



HOW-TO BOOKLET #3409 RECYCLING

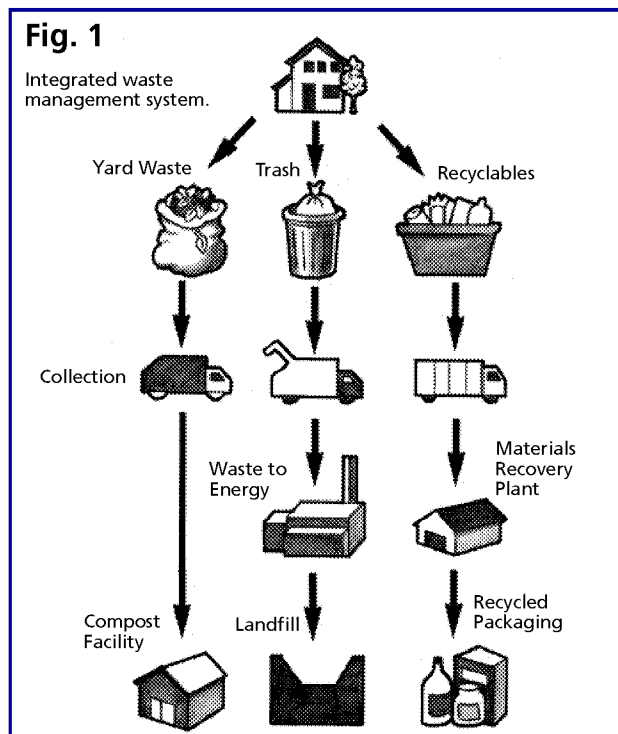


TOOL & MATERIAL CHECKLIST

- | | | |
|---|----------------------------------|--|
| <input type="checkbox"/> Recycling Bins or Containers | <input type="checkbox"/> String | <input type="checkbox"/> Magnet |
| <input type="checkbox"/> Colored/Clear Glass | <input type="checkbox"/> Plastic | <input type="checkbox"/> Aluminum |
| <input type="checkbox"/> Newsprint | <input type="checkbox"/> Paper | <input type="checkbox"/> Household Chemicals |

Read This Entire How-To Booklet for Specific Tools and Materials Not Noted in the Basics Listed Above.

For generations we've been in the habit of throwing all our cans, bottles, paper, and trash into one bag. Municipalities then hauled it all to a landfill and left it there to rot. Now landfills are reaching capacity and natural resources are not as boundless as they once seemed. The situation has forced a new, less wasteful era; an era in which much of our trash is recycled and made into new products. For this recycling to work, everyone must help. By educating ourselves about recycling and by separating the recyclable material from the trash, we all benefit.



THE RECYCLING PROCESS

The three basic recycling rules are: **REDUCE**, **REUSE**, and **RECYCLE**. That sounds like a lot of trouble, but it's only a matter of learning new habits.

Rule #1: Reduce. Reducing waste requires a little forethought. The idea is to bring home less material that will end up as trash. Take the time to shop carefully and evaluate if you really need an item, especially disposable, one-time-use items. For example:

- 🏠 Buy bulk-packaged items.
- 🏠 Buy products in recyclable or reusable/refillable containers.
- 🏠 Don't buy disposable products that do not biodegrade.
- 🏠 Have your name removed from junk mail lists.
- 🏠 Choose natural over synthetic packaging and products.

Rule #2: Reuse. Reuse items as many times as possible. The objective is to keep items out of landfills:

- 🏠 Give old magazines, books and catalogs to neighbors, hospitals or nursing homes.
- 🏠 Give unwanted clothing and repairable appliances to others or repair and keep them yourself.

- Get together with neighbors to collect unwanted items and have a garage sale or donate them to a charity so others can reuse the items.

Rule #3: Recycle. In an integrated waste management system, recyclables are sorted from solid waste, processed, and reused. Material that can't be recycled is incinerated. Yard and natural waste is composted. Landfills are used to dispose of any material that can't be recycled, composted, or incinerated (**Fig. 1**).

If recycling isn't yet mandatory in your state, it soon will be. Helping to save natural resources and diminish pollution by recycling is something we should all be doing. Recycling is needed because:

- Recycling is one thing everyone can do to help save the environment.
- Recycling helps keep our taxes and trash fees lower by reducing the amount of trash collected and dumped at a landfill.
- Recycling saves expensive and scarce landfill space.
- Recycling saves energy needed to make new materials.
- Recycling reduces air and water pollution.
- In most states, recycling is the law.

WHAT CAN BE RECYCLED

The largest component of most municipal, solid waste landfill is paper and paper products from homes and businesses (39 percent). Yard waste (15 percent), plastics (11 percent), metals (9 percent), and glass (8 percent), along with other wastes pack landfills to their capacity.

Although recycling programs vary from state to state, city to city, and town to town, most include paper, plastics, metal, and glass. Some communities include yard trash in their integrated waste management systems.

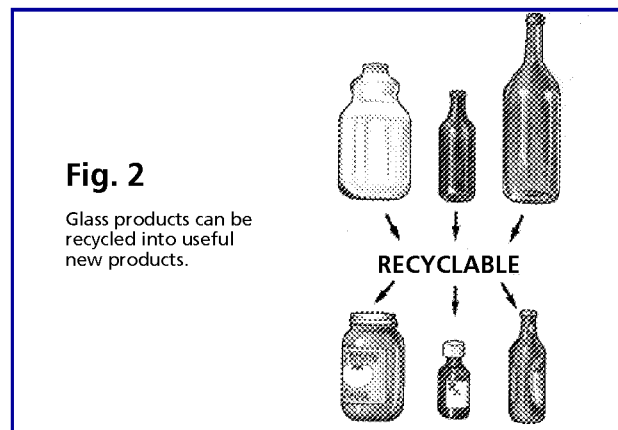
Glass: Glass is completely recyclable and saves precious energy resources. Making products from recycled glass uses less energy than starting from

scratch. Recycled glass is made into new beverage bottles, food jars, insulation, and other products.

Usually, clear glass containers are recycled into new clear glass products, while colored glass containers are recycled into new colored glass products. For this reason, some programs may ask you to separate glass by color; others, such as some curbside recycling programs, will collect the glass and separate it for you. Since food in containers can attract insects, always rinse your recyclables in water. Most recycling programs ask that lids and metal rings around the necks of containers be removed. Paper labels are not a problem and need not be removed. Do not crush glass bottles. The recyclers use machines to do that.

In most programs, broken glass, lead crystal, ceramic products, tempered window or plate glass, fluorescent and incandescent light bulbs, drinking glasses, mirrors, and heat-resistant glass are not accepted. They can seriously damage a glass furnace and/or result in poor quality of the recycled glass products (**Fig. 2**).

Aluminum: Aluminum is the most valuable of household trash items. Aluminum cans are recycled to produce new aluminum cans. By recycling aluminum cans, you are also saving energy. The manufacture of new products from raw aluminum is very energy intensive. To make sure that a can is aluminum, test it with a common household magnet. The magnet won't stick to the aluminum can's

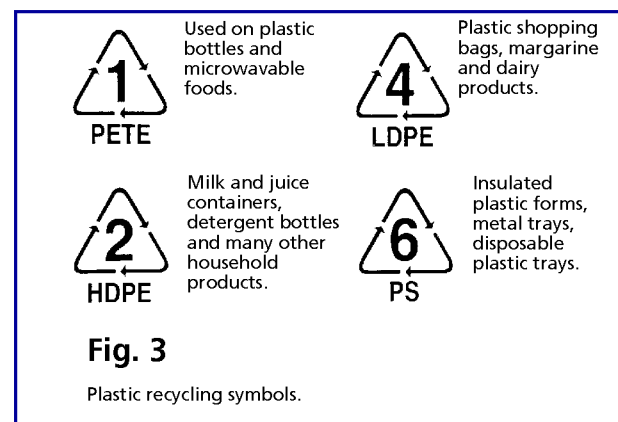


top and sides. Rinse the cans to prevent attracting insects and crush them to save space.

Check with your local recycling program to see whether other sources of household aluminum such as clean aluminum foil, clean pie tins, aluminum siding, and the metal frames of aluminum lawn furniture can also be recycled.

Steel and Bimetallic Cans: Steel cans are eagerly sought by the steel industry because they are a good source of scrap and their tin coating can be recovered and recycled. Some steel cans have aluminum tops—these are called bimetallic cans. A can is bimetallic if a magnet sticks to the sides but not the ends. Often, you can leave labels on cans. If you collect a lot of cans, you might want to flatten them to save space.

Plastic: Although Americans throw out more than 10 million tons of plastic every year (accounting for 11 percent of the volume of trash), only 0.2 percent of this material is recycled. Clearly, if you recycle plastics, you can help to dramatically reduce our nation's waste. The plastics industry has developed a coding system to help consumers identify different types of plastic. The codes can be found on the bottoms of some plastic containers (**Fig. 3**). The recycling symbol does not mean that the product is made from recycled material with post-consumer waste, nor does it guarantee that the container is recyclable. It means only that the product may be recycled in some communities.



Paper: Newspapers printed on regular newsprint—including colored newsprint such as comics and other non-glossy sections with color—are recyclable.

For pickup, place the newsprint in a brown paper grocery bag or bundle and tie it with string, depending on your community rules. Generally, newsprint shouldn't be mixed with other recyclables in the recycling container. The collection of other paper products depends on your local municipality or trash hauler. Check with the local agency handling recycling for the most updated information. Glossy newspaper inserts, coupons, junk mail, magazines, office paper, books, corrugated cardboard, and phone books may or may not be acceptable in your community. Computer printouts, bond paper, colored paper, envelopes, fax paper, carbonless forms, copier paper, and file folders can all be recycled, thus saving valuable landfill space and putting a once discarded product back in the economic mainstream. Remember that one ton of recycled paper saves 20 trees in the Earth's forests (Fig. 4).

COLLECTING RECYCLABLES

Recovery of recyclable materials is accomplished in one of two ways:

Curbside Collection: In some communities residents leave recyclables at the curb. A pickup service collects the items on a regular schedule.

Often curbside collection of recyclables is done on the same day as trash collection. In some areas, commercial recyclers will collect recyclables from businesses, industries, schools and so on.

Residents typically participate in a one-bin (often called commingled) or multi-bin program. In one-bin programs, residents put all recyclable materials in one container that is collected and taken to a processing facility where the materials are separated further.

In a multi-bin program, residents separate various materials, placing them into the appropriate bins (which are usually color-coded), to be set out at the curb for collection. In both types yard waste is generally set out separately. Sometimes, special recycling trucks with several compartments are used to keep materials sorted (Fig. 5).

Frequently, individual recycling containers or bins are given to residents of the community. They can also be purchased from the recycling agency or a local home center. It's suggested that you write your name and address on your recycling container in black marker or white paint. This simple step will make locating your container easier if it's lost or stolen.

Drop-off and "Buy-Back" Centers: Communities or independent recyclers often set up central locations where residents can leave recyclables. These

centers can vary in size from a one material, drop-off box at a shopping center to several multi-material collection sites within one community. Centers may be open 24 hours a day to allow convenient access to the public. Some centers pay cash for the recyclable materials.

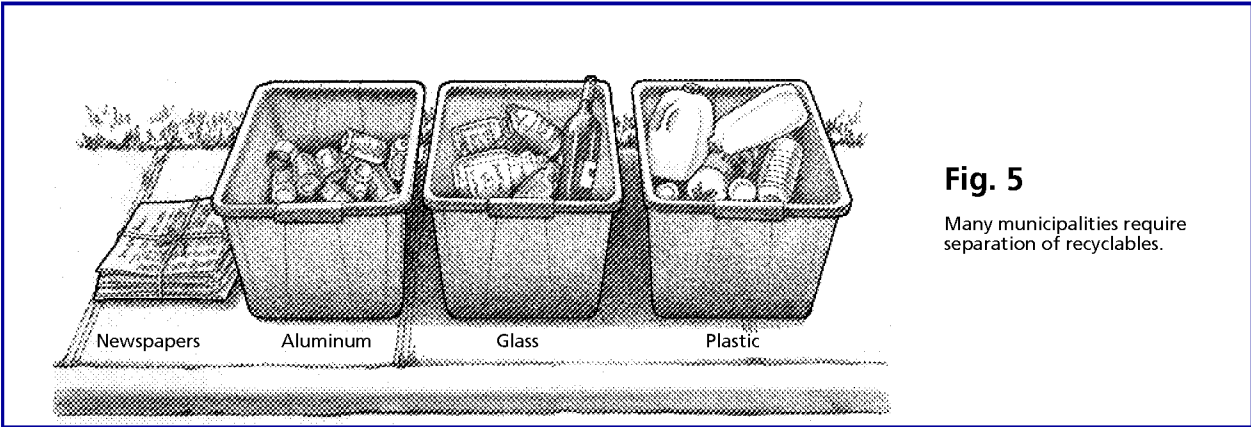
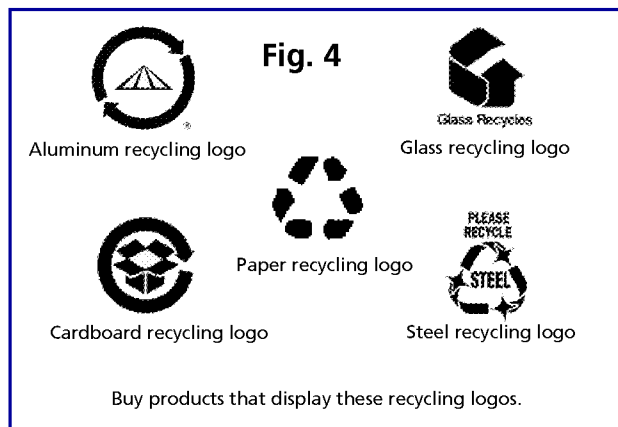
The most common buy-back programs are run by local wastepaper dealers. Additionally, aluminum companies have operated buy-back programs since 1970, and now collect 25 percent of the aluminum cans used in America.

If your recyclable materials are taken to drop-off centers, they should be taken there regularly so there is no build up of material. Set up a recycling area in your home and keep children and pets away. Keep the area clean to avoid insects and other biological pollutants.

OTHER RECYCLABLES AND TRASH

There are some products which don't fit into most local recycling or trash removal programs:

- 🏠 **Used Car Batteries:** It's against the law to throw out a car (lead-acid) battery with municipal waste. This type of battery is recyclable and must be taken to a recycling center that takes batteries or an automotive battery retailer in exchange for a new one.



- 🏠 **Household Batteries:** The kinds used in toys, radios, flashlights, watches, hearing aids, and so on are also harmful to the environment and should not be thrown away in your trash. Inquire as to how to dispose of them at your local household waste/recycling center.
- 🏠 **Used Oil:** Recycle your used motor oil, antifreeze, etc. Some service stations and repair centers (particularly chains) will accept used motor oil and other automotive fluids for recycling. There may be special collection centers for waste oil too; check with your local establishments.
- 🏠 **Old Appliances and Furniture:** Give your old appliances, furniture and clothing that still have some life to someone who can use them. There are a number of organizations that accept these items for repair and resale. Retailers may also take old appliances, furniture, etc. as "trade-ins" to fix and sell.
- 🏠 **Construction/Demolition Waste:** You generally should be able to include one container of trash from construction/demolition activities at your home in your regular trash. If you have more than that, or cannot fit the waste into a regular trash can or bag, try to make special collection arrangements with your trash hauler or a private trash contractor.
- 🏠 **Household Hazardous Waste:** Many household products contain chemicals that can contaminate natural resources and water supplies. Several examples are: paint thinners, paint, insecticides, glues, empty aerosol cans and special-purpose cleaners. Hazardous waste should never be disposed of with your ordinary trash. Many communities have special hazardous waste drop-off centers or periodic curbside pick up dates. Contact your local recycling officials for more information (Fig. 6).

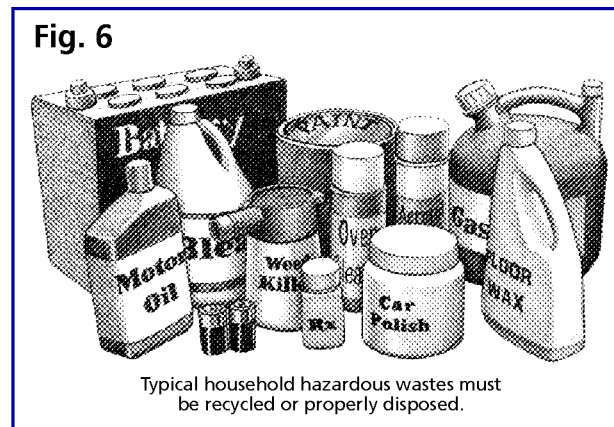
- 🏠 **Grass Clippings and Yard Waste:** Some communities provide pickup of grass clippings and yard waste on a regular basis. Others charge for this service. The best way to handle these wastes is by composting them—nature's way of recycling. Participate in a community composting program (if you have one). Or, start a backyard compost of your own.

BE A ENVIRONMENTAL SHOPPER

Always shop with the environment in mind. You can reduce waste when shopping by:

Looking for products with the least amount of packaging. Where possible, buy products with one layer of packaging rather than several. Buy products with no packaging when a package isn't necessary. Avoid multi-material packaging made of several different materials (foil, paper and plastic, for example). They're nearly impossible to recycle.

Look for products in recyclable packaging and recycle them. Glass, aluminum, bimetal and steel cans, and some types of plastics are relatively easy to recycle in a curbside program (if you have one) or at a local drop-off or buy-back center. Paper packaging generally is not. Certain cardboard boxes can be disassembled, turned inside-out, and retaped to be reused for shipping. Learn to identify and look for recycling labels on products.



Buy in bulk or in reusable containers. Buying in bulk reduces the number of purchases of smaller packages of the same item and the one large package creates less waste than several smaller packages.

Some companies are beginning to offer concentrates packaged in smaller containers that can be mixed with water, as well as refills of products in bottles smaller than the original.

Avoid buying disposable items. Disposable razors, diapers, pens, lighters, and paper products (plates, cups and napkins) are a big part of the waste management problem. Try to avoid them.

Reuse your grocery bags. Bring your own reusable bags and/or recycle the plastic bags. Some grocery stores offer a small rebate if you bring your own bags, and many now provide recycling bins.

Purchase durable, well-built products that carry a good warranty. They'll serve you better, cost less in the long run and have a longer life.

Look for safe substitutes for toxic materials. There are many natural substances that will do the job of processed products. For example: a mixture of olive oil and lemon juice can replace aerosol containers of furniture polish that contain toxic chemicals. Boiling water, vinegar, and baking soda can help to unclog your drains.

Buy products in recycled packaging. Recycling isn't complete until the recycled material is used. Therefore, buy products made from or packaged in recycled or returnable containers. Such products reduce the need for the use of virgin natural resources; reduce energy requirements for manufacturing; and creates markets for recyclables.

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