

► Reuse, think before you trash it.

We all have a lot of stuff that we don't need. Before you throw it in the trash, think about other uses for the item. Or if the item is in good condition, find out if you can donate it to a local church or charity. Or maybe there are students or staff on campus that could benefit from your extra notebooks, clothes, small appliances, furniture, etc.

- Host a Dorm Free Cycle Event – Set up donation boxes in your dorm or throughout multiple dorms for collection. Be sure to include details on what types of items you are requesting and explain that they should be in good, working condition. Then host the free cycle event in the lobby or common room of the dorm. Work with a local church or donation center to arrange pick up for leftover items. Check out [Harvard University's 10 Tips for Hosting Successful Freecycle Events](#)⁵³ in Massachusetts.
- Host a [Fix-It Fair](#)⁵⁴ to teach students, faculty, and staff how to fix or repurpose everyday items instead of discarding them. **Towson University** in Maryland Office of Sustainability worked with campus departments and community groups, including Sew Lab (Baltimore-based company), to provide workshops on repairing items such as clothes, zippers, computers, and bikes.



Towson University

- Host a campus move-out and reduce the amount of usable items that go into the landfill. At the end of the spring semester students are finished with exams and ready to go. Coordinate a move-out event that helps student easily donate items that they no longer want. Organize by categories: clothes, school supplies, electronics, furniture, and home goods—and work with campus partners such as housing and residence life and/or the office of sustainability to identify community organizations that will accept and pick up your donations. [Check out Rutgers University in New Jersey ProjectMoveOut](#)⁵⁵.

- Work with a local [Good Will](#), [Planet Aid](#), or other nonprofit organization to have donation bins placed on your campus to make it as easy as possible for students, faculty, and staff to drop off unwanted items.

3. Recycle, Don't Trash It

*Only 9 percent of the recyclable material used in the United States is actually recycled.*⁵⁶

EDUCATION

One of the biggest opportunities on campus to help increase recycling and reduce the amount of plastics going to the landfill, or possibly into the environment, is better and more effective education regarding how to recycle properly on a regular basis. There are new students on campus each semester, and its important to provide constant and consistent information about recycling for the whole community.

Strong effective recycling programs on campus educate the students, faculty, and staff on:

WHAT can be recycled	HOW to reduce contamination	WHERE to recycle	WHY to recycle
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- Ask your sustainability/facilities/operations departments for the most up-to-date information from the recycling hauler to ensure your educational signs are accurate and request that any changes be shared.
- Clear and simple signage near recycling centers on campus is essential. Post information about what can be recycled at all recycling centers on campus and how to reduce contamination of recyclable material.



- Recruit volunteers to monitor the recycling centers throughout the semester and help them share information with people on what can and cannot be recycled. The “[Caught Green Handed](#)” activity mentioned above is a great way to recognize good recycling behavior, and can be included in a broader awareness campaign around recycling.
- Share information about recycling dos and don’ts on the campus website and through the campus newspaper and social media channels. And highlight why recycling is so important. Host a [dorm contest](#) between floors or multiple buildings to find out which dorm can recycle the most.
- Learn more about your campus plastics recycling. Once recyclable material, including plastic, is picked up from your campus, where does it go? And what is its second life? Ask your facilities/operations department or contact the hauler directly (in coordination with your campus staff). This is great information to share with the campus community. This information might be cool to share in an educational awareness campaign.
- Send out a survey to your campus community about recycling on campus. This will help you learn if your recycling signage is effective or if improvement is needed.



[Texas Tech University](#)⁵⁷ educates their campus community on what can be recycled and where the recycling bins are located on campus. Through their website and social media, Texas Tech provides examples of what can be recycled, instructions on how to reduce contamination, and opportunities for the local community to drop off recyclables.



Georgia Southern University⁵⁸ conducted research on the indoor recycling habits of students in one campus building over an eight-week period. For the first four weeks, trash cans were placed in the classrooms with recycling receptacles outside of the classrooms. For the last four weeks, the trash cans were removed from the classrooms and replaced with a sign indicating where the recycling bins were located. The results of the study indicated that there were higher rates of recycling after trash cans were removed and recycling signs were replaced for the trash cans.

RECYCLING CHALLENGES

► **Avoid Contamination: Use the right bin, empty the container and give it a quick rinse!**

The contamination of recyclable plastics also plays a role in plastic pollution. Many countries have tightened their contamination standards - meaning how much contamination they will accept - causing U.S. haulers to do so, as well. Contamination rates of U.S. recyclables before sorting *vary*⁵⁹ from place to place but can reach 25 percent⁶⁰ or higher. For example, Lehigh University in Pennsylvania has a 0.05 percent allowable contamination rate, which is difficult to achieve.

As part of the recycling education campaigns on campus, be sure to include information about how to reduce

contamination of recyclable material. Use clear signage to highlight what items can be placed in the recycling bin. Empty your drink and food plastic containers before you throw them into the recycling bin. Also give it a quick rinse. According to [The Recycle Coach](#)⁶¹, a quick rinse is all you need to reduce food, drink, and other contaminants in plastic containers before you recycle them. The heat during the recycling process can burn off small amounts of stuck-on food and other residue. With single-stream recycling, all recyclable materials – paper, cardboard, glass, plastic, aluminum, etc. – are gathered together. So, if there is a full soda bottle or food residue that drips down on the paper and cardboard, then the whole bin will be considered contaminated and will be dumped in the landfill instead of taken to the recycling center for processing.



One theme of the [St. Louis College of Pharmacy](#)⁶² in Missouri’s awareness campaign focused on reducing contamination in their recyclables. Strategies included video boards, social media, volunteer bin monitoring, and recycling drop-off events.

► **Recycling Different Types of Plastic.**⁶³

Despite the efforts of many conservation and sustainability organizations worldwide, many people remain confused about what materials they can and cannot recycle. The most questions are usually around plastics. Plastics can be especially confusing, since different kinds of plastic require different types of processing to be reconstructed and then re-used as materials for other uses. Some municipalities will accept any and all types of plastic for recycling, while others accept only specific containers and bottles with code numbers stamped on the bottoms. Its important to check with your campus sustainability or operations department to find out what type of plastic can be recycled on campus, and what cannot. And use this information in your educational materials and signage. Waste (recycling) haulers may change their policy on what plastics they will accept so check frequently and update your educational materials and share these changes with the campus community.















The symbol code commonly found on recyclables is a single-digit number between 1 and 7 that is surrounded by a triangle of arrows. This system was designed by [The Society of the Plastics Industry](#) (SPI) in 1998 in order to allow consumers as well as recyclers to discern the difference between different types of plastics while at the same time providing a consistent coding system for the manufacturers.

Can you recycle plastic film?

Generally, plastic film cannot be recycled along with your plastic bottles and food containers, however it can be recycled. There are more than 18,000 locations across the United States and Canada that collect plastic film for recycling. Plastic film is soft, flexible packaging that is used in grocery, bread, zip-top, and dry-cleaning bags. It’s also used to wrap products such as paper plates, napkins, bathroom tissue, diapers, and more. Learn more at [PlasticFilmRecycling.org](#).

Thirty-nine of the fifty U.S. states now require the numbers to be molded or stamped on all eight-ounce to five-gallon containers that can accommodate the ½ inch minimum-size symbol, and each symbol serves to identify the specific type of plastic.⁶⁴ See Appendix B for definitions of plastics 1 through 7.⁶⁵

Plastic Resin Identification Codes

 PETE	 HDPE	 PVC	 LDPE	 PP	 PS	 OTHER
Polyethylene Terephthalate	High-Density Polyethylene	Polyvinyl Chloride	Low-Density Polyethylene	Polypropylene	Polystyrene	Other
Common products: to-go containers, cups, jars, trays, soda & water bottles	Common products: grocery bags, milk jugs, flower pots, detergent & shampoo bottles	Common products: pipe, pool liners, siding, automotive product bottles, sheeting	Common products: bread bags, paper towel overwrap, squeeze bottles, trash bags	Common products: yogurt tubs, cups, twine, straws, hangers, shipping bags, non-woven bags	Common products: to-go containers, razor handles, flatware, CD cases, hot & cold cups, foam packing, trays, egg cartons	Common types & products: polycarbonate, nylon, ABS, acrylic, PLA; multi-layer packaging, bottles, safety glasses, CDs, lenses, pouches
Recycled products: clothing, carpet, clamshells, soda & water bottles	Recycled products: detergent bottles, flower pots, crates, pipe, decking	Recycled products: pipe, siding, binders, carpet backing, flooring	Recycled products: trash bags, decking, furniture, shipping envelopes, compost bins	Recycled products: paint cans, speed bumps, auto parts, hangers, plant pots, toothbrush handles	Recycled products: picture frames, crown molding, rulers, flower pots, hangers, toys, tape dispensers	Recycled products: electronic housings, auto parts
						

Graphic by More Recycling

What's up with recycling the bottle cap?

Bottle caps are made from plastic resins that are different from those used to make the rest of the plastic bottles they come on. Most caps are made of polypropylene (#5 plastic), with some (such as sports-drink bottles) composed of high-density polyethylene (#2 plastic), while the rest of the plastic bottle is typically #1 or #2 plastic that is much more likely accepted at recycling bins and from recycling haulers. Check with your campus sustainability/facilities/operations departments to find out if your campus hauler accepts plastic bottle caps. If not, be sure to include in your educational signage instructions to remove the cap before recycling the plastic bottle.

► Where do plastic recyclables end up?

Less than ten years ago, plastic was exported at a value of \$34 billion.⁶⁶ An International Solid Waste Association 2014 report, "Global Recycling Markets: Plastic Waste,"⁶⁷ found that China was the leading import country for waste plastics, receiving 56 percent by weight of the global imports of waste plastic. China needed affordable secondary plastics to meet the increased demand for plastic products. The United States was the second largest consumer of plastics in the world and depended mainly on China and Hong Kong to absorb its waste plastics.



What is China's "Operation Green Fence" and Why Was it Launched?

Each day across the United States, about 1,500 shipping containers were packed full of recyclables and trucked to seaports, where they were loaded onto cargo ships and taken to China. The recyclables in those containers included metals, plastics, rubber, paper, cardboard, and textiles, which were used as raw materials by Chinese manufacturers. As a matter of fact, since 2007, recyclables have been one of the largest exported materials to China.

Containers were used to deliver a variety of products from Chinese manufacturers to consumers in the United States. Once emptied, those containers were then stuffed with recyclables and returned to China, where the materials would be recycled into new boxes, paper, clothing, and other items. Unfortunately, the quality of the recyclables started to decrease, and a lot of the plastics, scrap metal, and fiber that was entering China contained too much food, trash, and other contaminants. The excess residue could not be recycled, and Chinese manufacturers were getting stuck with the big expense to sort out and dispose of non-recyclables in Chinese landfills. The Chinese government, looking to protect its homeland manufacturers and mindful of the environmental impact of the increased waste to Chinese landfills decided it would act to improve the quality of the raw materials through the enhanced inspection of recyclables that were exported to China. The program, known as "Operation Green Fence,"⁶⁸ was formally implemented in February 2013 and was billed as an aggressive inspection effort aimed at curtailing the amount of contaminated recyclables and waste that were being sent to China.

China's Operation Green Fence bans bales of plastic that haven't been cleaned or thoroughly sorted. That type of recyclable material, which costs more to recycle, has often ended up in China's landfills, which had become a source of unrest in the country's South. Instead of investing in the sorting and cleaning technologies required to process soiled and unsorted recyclables, which both China and the United States have been reluctant to do, China's Green Fence policy

blocks the import of those plastics. As a result, U.S. recycling centers that once accepted scrap plastic for recycling are being forced to send it to American landfills.

And yet, Chinese processing factories desperately need U.S. plastic. Once reprocessed, it is used to make everything from polar fleeces to stadium seats. China imports around 40 percent of the world's plastic scrap, collecting the rest domestically.

The [International Solid Waste Association](#) report found that there is evidence from all around the world that Operation Green Fence has affected export markets and has had an immediate impact on the entire value chain of waste plastics. There is not enough reprocessing capacity and very little new reprocessing PE capacity that has been built in North America since 2001. (Polyethylene or polythene, AKA "PE," is the most common plastic. It's primarily used in packing materials such as plastic bags, plastic films, etc.)

However, according to [Waste 360](#), if Operation Green Fence did anything, it created an opportunity for the recycling industry and municipalities to evaluate policies and practices and adjust to changing markets.⁶⁹ Specifically, it's time for recyclers to challenge the existing collection and sorting models and take a long, hard look at problem materials to figure out a better way to collect and process materials for recycling. And in the meantime, identify other markets for U.S. recyclables, including increasing the amount that is recycled here at home. Check out Resource Recycling, Inc.'s "[From Green Fence to red alert: A China timeline](#)" for updates on the Chinese import policies and its impacts on the U.S. plastic recyclables market.

