Source Reduction Versus Recycling

Source Reduction
\+ Recycling
Waste Diversion

Recycling is a beneficial way to manage materials that would otherwise become waste. It uses reclaimed material in lieu of virgin material in the manufacture of products. Recycling includes collecting, processing, and remanufacturing recyclable material and buying recycled-content products. Source reduction helps create less waste in the first place. It includes reducing the amount of material used to accomplish a particular task; reusing a product in its original form; or using repairable, refillable, and durable products with the capacity for a longer useful life. All things being equal, source reduction is preferable to recycling. For waste that cannot be prevented, however, recycling is the next best choice.

A Note About Terminology

MSW includes wastes such as durable goods, nondurable goods, containers and packaging, food scraps, yard trimmings, and miscellaneous inorganic wastes from residential, commercial, institutional, and industrial sources. MSW does not include sewage, hazardous waste, nonhazardous industrial waste, construction and demolition debris, or automobile bodies (household hazardous waste is MSW). This fact sheet examines source reduction from an MSW perspective.

MSW Source Reduction in Action

Source reduction includes a wide range of activities. Individuals and organizations can practice source reduction for a variety of materials in different settings, from the home to the office to the factory floor.

- **Backyard composting and grasscycling.** Yard trimmings are one of the single largest components of the U.S. waste stream. Although the percentage has decreased since 1992, yard trimmings still accounted for 12.8 percent of the total waste generated in the United States in 1997. Homeowners can reduce the amount of yard trimmings in the waste stream through backyard composting and grasscycling. Backyard composting and grasscycling are considered source reduction because they prevent yard waste from entering the municipal waste collection system.

  Backyard composting is the controlled decomposition of food scraps and yard trimmings in open piles, pits, or bins. Spreading finished compost on lawns and gardens conditions the soil and replenishes vital nutrients.

  Grasscycling means leaving short grass clippings on lawns, rather than collecting and bagging them. As the clippings filter to the ground and naturally decompose, nutrients return to the soil and support further turf growth.

- **Donating textiles.** Textiles accounted for 3.8 percent of the U.S. waste stream in 1997. Over the past 35 years, the amount of textiles in the waste stream has steadily climbed from nearly 1.8 million tons in 1960 to more than 8.2 million tons in 1997. Americans recover textiles for reuse through donations to local thrift stores, charities, churches, and consignment stores. Donated textiles include clothing, drapes and curtains, towels, sheets and blankets, clean rags, and table cloths. Although some donated textiles are recycled into new fabric, most of them are reclaimed as secondhand clothing or converted into wiping and polishing cloths.

- **Reducing unwanted mail.** Third-class mail made up 2.2 percent of the U.S. waste stream in 1997. One way Americans can reduce paper consumption at home is by removing their names from bulk mailing lists. Entering a contest, making a donation, purchasing something, ordering a product by mail, or sending in a subscription often results in a new entry on someone's mailing list. Americans can reduce unwanted mail by avoiding unnecessary warranty cards; returning unwanted mail; and by notifying mail-order catalog companies and mailing list brokers that they want their names removed from mailing databases.

- **Reducing paper consumption at the office.** Office paper, including copier paper, computer printouts, and stationery, accounted for 3.2 percent of the U.S. waste stream in 1997. A wide variety of source reduction activities at the office can help reduce paper consumption:

  — Printing and copying double-sided.

  — Printing drafts on blank sides of used paper.

  — Keeping files on diskettes.

— Reviewing, editing, and finalizing reports or letters on the computer screen before printing.

— Communicating through voice or electronic mail.

— Circulating memos, documents, periodicals, and reports rather than distributing individual copies.

- **Replacing disposable corrugated shipping containers with reusable containers.** Like yard trimmings, corrugated (cardboard) boxes represent a relatively large component of the U.S. waste stream—almost 14 percent in 1997. Although an impressive 67 percent of corrugated waste is recycled, organizations can generate less of this material in the first place by switching from single-use corrugated boxes to reusable containers. Organizations either buy or lease the containers and establish a system for returning emptied containers after shipment. In addition to preventing waste, returnable containers are often less expensive than disposable containers over the long term.

- **Repairing and reusing wood pallets.** In 1997, 7 million tons of wood pallets entered the waste stream, accounting for 3.1 percent of total MSW generated. Organizations can reduce this waste by repairing used wooden pallets and reusing them. Some businesses repair their own pallets in-house, while others contract with local pallet repair operations. Organizations refurbished and reused an estimated 2.6 million tons of wood pallets in 1997.

How Does Source Reduction Affect Climate Change?

Human activities that thicken the gaseous 'greenhouse' around the planet threaten to disrupt the natural atmospheric balance that supports our earth's diverse ecosystems. Source reduction can greatly reduce the release of greenhouse gases into the atmosphere by:

- **Reducing emissions from energy consumption.** When consumers reuse products and manufacturers use less material in their factories, they reduce the amount of energy needed to retrieve, process, and transport raw materials and to manufacture products. When energy demand decreases, fewer fossil fuels are burned and less carbon dioxide is emitted to the atmosphere.

- **Reducing emissions from waste combustors.** Diverting certain materials from combustors reduces greenhouse gas emissions to the atmosphere.

- **Reducing methane emissions from landfills.** Source reduction (including backyard composting) diverts organic wastes from landfills, reducing the amount of methane emitted when these materials decompose.

- **Increasing storage of carbon in trees.** Source reduction of paper products preserves forests that remove large amounts of carbon dioxide from the atmosphere.

EPA MSW Source Reduction Programs

EPA promotes source reduction through a variety of programs, including the following:

- **Pay-As-You-Throw Programs.** EPA provides technical and outreach assistance to encourage communities to implement pay-as-you-throw programs for solid waste. Under pay-as-you-throw, residents are charged for MSW services based on the amount of trash they discard, creating an incentive to generate less trash and increase recycling. On average, communities with pay-as-you-throw achieve waste reductions of 14 to 27 percent. For more information about these programs, access EPA's Pay-As-You-Throw Web site at <www.epa.gov/payt> or call 888 EPA-PAYT (372-7298).

- **WasteWise.** WasteWise is a voluntary partnership between EPA and U.S. businesses, institutions, nonprofit organizations, and government agencies to prevent waste, recycle, and buy and manufacture recycled-content products. By eliminating more than 1.8 million tons of waste through source reduction in the first 4 years of the program, WasteWise partners prevented the emission of 1.1 million metric tons of carbon equivalent (the basic unit of measure for greenhouse gases) into the atmosphere. More than 750 organizations participated in the WasteWise program in 1998. For more information about the program, access EPA's WasteWise Web site at <www.epa.gov/wastewise> or call 800 EPA-WISE (372-9473).

How Do I Get More Information on Source Reduction?

Information Available From EPA

The following publications are available on EPA's Public Access Server at <www.epa.gov/epaoswer/osw>. They also are available through the RCRA Hotline. To order a document, call 800 424-9346 (or 800 553-7672 for the hearing impaired). In Washington, DC, the number is 703 412-9810 or TDD 703 412-3323. The RCRA Hotline is open from Monday through Friday, 9 a.m. to 6 p.m., e.s.t.

- EPA's Climate Change and Waste Web Site
  www.epa.gov/globalwarming/actions/national/ccap/waste/index.html
- EPA's Office of Solid Waste
  www.epa.gov/osw/
  www.epa.gov/compost
- The Consumer's Handbook for Reducing Solid Waste (EPA530-K-92-003)
- Business Guide for Reducing Solid Waste (EPA530-K-92-004)
- Environmental Fact Sheet: Recycling Grass Clippings (EPA530-F-92-012)
- Environmental Fact Sheet: Yard Waste Composting (EPA530-SW-91-009)
- Enviroene
  www.epa.gov/envirosense/
- Pay-As-You-Throw: Throw Away Less and Save (EPA530-F-96-028)
- Waste Prevention, Recycling, and Composting Options: Lessons from 30 Communities (EPA530-R-92-015)

Other Selected Sources of Information

Some of the publications listed below might require an ordering fee.

- Reuse it, Repair It, Rent It, Donate It—But Don't Throw It Away!
  To order, contact:
  New York City Department of Sanitation
  P.O. Box 156
  Bowling Green Station
  New York, NY 10274-0156
  Phone: 212 837-8089
- Making Source Reduction and Reuse Work in Your Community
  To order, contact:
  National Recycling Coalition, Inc.
  1727 King Street
  Suite 105
  Alexandria, VA 22314-2720
  Phone: 703 683-9025, Ext. 405
- Making Less Garbage: A Planning Guide for Communities

  Making Less Garbage on Campus: A Hands-On Guide

  Reducing Office Paper Waste

  To order, contact:
  Inform, Inc.
  120 Wall Street
  New York, NY 10005-4001
  Phone: 212 361-2400
- Source Reduction Now
  How to implement a source reduction program at an organization.
  To order, contact:
  Minnesota Office of Waste Management
  1350 Energy Lane
  St. Paul, MN 55108
  Phone: 800 657-3843
- Weaving Textile Reuse into Waste Reduction
  To order, contact:
  Institute for Local Self-Reliance
  2425 18th Street, NW
  Washington, DC 20009-2096
  Phone: 202 232-4108

Selected Internet Resources

- California Integrated Waste Management Board (CIWMB)
  www.ciwmb.ca.gov/
- Indiana Institute on Recycling (IIR)
  web.indstate.edu:80/recycle/
- INFORM
  www.informinc.org/
- National Pollution Prevention Roundtable
  www.p2.org/
- National Waste Prevention Coalition (NWPC)
  www.metrokc.gov/nwpc/
- Privacy Rights Clearinghouse's Reducing Junk Mail Fact Sheet
  www.privacyrights.org/fs/fs4-junk.htm
- The Solid Waste Association of North America (SWANA)
  www.swana.org/

National Reuse Organizations

Reuse organizations are points of contact for organizations interested in buying, selling, or donating excess material that would otherwise go to waste. Contact your state recycling agency for information about local and regional reuse organizations.

- Reuse Development Organization, Inc.
  Indianapolis, IN 46244
  Phone: 317 631-5396
  E-mail: info@redo.org
  Internet: www.redo.org/
- Chicago Board of Trade Recyclables Exchange
  141 West Jackson Boulevard
  Chicago, IL 60604-2994
  Phone: 312 435-7223
  Internet: cbot-recycle.com
- National Association for the Exchange of Industrial Resources
  560 McClure Street
  Galesburg, IL 61401
  Phone: 800 562-0955
  E-mail: donor.naier@misslink.net
  Internet: www.freegoods.com/