



Water Quality & Waste Management

Before You Recycle, Choose to Reuse

Reduce, reuse, and recycle—the “three R’s” of solid waste management—are listed in order of importance for actions that should be taken to manage solid waste. So why isn’t recycling the first step? Advertisers, educators, and government officials constantly urge us to recycle, so we have assumed it’s our civic duty. We gather up our recyclables, set them on the curb, and feel satisfied that we have done our part for the environment. It is important to recycle, but we must remember that recycling is the third choice. We should consider reducing and reusing before recycling.

The first “R,” *reduce*, means eliminating or decreasing the amount of waste we produce or reducing the toxicity of the materials. Redesigning products to reduce waste and make them more durable, eliminating excessive packaging, avoiding disposable products, and decreasing consumption are all great ways to reduce solid waste.

The second “R,” *reuse*, means taking products that would otherwise be discarded and using them again in their current form, or with few repairs or changes. People often mistakenly say they are recycling something when they are actually reusing it.

The third “R,” *recycling*, involves collecting used materials, processing them mechanically and chemically, and remanufacturing them into new products. These activities consume energy, water, and other resources, and cause pollution. Although the resource use and pollution associated with recycling is far less than that created by manufacturing with virgin materials, it is greater than the act of simply reusing an item.

Advantages of Reuse

Reuse has several advantages over recycling:

- saves or delays purchasing and disposal costs
- conserves resources
- reduces the waste stream
- causes less pollution than recycling or making new products from virgin materials
- makes needed items available to those who can’t afford to buy them new

The process of reuse begins with the attitude that products and materials have usefulness beyond the owner’s original intention. Before tossing something in the trash, stop and ask yourself if it can be used for some other purpose. Can you repair the item instead of replacing it? Can you create whatever it is that you want from an item on hand? Reuse means minimizing waste and maximizing resources, and this translates into getting

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more for your money whether you are an individual, household, business, institution, government agency, or industry.

Reusing allows you to take responsibility for the waste you create. Using your imagination to create what you want from what you have is self-empowering and rewarding. You can feel good about saving money and resources. The following is a list of reuse activities that can be carried out by individuals and households.

Reuse Strategies for Individuals and Households

- Keep empty containers for storing leftovers and other household and shop items.
- Install reusable furnace and air conditioner filters.
- Repair, rather than replace, broken or worn-out products.
- Donate useable, unwanted items to thrift shops, charities, and social service organizations.
- Transform empty plastic bottles into bird feeders, scoops, terrariums, or watering cans.
- Take reusable tote bags on shopping trips.
- Make dust cloths from old towels and sheets.
- Donate magazines to libraries and hospital waiting rooms.
- Make wrapping paper from comics and magazine pages, or reuse old gift wrap.
- Donate newspapers to pet shops.
- Reupholster or slipcover outdated furniture.
- Hold a garage sale.
- Donate paper that has been used on one side to daycare centers.
- Use packing materials again or donate them to shipping shops.
- Rent or borrow things you use infrequently.
- Buy rechargeable batteries and appliances.
- Use old toothbrushes for household cleaning.
- Wash and reuse aluminum foil and plastic sandwich bags.
- Wrap postal packages with paper grocery bags.
- Use old sheets and shower curtains as drop cloths.

In addition to things you can do as an individual, there are many reuse techniques you can employ in your workplace.

Reuse Strategies for Businesses, Industries, Institutions, and Local Governments

- Ask suppliers to use reusable cartons, pallets, and crates.
- Distribute product lines in reusable containers.
- Design products for reuse.
- Order binders with slip-in spine and cover pockets so they may be reused.
- Repair old furniture and equipment or donate it to charitable organizations.
- Establish giveaway programs for damaged inventory, pallets, and lumber.
- Recover and reuse waste heat, trimmings, plastic scrap, cooling waters, solvents, and other production materials.
- Use refillable, reusable toner cartridges.
- Buy refillable pens.
- Turn manila folders inside out so they can be reused.
- Use outdated letterhead for in-house memos.
- Shred confidential papers for reuse in shipping.
- Reuse packing materials or donate them to another organization.
- Use an erasable memo or chalkboard for messages.
- Use mugs instead of disposable cups.
- Reuse paper printed on one side.
- Buy erasable, reusable wall calendars.
- Use two-way envelopes and mailing pouches.
- Convert scrap paper and overruns into memo and telephone answering pads.
- Create an office supply swap area.

Reusable shipping containers

One of the biggest impacts business and industry can make on reducing discards to landfills is to replace single-use shipping containers with reusable ones. Over the course of its lifetime, a 2-cubic-foot plastic, reusable shipping container making 250 trips will replace 250 single-use cardboard boxes, reducing waste by 98.5 percent and costs by up to 92 percent per use. Reusable containers may have additional benefits, including reduced shipping damage due to sturdier containers and lower labor costs associated with assembling and breaking down single-use boxes. Deterrents to reusable shipping containers include

higher initial costs, aesthetics of containers after several uses, the need to return containers, and storage room for containers. Companies that use reusable shipping containers include Toyota USA, Xerox, Pepsi-Cola, and Puget Consumer's Co-op.

Reuse Operations

Reuse operations have been in place throughout the United States for many years. Typically, you will find two types of reuse operations: one type provides brokering and listing services, and one type provides the physical space (warehouse or storefront) to store materials available for reuse. Some examples of reuse operations are provided in the following sections.

Swap shops. Swap shops take used materials that would normally be discarded and make them available to employees or the public at little or no cost. Swap shops at businesses and industries can be designated areas where employees can collect used buckets; extra, individual soaps and shampoos (at hotels); pallets; containers; and other items. Local governments can set up swap shops at landfills or collection centers where the public can drop off nonhazardous reusable items and pick up things they can use. For example, in 1994, Scotland County (North Carolina) set up swap shops at each of their six garbage and recyclables collection centers to collect reusable clothing, furniture, toys, small appliances, and other household goods. The shops are 10-foot by 16-foot buildings with roll-down doors in front that are kept open during business hours. Collection center attendants check donated items to see if they are reusable, and electrical appliances are plugged in to see if they work. Attendants place clothing on hangers and display them on rods, and fold sweaters neatly and place them on shelves along with shoes. The swap shops have been so successful that very little is left over or discarded. For more information about Scotland County's swap shops, contact Jim Blackwell or Lynn Wood at (910) 277-2407.

Surplus stores. Surplus stores accept unwanted items (usually furniture and office equipment) and make them available internally or for sale to other agencies or to the public. Surplus stores are usually operated by large institutions such as universities and governments. Duke University opened a surplus store in 1981 that makes used furniture and equipment available to campus departments and sells items to the general public. The surplus store has generated millions of dollars for Duke University from sales to

the public and the reuse of equipment internally. For more information, contact Joe Alston at (919) 684-3421 or S.T. van Campen at (919) 684-2964. State and federal surplus stores provide a good source of used equipment, vehicles, and supplies for institutions and local governments. For example, Charles Whittenton, the director of Cumberland County's Solid Waste Management Department, obtained a number of used items from federal surplus that he used in setting up a permanent household hazardous waste collection center. Contact Mr. Whittenton at (910) 483-2176.

Scrap exchanges. Scrap exchanges accept industrial scrap or printer overruns and distribute them for free or sell them at a nominal cost to schools, day-care centers, senior centers, and nonprofit organizations with arts programming. The scrap materials can be used in art and drama classes and in a variety of arts and crafts programs. Schools and other organizations can contact businesses directly to obtain scrap materials or they can use a scrap exchange. For example, The Scrap Exchange, a nonprofit business founded in 1991 in Durham, North Carolina, collects and distributes approximately 175,000 cubic feet of clean, reusable industrial scraps annually. A variety of materials, including foam cut-outs, ribbon, and fabrics, are sold by The Scrap Exchange at low cost to schools and arts organizations. For more information about The Scrap Exchange, contact Pat Hoffman at (919) 286-2559.

Salvage operations. Salvage operations are usually private firms that sell reusable building materials at a fraction of the current market price. Materials that can be reused include framing lumber, timbers, brick, stone, siding, windows, doors, asphalt, and various fixtures. Markets for these materials include contractors, builders, remodelers, homeowners, landlords, artists, and collectors. The building materials are usually provided by construction and deconstruction operations. *Deconstruction* is a new term for the process of dismantling old buildings and reusing the materials to build new structures. The North Carolina Cooperative Extension Service has a videotape and fact sheet available that describe the process of deconstruction.

Industrial materials exchange services. Waste exchange programs for businesses and industries link generators of reusable "waste" with other companies that can use those items or materials. These types of programs actually exchange information, rather than waste, by compiling information about available or wanted waste and surplus materials and posting it in

newsletters, catalogs, or on an electronic bulletin board service. Companies either contact each other directly or go through the exchange service. Industrial waste exchanges can be operated at local or regional levels. Some local governments have set up waste exchange programs that match industrial users with generators by maintaining a database and distributing the information in newsletters. There are numerous regional waste exchanges operating throughout the United States and Canada; regional coverage ranges from several counties to statewide to multi-state. Materials listed in waste exchanges typically include the following items:

- acids and alkalis
- construction materials
- containers and pallets
- discontinued products
- durables and electronics
- glass
- metals and metal sludge
- oil and wax
- other inorganic and organic chemicals
- paint and coatings
- plastic and rubber
- solvents
- surplus equipment
- textiles and leather
- unused supplies
- wood and paper

North Carolina is home to the oldest waste exchange service in the United States. The Southeast Waste Exchange (SEWE), a nonprofit information clearinghouse established in 1978, is sponsored by the Urban Institute at the University of North Carolina at Charlotte. SEWE provides a listing service for the southeastern United States that links industrial waste generators with potential users. SEWE publishes a bimonthly Waste Watcher catalog, hosts a national electronic bulletin board, and offers on-site assistance to implement waste reduction programs. For more information, contact Maxie May at (704) 547-4289.

Individual materials exchanges. Several local governments in North Carolina have reuse operations that target a particular material, such as paint or pallets,

and operate them on a continuous basis or as one-day events. In fiscal year 1994-1995, local governments reported in their annual solid waste management reports that they held 18 paint exchanges, 18 pallet exchanges, and 13 waste exchanges (other materials). The Burke County Recycling Processing Center separates canning jars and sells them for five cents each. The center also sets aside glass bottles that can be capped for reuse by a local wine bottler. For more information, contact Tom Rhodes at (704) 433-9500.

Secondhand stores. Secondhand shops can be private or nonprofit, and some own the used items they sell, whereas others take merchandise on consignment. Many nonprofit organizations set up thrift shops to benefit local schools, hospitals, and other community projects. Some nonprofits have outlets throughout the United States, such as Goodwill Industries, the Salvation Army, and St. Vincent de Paul. Although secondhand stores are not traditionally considered a waste reduction option, they provide an outlet for products that can be reused instead of discarded.

Information Resources

Computer Reuse Network, Hollywood, South Carolina. Telephone (803) 889-8247.
www.awod.corn/gallery/probono/corn/

Division of Pollution Prevention and Environmental Assistance, North Carolina Department of Environment and Natural Resources, P. O. Box 29569, Raleigh, NC 27626-9569. Telephone (919) 715-6500 or (800) 763-0136.
www.p2pays.org

INFORM, Inc., 120 Wall Street, 16th Floor, New York, NY 10005-4001. Telephone (212) 361-2400.
www.informinc.org

Institute for Local Self-Reliance, 2425 18th Street, NW, Washington, DC 20009. Telephone (202) 232-4108.

National Association of Resale and Thrift Stores, 20331 Mack Avenue, Gross Pointe Woods, MI 48236.
Telephone (800) 544-0751.

North Carolina Cooperative Extension Service - your local extension center or Rhonda Sherman, Department of Biological & Agricultural Engineering, North Carolina State University, Box 7625, Raleigh, NC 27695-7625. Telephone (919) 515-6770.
www.bae.ncsu.edu/people/faculty/sherman

Repair, Resale, and Reuse Council. Contact Ann Schneider at (408) 748-3200.

The Reuse Development Organization, 3220 Western Pike, Hancock, MD 21750. Telephone (301) 678-5503.

Used Building Materials Association, 501-428 Portage Avenue, Winnipeg, Manitoba, Canada R3C 1N6. Telephone (204) 947-0848.

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