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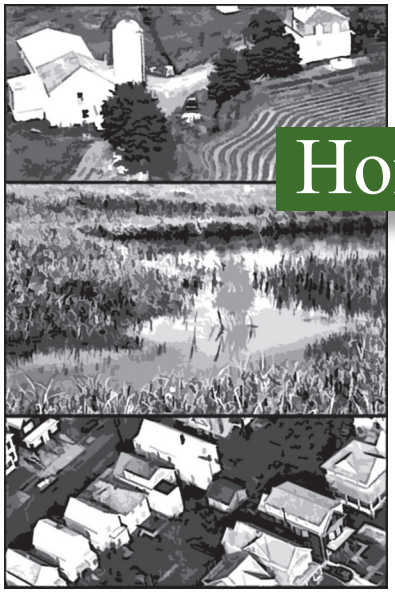

Home & Environment

Household Waste Management

Recycle

Tyler Henningsen, Ashley Osborne and Brad Lee

Waste management is the collection, processing and disposal, or reuse of recyclable and non-recyclable materials. The ultimate goal of waste management is to reduce the amount of waste material that is deposited in landfills through recycling and/or reuse.

In this Publication

Recycle

Recycling turns waste materials from the products you purchased into new products and packaging. What is and is not recyclable differs from city to city and state to state. Recyclable materials such as paper, plastics, glass, and metals can be processed and reused. Items that are typically non-recyclable include ceramics, bathroom and kitchen waste, cookware, and paper products soiled by food or grease.

Americans create about 5 pounds of waste per day, half of which is recycled in some manner, leaving roughly 2.5 pounds of waste per day going to landfills. The percent of waste that is recycled has increased dramatically since the 1960s, when only 10 percent of waste was recycled.

Have you ever wondered what happens to those two liter bottles, plastic milk jugs and aluminum cans you recycle? What about your daily newspaper, office paper or glass containers? When recycled, these items are processed into reusable materials that have new life as new products.

To close the recycling loop, we not only need to recycle; we also need to purchase items made from recycled materials. Whether at the grocery store or the office, buying recycled is easy to do. Today we find long-lasting plastic lumber made from milk jugs, carpeting and clothing made from plastic soft drink bottles, and landscaping mulch made from tree and yard waste. Glass bottles may have a second life as tile for your home, and many of the paper products on the market today include recycled fiber. When you're shopping, take the time to look for items made from recycled materials. Check product packaging to see if the product or packaging

The 3 Rs are the foundations of waste management. The order is based on the impact each has on waste management.

says "made with recycled material" or "made with post-consumer waste". Either of these terms tell you that the item you are purchasing has some recycled content. Recyclable materials accepted by recycling authorities vary by locality. Check with your local recycling authority or county Solid Waste Coordinator for more information on what materials they will accept.

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Paper

Most paper products can be recycled. The only universal exception for general paper recycling is items contaminated with food, as the oils and grease can not be separated during the recycling process. Other paper products that may or may not be recyclable in your area are corrugated cardboard and aseptic containers (juice and milk boxes). Your local recycling authority may require that paper be sorted; these categories may include white office paper, mixed paper, newspaper, and cardboard.

Plastic

Recycling plastics can be complicated, but many recycling authorities are simplifying the process for customers. Plastics are broken down into seven categories. Each category represents different types of resins that were used in the creation of the plastic. You can find what category a plastic is by looking for the recycling symbol and the number in the center of it (Table 1).

Glass

Most recycling authorities only collect glass containers, such as beverage bottles. Other types of glass products are treated with chemicals that can contaminate or harm equipment in the recycling process. Pyrex, glass tableware, light bulbs, mirrors and windows typically cannot be recycled.

Steel and Aluminum

Steel and aluminum cans are almost universally accepted by recyclers. They do not need to be cleaned, other

Table 1. Recycling symbols and categories.

Symbol	Common items
1 PETE	Soda and water bottles
2 HDPE	Milk and juice bottles, cleaning product bottles, and plastic and trash bags
3 PVC	PVC piping and some cleaning and food product bottles
4 LDPE	Squeezable bottles, and food and shopping bags
5 PP	Bottle caps, some food and medicine bottles, and straws
6 PS	Rigid foam products such as cups, plates, and silverware, and some medicine bottles and CD cases
7 OTHER	All other plastics, including mixed and layered plastics

Items from categories 1, 2, and 4 can typically be recycled. And while the other categories are less likely to be recycled, check with your recycling authority as many are starting to accept these.

than for odor purposes, or to have their labels removed. Other metals may be accepted.

White Goods and Electronics

White goods are any type of home appliances. If an item is not in good working order, it can almost certainly be recycled. Some appliances require special recycling methods, such as refrigerators, freezers, air conditioners, and any other appliance that uses coolant. These appliances must have their coolant removed before disposal/recycling. If you are buying a new appliance, check with the retailer to see if they provide a disposal service.

E-Waste is any electronic or electrical device that has been disposed. Disposing of these goods properly is important, as many of the materials used to make electronics are highly toxic. Computer monitors and televisions can contain leaded glass and mercury; printed circuit boards contain lead, chromium, cadmium and sometimes mercury; batteries contain lead, mercury and cadmium.

- Batteries can be recycled in a number of different ways. Wet-cell batteries, such as car and boat batteries, are often required by state law to be recycled, and can be returned to a retailer for disposal. Single use batteries can be recycled through specialized recyclers or retail store drop-offs. Rechargeable batteries can be recycled through specialized recyclers as well, such as the Rechargeable Battery Recycling Corporation (www.call2recycle.org/), which has drop-off locations in many states.
- Computers that are not in good working order can be recycled for free or a nominal fee through computer retailers. Local recycling authorities often have events or facilities for collecting computers and electronics. Before you do recycle, format your hard drives to help prevent identity theft.
- Cell phones and cell phone accessories are made from precious metals, copper, plastics, and other valuable resources. Extracting and manufacturing these valuable resources requires energy. By recycling cell phones, valuable materials are kept out of landfills, and energy and other natural resources are conserved. Cell phones are accepted through the Rechargeable Battery Recycling Corporation (www.call2recycle.org/) and as part of the eCycling program through the EPA. Many cell phone retailers are accepting phones and accessories at their retail stores.

Motor Oil

Motor oil is extremely toxic to the environment and can be easily recycled at almost any local service station for free. Motor oil is one of the most widespread pollutants. Used oil is insoluble in the environment, persistent, and can contain toxic chemicals and heavy metals. Used oil is a major source of pollution in our nation's waterways; it can kill plant and animals and pollute drinking water that is obtained from surface waters and groundwater. Used oil from a single oil change, 2.5 quarts, can ruin a million gallons of fresh water—a year's supply for 50 people. An estimated 120 million gallons of motor oil are disposed of improperly each year, eventually making the way into water supplies. Recycling this oil would save the United States 1.3 million barrels of oil a day. Recycled oil is used to make re-refined oil, which is as good as new oil. One gallon of used oil that is re-refined makes enough oil for a typical oil change; it would take 42 gallons of crude oil to make that same amount. In many states it is illegal to improperly dispose of used motor oil, and fines in Kentucky can be up to $1,000.

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Composting

Composting is nature's way of recycling, where organic materials are decomposed by bacteria, fungi, worms, and insects. The product of composting, called compost, provides a number of benefits when used as a soil additive. It can also be used to reduce the amount of chemical fertilizers used on your soil by providing some of the same nutrients. Compost provides a good growing environment for beneficial soil organisms and helps prevent soil erosion because it can hold more water than soil alone. It improves conditions for whatever you grow in it.

Composting is also an important part of waste management; it keeps huge amounts of waste from being deposited in landfills. Many organic materials can be composted, including fruit and vegetable waste, coffee and tea grounds as well as their filters, sawdust, shredded newspaper, yard clippings, and leaves. Things that should not be composted include sawdust from chemically

treated woods, meat and dairy products, baked goods such as breads, fats, oils, and greases, and animal fecal wastes. The chemicals in treated woods can hamper the composting process by killing off the decomposers; meats, dairy products, baked goods, and fats, oils, and greases attract pests; and pet wastes can carry parasites and diseases.

Vermicomposting—adding worms to your compost—will speed the composting process typically used for paper and household organic wastes. Vermicomposting can be done in an apartment, under the sink, or anywhere where the temperature remains between 50°F and 80°F. Vermicomposting requires a plastic or wood container that is well ventilated and allow excess moisture to drain. Holes must be drilled on the top or sides and bottom. If the bin is indoors, a plastic sheet or pan can be used to collect excess liquid.

Resources

If you have any questions or concerns about how to dispose of any item, contact your local the Division of Waste Management. Every county in Kentucky has a solid waste coordinator who deals with issues in recycling, composting, landfill and disposal, household hazardous waste, litter abatement, illegal dumping, enforcement of solid waste laws, education, and community outreach.

- Kentucky Division of Waste Management: (502) 564-6716
- Kentucky solid waste coordinators: (http://www.waste.ky.gov/NR/rdonlyres/9DF373FD-46CD-4579-87E9-29B762BD52A7/0/SolidWasteCoordinators62909.pdf)
- Recycling facilities by county: http://www.waste.ky.gov/NR/rdonlyres/26B46DB4-4D5F-47E9-9109-29D6047A96C5/0/rptFacilbyCounty31309.pdf

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Issued 9-2010