### **How to Recycle**

The average American generates 4.48 pounds of trash per day, adding to the grand total of about 262 million tons of trash the United States accumulates per year. American communities recycled and composted nearly 35% of municipal solid waste in 2015, diverting 91 million tons to recovery according to the U.S. EPA. Use the "Recycling Explorer" below to learn what to recycle and how.

## **Plastic Bottles and Containers**

#### What can be recycled?

Containers for beverages, foods, and household cleaners; bottles for shampoo, body wash, and other toiletries, plus caps and lids

## Why it wants to be recycled

Used plastics are versatile and adaptable, as illustrated by their wide range of uses. There is a large market for recycled plastic bottles and containers, and keeping that valuable material out of landfills also helps reduce energy use and emissions.

#### How to recycle it

Look for <u>curbside</u>, school, work, or public space recycling bins, or find local recycling drop-off centers. In some states, beverage containers have a deposit refund and can be returned to the store where they were purchased.

For *lotion bottles and other toiletry items* with pumps, empty the contents, discard the pump, and recycle the bottle. For no-pump containers, simply empty the contents, re-screw the cap to keep it all together, and recycle. Check your local ordinances for specific instructions — this category *is easily contaminated* with incorrect preparation or the wrong materials.

### What do recycled plastics from bottles and containers become?

Once collected, mixed plastics are sorted, baled, and sent to a reclaiming facility. There the plastics are cleaned, washed, and ground into flakes. The flakes are dried, melted, filtered, and formed into pellets. These are sent to a manufacturer to be heated and remolded into a new product.

Depending on the kind of plastic, recycling might give a product new life as fiber for clothing, carpeting, car parts, or strapping. Or it could become a cutting board, a durable outdoor deck, a bench, plastic lumber, playground equipment, or maybe even a recycling bin.



# Did you know?

It takes 114 20-oz beverage bottles to make enough fiberfill for a sleeping bag.

## **Mythbuster**

**MYTH:** You must remove your beverage container cap before recycling.

**FACT:** Recyclers want your caps and lids, too. A tip: caps can slip off conveyer belts during the recycling process, so when you empty a bottle, crush it, cap it, and toss it in the recycling bin.

**MYTH:** You must rinse out every drop of lotion, soap, or shampoo before recycling the bottle.

**FACT:** Plastics will be cleaned at the recycling facility. Be sure to reduce waste by using all the product in the bottle, then lightly rinse and recycle it.

#### **More Resources**

American Chemistry Council Association of Postconsumer Plastic Recyclers How2Recycle Napcor Earth 911

# **Plastic Bags and Film**

## What can be recycled?

Retail bags, dry cleaning bags, bread bags, shipping pillows, sealable or "zippered" plastic food bags, flexible plastic wraps on paper towels, cases of soda, cotton balls, bathroom tissue, and more

## Why it wants to be recycled

Plastic bags and flexible wraps, also known as "film," are recyclable and — like other plastics — can be used to make many other products. Recycling reduces litter, lessens the amount of waste going to landfills, and gives a valuable resource a second life.

### How to recycle it

Return plastic bags and films to labeled receptacles, widely available at grocery and retail outlets. Do not include food or cling wrap, prepared food bags, biodegradable bags, or film that has been painted or has excessive glue. Check your local ordinances for specific instructions — this category is easily contaminated with incorrect preparation or the wrong materials.

### What does recycled plastic bags and film become?

Once collected, plastic bags and film are baled and sent to recycling centers. Here, the used bags are cleaned, processed, and turned into flakes and pellets. The pellets are used to make new plastic shopping bags, durable outdoor fences, decks, shopping carts, and home building products.



## Did you know?

America's recycling of plastic bags and film increased by 56% from 2005 to 2012. There are currently more than 15,000 locations nationwide — primarily major grocery and retail chains — where you can take plastic film to be recycled.

#### Mythbuster

**MYTH:** Your lunch sandwich bag cannot be recycled with your plastic bags, wraps, and other film.

**FACT:** Sandwich bags (with or without zippers) can be taken to your local retail establishment for recycling with other plastic film.

#### **More Resources**

American Chemistry Council How2Recycle Plastic Film Recycling

# **Kitchen Plastics**

### What can be recycled?

Tubs and lids (like for cottage cheese), cups (like for single-serving yogurt), and iced tea or big syrup bottles

## Why it wants to be recycled

The Environmental Protection Agency (EPA) measured the nation's overall plastics recycling rate for 2014 at just 9.5 percent, and kitchen plastics are an area where that number can improve significantly to preserve resources and keep re-usable waste out of our landfills.

## How to recycle it

Look for <u>curbside</u>, school, work, or public space recycling bins, or find local recycling drop-off centers. While not all kitchen plastics are recyclable, community websites and local recycling agencies often have posters with visuals to help identify the items that are accepted.

## What do recycled kitchen plastics become?

Kitchen plastics can be used to make many products, including buckets, crates, razor and toothbrush handles, toys, and even brand new kitchenware like cutting boards, measuring cups and colanders.



## Did you know?

Plastic lids from yogurt cups may contain mixed material lids, so those aren't always recyclable. Check your favorite brand — if the lid is plastic, it can be recycled too!

## **Mythbuster**

**MYTH:** Plastic lids from cups and tubs aren't recyclable.

**FACT:** They usually are (double-check yogurt lids though!). Keep plastic lids and tops with their bottoms and recycle away!

#### **More Resources**

**Association for Plastic Recyclers** 

**Recycle Your Plastics** 

Plastics Make it Possible

## **Foam**

### What can be recycled?

Drink cups and other foodservice packaging products like foam cups, take-out containers, coolers, foam packaging used to protect items during shipping, and building insulation are just a few of the uses of expanded polystyrene (EPS) or "polystyrene foam" (also referred to as "Foam #6")

## Why it wants to be recycled

Recycling Foam #6 reduces the amount of solid waste that goes to our landfills and conserves natural resources.

## How to recycle it

Foam #6 is a thermoplastic, which means that it can be recycled again and again. By using widely available *compactors specifically designed for foam (known as "densifiers")*, you can load 40,000 pounds of foam on a 48-foot trailer to transport the material to a recycling facility, where it is converted into recycled pellets. Because of advances in technology that have made foam recycling more efficient, some cities have added foam to their curbside and *drop-off collection programs*. In fact, there are over 200 drop-off locations across the country so far. Check here to see if there is a drop off location in your community.

Packaging peanuts can be reused or recycled — contact your local packing and shipping store, like UPS, to find out if they will take clean peanuts.

#### What does recycled foam become?

Foam can be recycled to make a number of items we use every day — from picture frames to crown moldings and baseboards to plant packaging, and much more. It can also be recycled into foam insulation to maximize your home's energy efficiency or turned back into packing material to help protect fragile and breakable items.



## Did you know?

In 2013, over 127 million pounds of foam was recycled, including 72.8 million pounds of post-consumer packaging.

## **Mythbuster**

MYTH: Foam is not recyclable.

**FACT:** Foam is recyclable. There are over 200 foam recycling drop-off locations across the U.S., including in and around most metropolitan areas.

#### **More Resources**

Home for Foam Foam Facts EPS Packaging Recycle Foam

# **Food and Beverage Cartons**

### What can be recycled?

Packaging for food and beverage products such as milk, juice, soy milk, soups, and broths

## Why it wants to be recycled

Cartons contain some of the highest-quality virgin fiber in the recycling stream, and reusing those fibers means that we don't have to deplete precious environmental resources to obtain more.

## How to recycle it

Empty out the unused juice or broth from your carton before recycling, and then toss the carton – without flattening – into your *curbside* recycling bin (caps and straws can go in there too).

#### What do recycled cartons become?

Recycled cartons are turned into products you use every day, like tissues, paper towels, toilet paper, writing and office paper. They also become environmentally friendly building materials, like ceiling and roofing tiles.



## Did you know?

There is no need to flatten your carton before placing it in the bin — they're best recycled in their original form.

## **Mythbuster**

MYTH: Cartons can't be recycled unless the caps or straws are removed and they are rinsed out.

**FACT:** Check your local ordinances. In many areas, there's no need to remove caps or straws — and don't worry about rinsing cartons out. As long as the contents are gone, go ahead and recycle them.

#### **More Resources**

**Carton Council** 

# **Aluminum**

## What can be recycled?

Beverage cans, pet food cans, aerosol cans, aluminum foil, and cookware

#### Why it wants to be recycled

Aluminum is infinitely recyclable. Recycling a can takes just 5% of the energy and emits a mere 5% of the greenhouse gases that making one from scratch does.

#### How to recycle it

Look for *curbside*, school, work, or public space recycling bins, or bring aluminum to local recycling drop-off or buy-back centers. In some states, beverage cans have a deposit refund and can be returned to the store where they were purchased.

#### What does recycled aluminum become?

Aluminum's recycling journey begins when it is collected, crushed, and cut into chips that are fed into a furnace to remove paint and coatings. The chips are then melted and formed into the blocks called *ingots*. The aluminum blocks are rolled into sheets which are sent to manufacturers to make new cans. One of these blocks contains enough aluminum to make 1.3 million new cans (which have an average of 68% recycled content). A can's journey from the recycling bin back to store shelves takes less than 60 days.



## Did you know?

About 1 billion pounds of aluminum, or 32 billion cans, end up in landfills every year. That wasted energy could power 1.5 million homes for a year.

## **Mythbuster**

**MYTH:** The tab is the only part of the can that can be recycled.

**FACT:** The entire can is recyclable! In fact, it's better to keep the tabs on the can to ensure they make it through the recycling process.

#### **More Resources**

The Aluminum Association Can Manufacturers Institute

## **Steel**

## What can be recycled?

Food cans, aerosol cans

## Why it wants to be recycled

Recovered steel can be re-melted and used again and again to produce new steel products. For every ton of steel recycled, 2,500 pounds of iron ore, 1,400 pounds of coal, and 120 pounds of limestone are conserved. Recycling steel saves nearly 74% of the energy used to produce it from raw materials — that's enough energy to power about 18 million homes for a full year.

## How to recycle it

Look for *curbside* recycling bins, local recycling drop-offs, or scrap buy-back centers.

#### What does recycled steel become?

Steel is collected, separated from other materials by a magnet, and crushed into large bales. The bales are shipped to steel mills where they are melted in a furnace to make new steel. Steel packaging, car bodies, appliances, and steel framing use a minimum average of 22% recycled steel. Products such as structural sections and bridge spans use virtually 100% recycled steel.



### Did you know?

Steel is the most recycled material in North America. Each year, more steel is recycled than aluminum, paper, glass, and plastic combined!

## **Mythbuster**

**MYTH:** You must remove paper labels before recycling steel cans.

FACT: There's no need to remove paper labels — they burn off in the recycling process.

#### **More Resources**

Steel Recycling Institute Can Manufacturers Institute

## Glass

### What can be recycled?

Food and beverage containers

#### Why it wants to be recycled

Glass can be recycled over and over without any loss in purity or quality. For every ton of glass that is recycled, over one ton of natural resources are saved — including sand, soda ash, limestone, and feldspar. Using recycled glass cuts energy costs and reduces greenhouse gas emissions. Plus, one ton of carbon dioxide is reduced with every six tons of recycled glass used.

## How to recycle it

Look for *curbside*, school, or work recycling bins or find a local recycling drop-off center — and be sure to check local recycling ordinances. In some states, beverage containers have a deposit refund and can be returned to the store where they were purchased. **Don't put dishware, light bulbs, heat resistant glass (Pyrex), mirror glass, window glass, crystal, or computer screen glass in your recycling bins — they can damage the furnace and cause impurities in new containers.** 

#### What does recycled glass become?

In order to be recycled, glass is collected, mixed, and then sorted by color — clear, green, and amber — at a materials recovery facility. Most glass then goes to a processor for further cleaning, sorting and crushing into "cullet." This cullet is mixed with sand, soda ash and limestone and then heated and shaped for reuse. Glass container manufacturing companies purchase approximately 65-80% of glass containers collected through deposit refund programs — those become new containers. Recycled glass that cannot be sorted for containerend use may be used in kitchen tiles, counter tops, or wall insulation.



## Did you know?

Recycling one glass bottle saves enough energy to power a computer for 30 minutes or a TV for 20 minutes.

### Mythbuster

**MYTH:** You must remove all labels before recycling glass containers.

FACT: There's no need to remove labels before recycling glass bottles — the heat generated in the manufacturing process takes care of that.

#### **More Resources**

**Glass Packaging Institute** 

# **Paper**

## What can be recycled?

Office and printing paper, newspapers and advertising inserts, mail and envelopes, magazines and catalogs, plus an array of cereal and other dry food boxes, frozen food packaging, shoe and tissue boxes, non-greasy pizza boxes, paper towel and toilet paper rolls, soap and laundry detergent boxes, cosmetic packaging, corrugated cardboard, paper bags, and more

#### Why it wants to be recycled

Every ton of paper recycled saves 3.3 cubic yards of landfill space. Approximately 75% of U.S. paper mills use some recovered fiber to make everything from paper-based packaging and tissue to office paper and newspaper. Based on weight measurements, paper is recycled nearly three times as often as it is sent to landfills, making paper the most recycled material in the municipal solid waste stream.

#### How to recycle it

Look for *curbside*, school, work, or public space recycling bins.

#### What does recycled paper become?

With a recycling rate of over 60%, many paper products have recycled content — here are just a few examples: Newspaper is usually made into more newsprint, with the remainder used for paperboard, tissue, and construction paperboard. Recycled office paper becomes raw material for tissue, printing and writing papers, and paperboard. Most recycled corrugated boxes are made into new boxes, and the rest is used for packaging, like cookie and cracker boxes.



### Did you know?

Every day, U.S. papermakers recycle enough paper to fill a 15-mile-long train of boxcars.

## **Mythbuster**

MYTH: You must remove staples, labels, and stickers from direct mail before recycling.

FACT: You don't need to remove staples, labels, or stickers from paper products. The recycling process takes care of that.

#### **More Resources**

Paper Recycles How2Recycle

# Yard Waste

#### What can be recycled?

Trimmings and leaves, Christmas trees, small brush, grass clippings, weeds

## Why it wants to be recycled

Yard debris currently make up over 13% of waste sent to landfills. Composting turns yard trimmings into nourishment for the soil and can be used as mulch. That keeps materials out of landfills where they take up space and release methane, a potent greenhouse gas.

## How to recycle it

Yard debris can be *composted right at home*. Add them to a compost pile outdoors along with <u>food</u> <u>scraps</u>. Some communities collect larger brush or have collection points and then turn these yard trimmings into mulch that is offered to residents.

### What do recycled yard trimmings become?

Grass clippings that are left onsite will decompose and return nutrients to the soil. Leaves can be used as mulch around trees and shrubs to retain moisture. Yard trimmings can be added to your outdoor compost pile. Recovered wood can be used for mulch, fuel, compost, animal bedding, and even in manufactured products such as particle board.



#### **Mythbuster**

**MYTH:** It is important to bag your grass clippings and dispose of them in a compost pile after mowing your lawn.

**FACT:** An alternative to bagging your grass clippings is to mow your lawn so that the grass clippings are never more than two or three inches tall — then you can leave clippings where they fall to decompose and enrich the soil.

#### **More Resources**

# **Food Scraps**

## What can be recycled?

Fruit and vegetable peelings, coffee grounds, and other food scraps, plus small amounts of soiled paper or cardboard

## Why it wants to be recycled

Recycled food scraps are called *compost*, and they are a beneficial soil additive, providing nutrients while helping to retain soil moisture in arid climates. Also, composting food scraps keeps them out of landfills where they takes up space and release methane, a potent greenhouse gas.

#### How to recycle it

Food scraps can be *composted right at home*. Indoors, *Vermicomposting* uses red wiggler worms in a bin to contain the worms and the organic matter or *In-Vessel Composting* keeps organic material in a drum or similar container where the environment can be controlled. If you have a yard, food scraps can be added to a compost pile outdoors along with other organic waste. *Do not compost meat scraps*.

Aerated Static Pile Composting is a large pile of organic waste mixed together with layers of wood chips or shredded newspapers added so air can pass through from the bottom to the top of the pile. Typically, the pile is turned frequently by hand (in a backyard setting) or air is mechanically blown or sucked through the pile.

## What do recycled food scraps become?

Food scraps currently make up 14% of what ends up in landfills annually. By composting your food scraps, you can keep them out of landfills and allow them to enrich the soil.



## Did you know?

Compost improves soil health and structure, increases drought resistance, and reduces the need for water, fertilizers, and pesticides.

## Mythbuster

**MYTH:** Compost piles are smelly, attract pests, and take a long time to be ready for reuse.

**FACT:** A properly managed compost pile will not attract pests and can create usable compost in just 6 to 8 weeks.

#### **More Resources**

**EPA US Composting Council** 

## **Household Hazardous Waste**

#### What can be recycled?

Fluorescent light bulbs and tubes, glues and adhesives, cleaning fluids, oil-based paints, paint thinners and stains, lawn and garden chemicals, pool and spa supplies, propane and butane tanks, and automobile fluids

#### Why it wants to be recycled

Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered household hazardous waste (HHW). Improper disposal of HHW can pollute the environment and pose a threat to human health.

#### How to recycle it

Most communities have *HHW drop-off locations* or schedule special collection days. Check with your local solid waste agency about collection events and local drop-off centers.

## What does recycled hazardous waste become?

Certain materials — like cleaning solvents — can be cleaned and reused. Alternatively, some hazardous waste can be blended and used as a fuel ingredient, or treated and then used as an ingredient in a product such as fertilizer.



## Did you know?

Leftover household products that contain corrosive, toxic, ignitable or reactive ingredients are considered household hazardous waste.

## Mythbuster

**MYTH:** Since Federal law allows disposal of household hazardous waste in the trash, it is okay to put it there.

**FACT:** Although the Environmental Protection Agency (EPA) sets national standards, states often have more stringent regulations. Call your local solid waste agency for instructions on the proper disposal of household hazardous wastes.

### **More Resources**

# **Electronics**

### What can be recycled?

Desktop and laptop computers, monitors, printers, copiers, hard drives, batteries, tablets, televisions, cell phones, digital cameras, cords, keyboards and <u>ink and toner cartridges</u>

### Why it wants to be recycled

More than 4.4 million tons of electronic equipment in the U.S. are recycled each year, which helps prevent valuable material from going into the waste stream.

## How to recycle it

If your cell phone, laptop, or other device is still in working condition, you can *give it a "second life"* by donating it to a school or nonprofit organization — there are even mail-in donation programs. Or return your escrap to the manufacturer or retailer; many companies refurbish electronic devices for resale. Look for *e-scrap collection events* in your community — they may be organized as fundraisers for local schools or charities. When recycling phones and computers, always clear your personal data. You can find out how by asking the manufacturer or using an R2 Solutions-certified recycling company. Check your local ordinances for specific instructions — this category is easily contaminated with incorrect preparation or the wrong materials.

## What do recycled electronics become?

Electronics contain valuable precious metals such as gold, silver, platinum, palladium, copper, tin, and zinc that can be recovered and used to make jewelry, plating, new electronics, or automotive parts. Plastic components can become parts of new electronic devices or even turned into another plastic product like garden furniture.



## Did you know?

One metric ton of electronic scrap from personal computers contains more gold than 17 tons of gold ore.

## Mythbuster

**MYTH:** I can safely dispose of electronic waste in my household trash.

**FACT:** Many states have banned electronic waste from landfills and the EPA supports recycling e-scrap to recover minerals and reduce the environmental impacts of mining and manufacturing additional materials.

#### **More Resources**

# **Auto Parts and Products**

## What can be recycled?

Car parts, seats, engines, antifreeze, batteries, brake fluid, gasoline, motor oil, and tires

#### Why it wants to be recycled

Recycling auto parts yields resources such as oil, steel, and aluminum. By re-using these materials, we save the energy needed to mine and manufacture new resources.

## How to recycle it

Vehicles can be donated to nonprofit groups and sold to automotive recyclers. Some parts, such as tires, lead acid batteries, and gasoline, may be dropped off at your local recycling center. Other items, like oil and lead acid batteries, may to be returned to the dealer or repair shop.

Recycled vehicles are first dismantled to recover fluids and take away parts such as batteries, wheels, tires, fenders, radios, engines, and other materials that can be sold for reuse in other vehicles or other markets. Next, vehicles are crushed and loaded onto a shredder. The shredder grinds the vehicle into pieces from which metals are separated. The recovered metals are sent to mills to be re-melted. The remaining material, known as auto shredder residue (ASR), or "fluff" — which includes the plastic, fiber, and some metals — may be further recycled or sent to landfills.

## What do recycled auto parts become?

Scrap tires may be shredded and used as synthetic turf for playgrounds or rubberized asphalt. The recovered fabric can become paper or packaging materials. Glass from the automobile can be recycled to create new glass. Plastics from the dashboard and wire coverings can be recycled to make building materials and clothing. Oil is collected and re-refined into new oil, reconditioned to be used again. Batteries are broken apart and the plastics go to a recycler to be melted and made into pellets while the lead is cleaned, melted, and made into ingots which can be reused for new batteries and other items. The sulfuric acid is either neutralized to turn it into water that meets clean water standards, or it is converted into sodium sulfate, which is used in laundry detergents and glass and textile manufacturing.



## Did you know?

Recycled vehicles provide more than one-third of all iron and steel scrap in the United States scrap processing industry.

## Mythbuster

**MYTH:** Once the useful life of an automobile is over, it is left in a junkyard.

**FACT:** The automobile is the most recycled consumer product in the world. Nearly all cars around the world are recovered for recycling.

## **More Resources**

EPA Earth 911