trash in the Great Pacific Garbage Patch. Most of the remaining garbage is composed of other gear from the fishing industry, including ropes, oyster spacers, eel traps, crates and baskets.</p>
<p>Plastic straws are one of the most common items found on beaches.</p>	<p>TRUE. According to Ocean Conservancy’s 2018 International Coastal Cleanup report, True. According to Ocean Conservancy’s 2018 International Coastal Cleanup report, straws ranked #7 in the top 10 list of items found on beaches around the globe, making up about 3% of total trash collected during the annual cleanup.</p>
<p>Americans use 500 million plastic straws a day, and they end up in the oceans.</p>	<p>According to research conducted by the Foodservice Packaging Institute, the estimate of 500 million straws a day is incredibly inflated. Cut that number in half, and that’s closer to a more realistic estimate.</p> <p>However, the vast majority of straws do not end up in the ocean, but in landfills, and while that is not ideal, it is better than being improperly disposed on land or in waterways.</p>
<p>Banning single-use plastic items will reduce litter.</p>	<p>FALSE. Bans simply change the composition of litter streams, not reduce it. San Francisco conducted litter audits before and after they banned foam polystyrene foodservice packaging in 2008. The audits showed a reduction of approximately 30 percent in littered foam cups, but a roughly 30 percent increase in littered paper cups.</p>
<p>Requiring the use of compostable foodservice packaging will reduce litter.</p>	<p>Compostable foodservice packaging will not degrade and disappear when littered. These items are designed to compost in an industrial facility over several months — not in your backyard, on roadways or in waterways.</p> <p>Additionally, since these items may be on the ground for an extended period of time if littered, it may lead to more litter. Keep American Beautiful’s 2009 “Littering Behavior in America” study found that litter begets litter — the mere presence of litter encourages additional litter.</p>

Resources

Tracking Legislation

The Foodservice Packaging Institute offers a free monthly document that tracks pending and approved legislation at the federal, state and local levels related to foodservice packaging. If you are interested in receiving this newsletter, please email Brian Sernulka, FPI's director of government relations, at bsernulka@fpi.org to be added to their list of recipients. The National Restaurant Association tracks packaging legislation as well. To be added to our listserve, please email Michael Ambrose at mambrose@restaurant.org.

Sourcing Guide

There are many factors to consider when choosing the right packaging for your business including performance, cost, appearance, environmental impact and ease of use. The Foodservice Packaging Institute offers a strategic sourcing guide to help members source new packaging if they choose to do so. The guide can be found [here](#).

Beginning a recycling/composting program

The National Restaurant Association has collaborated with the Foodservice Packaging Institute to help restaurants begin a recycling or composting program with an

emphasis on foodservice packaging. Please visit <https://www.recyclefsp.org/foodservicemainpage> to learn more and get specific tips and tools to get started.

Find a composting/recycling facility

In order to mandate that foodservice packaging must be recyclable or compostable, a recycling or composting facility that accepts foodservice packaging must be in close proximity to the mandated businesses. To find locations of composting and recycling facilities in your area, visit <http://www.findacomposter.com> and Earth911, [here](#).

Affiliate membership

Foodservice operators are eligible for a complimentary membership in the Foodservice Packaging Institute. This membership provides you with newsletters and updates on the latest news, legislation, and trends related to the foodservice packaging, as well as discounts on FPI conferences and assistance with sourcing new products. See [here](#) for more information.



Restaurants are focusing more on their packaging materials and responding to *consumers' desires for more eco-friendly options.*