



Residential Environmental Management: Recycling Household Wastes

Sarah Drummond Kirby

Housing Specialist

Sue E. Williams

Family Policy and Energy Specialist

Introduction

There are a number of emerging environmental issues confronting families and communities today. The disposal and management of household wastes is a primary concern.

Americans produce an estimated 160 million tons of garbage a year. Of that amount, only about 27 million tons are recovered in some form even though estimates suggest that about 71 percent of household wastes could be reused or recycled. In a study done on residential household waste, it was found that discarded household trash weighed an average of 39 pounds per household per pick up and filled a volume of 60 gallons. About one-half of the average total weight (19.5 pounds) of the household trash and about two-thirds of the volume (38 gallons) of trash was made up of recyclable materials. These materials included paper, cardboard, glass, some yard wastes, plastics, textile rags, aluminum, and other metals.

Environmental Concerns

While some experts believe that interest in the environment is decreasing, evidence suggests otherwise. A recent Gallup Poll indicates that a significant majority of individuals in the United States feel that the public, government, business, and industry are not concerned enough about the environment. Also, "almost all Americans think that additional environmental action is necessary to avoid major worldwide environmental disruptions".

The United States Environmental Protection Agency (EPA) wants to reduce the amount of waste produced in this country. In fact, EPA has set a

national goal of reducing and recycling 25 percent of our waste by 1992. Currently, only about 10 percent of our wastes are recycled. One way to address the environmental problem at the household level is to recycle.

Recycling

Recycling is the collection and reprocessing of manufactured materials for reuse either in the same form or as part of a different product. According to the EPA, we should recycle because it reduces reliance on landfills and incinerators, costs less than landfilling or incineration, protects our health and environment when harmful substances are removed from the waste stream. Recycling conserves our natural resources by reducing the need for raw materials.

Recycling is a relatively easy process; however, some people do not participate. The most common reasons people give for not recycling are that they do not have enough information, that they do not have enough room to store items to be recycled, and that recycling is too much of a hassle. Another reason is that their community lacks recycling facilities and there are no incentives to participate in recycling.

While recycling requires some lifestyle changes, many individuals have found the process to be quite satisfying. Some people become interested in recycling, particularly recycling of paper and aluminum cans, to earn money. Recycling is usually not very profitable at the household level - you simply do not have enough valuable trash to earn a sizable amount. However, children may find the monetary rewards encouraging.

What can be recycled?

Many things can be recycled. The most commonly recycled household items are aluminum, paper, glass, and plastic. Different products have different recycled lives because some materials recycle better than others. For example, glass containers are 100 percent recyclable. Aluminum

can also be endlessly recycled. As paper is recycled, its quality degrades slightly, and eventually, the paper may end up in a landfill. Recycling plastic gives the plastic an extra life. Eventually though, even recycled plastic may end up in the landfill.

Aluminum

According to the EPA (1989), the demand for recycled aluminum is high. It takes 95 percent less energy to recycle an aluminum can than it does to produce one from virgin ore. Of the 77.9 billion aluminum cans produced in 1988, 42.5 billion cans were recycled. Aluminum cans are 100 percent recyclable. In addition to aluminum cans, other aluminum products can also be recycled. Aluminum foil, pie plates, window frames, storm doors, gutters and siding are recyclable. Be certain to check with your local recycling center in order to determine what aluminum items they will accept.

Paper

Much of the household trash generated each year is paper. In fact, paper makes up 41 percent of our waste by weight. Making paper from recycled paper requires 64 percent less energy than using wood pulp, and it also saves trees. Paper that can be recycled includes newspaper, corrugated cardboard, heavy brown paper, high-grade paper, and scrap paper. Products normally found in these categories include brown paper bags, postal wrapping paper, card board boxes, computer paper, envelopes, notebook paper, typing paper, copy paper, phone books, catalogs, cardboard egg cartons, and junk mail. Remember, paper cannot be recycled if it contains food residues, carbon paper, cellophane, asphalt, self-stick adhesives, wax, plastic, foil coating, string or "wet strength" chemicals. Again, check with your local recycling center to determine what paper products they permit.

Glass

Glass is one of the most commonly recycled household items; yet every year Americans dispose of 2.5 billion tons of glass. Glass containers are 100 percent recyclable; in fact approximately 30 percent of the glass on store shelves is recycled glass. To recycle glass, it often has to be separated into one of three colors: clear, green, and brown. When recycling glass, exclude the following materials:

- metals, such as aluminum caps, steel lids, lead bottle collars, and light bulb filaments.
- ceramic products such as cups, dishes, and ovenware.
- stones and dirt
- plate or window glass
- heat-resistant glass such as Pyrex.
- lead-based glass such as crystal and television tubes (Short, 1991).

Consult your local recycling center if you have questions concerning the type of glass they will allow and what kind of preparation is required.

Plastics

United states production of plastics has grown in the past 40 years, increasing about 10 percent each year. This growth is expected to continue. Plastic recycling is a relatively new business. Currently only about one percent of the plastic used is recycled. Recycling plastic can save up to 60 percent of the energy required to make the same products from virgin materials, and it also saves on our natural resources. Only certain types of plastics are usually accepted at recycling centers. The two most commonly accepted and the two most recycled are PET, or polyethylene terephthalate, and HDPE, or high-density polyethylene.

To assist recyclers and consumers, a voluntary container coding system was implemented in 1988. The code consists of a triangular arrow with a code number from one to seven in the center. This code can be found molded into the bottom of plastic containers. The following is the list of codes for the various plastics:



Polyethylene Terephthalate (PETE or PET): Clear plastic used in soft drink bottles, some household cleaners, and vegetable oil bottles.



High-Density Polyethylene (HDPE): Colored or opaque, plastic commonly found in milk and juice jugs, detergent bottles, and dull grocery bags.



Polyvinyl Chloride or Vinyl (PVC or V): Plastic generally found in vegetable oil bottles and food wrap.



Low-Density Polyethylene (LDPE): Primarily used for glossy grocery bags and bread bags.



Polypropylene (PP): Plastic found in jar lids, syrup bottles, yogurt containers, shampoo bottles and margarine tubs.



Polystyrene (PS): Found in foamed fast food containers, hot beverage containers, egg cartons, clear flatware and salad boxes.



Other: This group encompasses all those plastics not previously mentioned. Also includes multilayered plastics.

Getting Started at Home

To begin recycling, you must first determine who in your community is involved in recycling. That will let you know which companies, agencies, organizations or people can offer either advice or will take your trash items. Many schools and churches are recycling in order to raise money for activities.

Not all communities will have facilities that take paper, glass, aluminum, and plastic. Find out what items are recycled in your area, and then make purchase decisions based on that information. For example, if your area has a collection that accepts aluminum for recycling, buy soft drinks in aluminum cans instead of plastic bottles. Or, if your area has paper recycling, purchase laundry detergent in boxes and not plastic jugs.

The second thing you need to begin home recycling is a recycling center. You can purchase containers and products to help you be organized or you can make containers. The exact number of containers you purchase will depend upon what can be recycled in your area. You will need one container for each type of material. In most cases, you will need four containers: one for aluminum products, another for glass, a third for paper, and a fourth for trash or garbage not being recycled.

It is helpful if your home recycling center is conveniently located to the areas where you most often create waste. That way you can easily dispose of each item into its own container. Be certain to prepare each item according to your local recycling center's specifications. Failing to do so may keep your local recycling handler from accepting the recyclable items. Preparation may include the rinsing of bottles, removal of labels and collars,

and the bundling of newspapers. It is also a good idea to crush aluminum cans and plastic bottles in order to save space in your home or community recycling bin.

Summary

Recycling is just one way in which we can help solve this country's garbage problem. Your household can respond to household waste concerns by:

- reducing the amount of trash that you throw away.
- reusing products and containers.
- recycling as much waste as you can.
- answering environmental problems by reviewing your own behaviors and waste producing habits.

In closing, Daniel D. Chiras notes that we, as individuals, have not taken adequate responsibility for our environmental problems. We tend to remove ourselves from responsibility so that we do not have to take the blame or guilt for the shape our world is in today. It also removes us from the responsibility of having to take part in the solution of the problem. However, we, as individuals, must account for our actions. We all have an obligation to help provide for a better world.

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