



EcoPurchasing means
considering attributes
such as



recycled content
toxicity
reusability
durability
repairability



before you buy
a product.

2000 Buy-Recycled Series Transportation Products

The road is clear for buying recycled-content products, and many agencies are moving into high gear!

Transportation officials around the country are reporting that recycled-content safety cones, traffic barricades, traffic control devices, and parking stops deliver high performance and cut installation and maintenance costs.



To make it easier to buy recycled, the U.S. Environmental Protection Agency (EPA) updates the Comprehensive Procurement Guidelines (CPG) every 2 years. Through the CPG, EPA designates items that must contain recycled materials when purchased by federal, state, and local agencies, or by government contractors, using appropriated federal funds. Several transportation products are among these items. EPA's research shows that the items designated in the CPG are of high quality, widely available, and cost-competitive with virgin products. EPA also issues nonregulatory companion guidance—the Recovered Materials Advisory Notice (RMAN)—that recommends levels of recycled content for those items.

Whether you're working on a major highway or repairing a local road, there's one way to ensure a smooth ride—buy recycled! When you buy recycled, you're doing more than supplying road crews' needs; you're also helping to support recycling businesses and protect the environment.





**The CPG
requires
federal
agencies to
buy items
made from
recovered
materials.**

What Is The CPG?

Recycling is more than just dropping off your cans, bottles, and newspapers at the curb or at a local collection facility. Diverting recyclables from the waste stream is only the first of three steps in the recycling process. The second step occurs when companies use these recyclables to manufacture new products. The third step comes when you purchase products made from recovered materials. That's how we close the loop.

To support markets for the materials collected in recycling programs and to help these programs expand, the Resource Conservation and Recovery Act requires agencies to buy recycled-content products designated by EPA. In addition, President Clinton signed Executive Order 13101 in September 1998, which called for an increase in the federal government's use of recycled-content and other environmentally preferable products.

Issued in May 1995, the first CPG designated 19 new products, including traffic cones and barricades, and incorporated five previously designated items in seven product categories. Procuring agencies are required to purchase these items with recycled content. The first CPG update (CPG II) was published in November 1997, and designated an additional 12 items, including parking stops and traffic control devices. A second CPG update (CPG III) was published in January 2000, but did not designate any new transportation products. This fact sheet updates the information provided in the 1997 Buy Recycled Series.

Procuring agencies include all federal agencies, and any state or local government agency or government contractor that uses appropriated federal funds to purchase the designated items. If your agency spends more than \$10,000 per year on a product designated in the CPG, you are required to purchase it with the highest recycled-content level practicable. The CPG also applies to lease contracts covering designated items.

Once designated, an agency has 1 year to develop an affirmative procurement program (or revise an existing one) for a designated item it purchases. By May 1, 1996, agencies were required to develop affirmative procurement programs to incorporate buy-recycled requirements for traffic cones and barricades. By November 13, 1998, agencies were required to revise their affirmative procurement programs to incorporate parking stops and traffic control devices.

The CPG acknowledges, however, that specific circumstances might arise that preclude the purchase of products made with recovered materials. Your agency may purchase designated items that do not contain recovered materials if it determines that: 1) the price of a given designated item made with recovered materials is unreasonably high, 2) there is inadequate competition (not enough sources of supply), 3) unusual and unreasonable delays would result from obtaining the item, or 4) the recycled-content item does not meet the agency's reasonable performance specifications.

How Do I Purchase Recycled-Content Transportation Products?

EPA issues purchasing guidance in RMANs, which are designed to make it as easy as possible to buy the designated items. The RMANs recommend recycled-content levels to look for when purchasing transportation products, as shown in the chart below. Following the RMANs' recommended levels will help ensure your affirmative procurement program and standards meet the buy-recycled requirements.

Rather than specifying just one level of recycled content, the RMANs recommend ranges that reflect actual market conditions. The recommendations are based on market research identifying recycled-content products that are commercially available, are competitively priced, and meet buyers' quality standards.

Refer to EPA's availability list entitled "Transportation Products Containing Recovered Materials" for sources of the designated transportation items. See the last section of this fact sheet for this and other helpful resources.

The RMAN recommends recycled-content ranges at which the designated items are generally available in the marketplace.

EPA's Recommended Content Levels for Transportation Products

Transportation Products ¹	Recovered Material Content ²
Traffic Cones: —Plastic (PVC and LDPE) —Crumb Rubber	50–100% 50–100%
Traffic Barricades (type I and II only): —Plastic (HDPE, LDPE, PET) —Steel ³ —Fiberglass	80–100% (postconsumer)/100% (total) 16% (postconsumer)/25–30% (total) 67% (postconsumer)/100% (total) 100%
Parking Stops: —Plastic and/or Rubber —Concrete Containing Coal Fly Ash —Concrete Containing Ground Granulated Blast Furnace Slag	100% Generally, 20 to 30 percent, but could be up to 40 percent. Fifteen percent when used as a partial cement replacement as an admixture in concrete. 25–70%
Traffic Control Devices: —Channelizers: Plastic Rubber (base only) —Delineators: Plastic Rubber (base only) Steel (base only) ³ —Flexible Delineators	25–95% (postconsumer) 100% (postconsumer) 25–90% (postconsumer) 100% (postconsumer) 16% (postconsumer)/25–30% (total) 67% (postconsumer)/100% (total) 25–85% (postconsumer)

¹ Transportation products containing recovered materials must conform to the *Manual on Uniform Highway Traffic Control Devices* used by the Federal Highway Administration, as well as other applicable federal requirements and specifications.

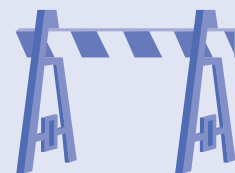
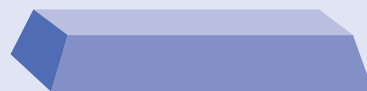
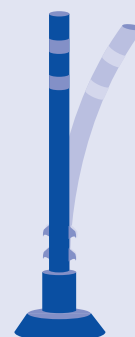
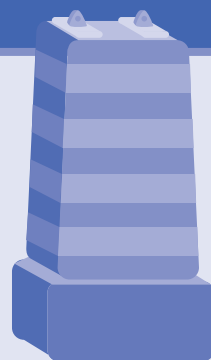
² Content levels are based on the dry weight of the raw materials, exclusive of any additives such as adhesives, binders, or coloring agents.

³ The recommended recovered materials content levels for steel in this table reflect the fact that the designated items can be made from steel manufactured from either a Basic Oxygen Furnace (BOF) or an Electric Arc Furnace (EAF). Steel from the BOF process contains 25–30% total recovered materials, of which 16% is postconsumer steel. Steel from the EAF process contains a total of 100% recovered steel, of which 67% is postconsumer.

How Do I Purchase Recycled-Content Transportation Products (Continued)

Key Terms

- **Channelizers:** Channelizers are barrels or drums that direct traffic around areas of road repair and construction. Street maintenance agencies and construction contractors use channelizers on construction sites, medians, on/off ramps, mountainous terrain, and areas where fog and haze are common. Channelizers are designed and colored to be highly visible and can be constructed from recovered HDPE and rubber. The bases of the drums are weighted to provide stability and are often made from used tires.
- **Delineators:** Delineators are temporary pavement markers that come in many shapes, sizes, and compositions. They are manufactured primarily from recovered and postconsumer HDPE. Delineator bases are either steel stakes that can be driven into the ground or rubber to support the delineator on the road surface.
- **Flexible Delineators:** These products come in the form of stakes and are driven into the ground. The product is flexible enough so that vehicles can strike them without causing damage to the vehicle or the delineator. They are used at golf courses, airports, military bases, shopping centers, and recreation areas.
- **Parking Stops:** Commonly found in parking lots, parking stops are used to mark parking spaces and keep vehicles from rolling beyond a designated parking area.
- **Traffic Barricades:** Traffic barricades are used to redirect or restrict traffic in areas of highway construction or repair. They are typically made from wood, steel, plastic, or a combination of these materials. Many manufacturers have switched to the use of recycled materials in both the supporting frame and rails of the barricades.
- **Traffic Cones:** Traffic cones are used to mark a road hazard or direct traffic. In general, both recovered- and postconsumer-content plastics are used in the upper component of the cones, and crumb rubber and/or plastics are used in the base.





CASE STUDIES: Safer, Cheaper, and More Effective Recycled-Content Transportation Products

States Combine Efforts: Traffic Cones

The states of Indiana, Maine, Massachusetts, Michigan, New Jersey, New York, Vermont, and Wisconsin are combining their resources to buy recycled-content traffic cones. Since 1993, they have bought approximately 50,000 cones per year, mostly for highway construction along roads and tunnels and for use at airports. In

addition, many cities, counties, and universities across the United States also purchase these recycled-content traffic control devices. For more information contact Ron Wachenheim of the New York Office of General Services at 518 474-1557.

Kentucky Department of Highways: Flexible Delineators

In 1994, the Kentucky Department of Highways purchased a sample supply of flexible delineators made from recovered plastic. Based on the delineators' successful performance, the department has purchased more than 3,000 flexible delineator posts made from recovered plastic for a number of projects along Kentucky's interstate highways. A project on Interstate Highway 65, for example, used flexible delineator posts every 500 feet along a 50 mile stretch. According

to department officials, the durability of recycled plastic flexible delineators has reduced replacement and maintenance costs. The delineators also have increased traffic safety because they bend on impact, reducing the chance of damage to vehicles or injury to their occupants. For more information, contact Janet Coffee of the Kentucky Department of Highways at 502 564-4556

U.S. Postal Service: Parking Stops

A U.S. Postal Service (USPS) Mail Transport Equipment Warehouse in Henderson, Colorado, installed six recovered plastic parking stops in 1996. While USPS had no specifications requiring the use of recovered materials in this product at the time, employees were encouraged to buy recycled products through procurement training and printed promotional materials. The facility experienced no performance problems with the 100 percent postconsumer plastic parking stops, which were purchased from a local

manufacturer. USPS found maintenance and installation costs to be lower than those for conventional concrete stops because of the product's durability and light weight as well as the fact that it came with mounting hardware. The facility received the White House Closing the Circle Award for its success with waste prevention, recycling, and affirmative procurement of recovered-content products. For more information, contact Elaine May of USPS at 303 313-5241.

Texas Department of Transportation: Channelizers

The Texas Department of Transportation (TxDOT) has used recycled products in highway operations for the past several years. Based on their experience and field evaluations, TxDOT is revising their procurement standards to encourage expanded use of recovered-content traffic control devices. Currently, TxDOT is using recycled-content channelizers in highway projects across the state. The channelizers' light weight and flexibility

boosts highway and work zone safety, since less damage is caused when vehicles strike them. The strength of the channelizers also allows for their long-term use, saving money and essentially removing these materials from municipal solid waste. For more information, contact Greg Brinkmeyer of the TxDOT at 512 416-3120 or Dan Maupin at 512 416-3128.

How Can I Get More Information?



Information Available From EPA

This fact sheet and the following publications on buying recycled-content products are available or can be accessed in electronic format on the Internet at www.epa.gov/cpg. Use Internet e-mail to order paper copies of documents. Include the requestor's name and mailing address on all orders. Address e-mail to: rcra-docket@epa.gov.

Paper copies also can be ordered by calling the RCRA Hotline. Callers within the Washington Metropolitan Area must dial 703 412-9810 or TDD 703 412-3323 (hearing impaired). Long-distance callers can call 800 424-9346 or TDD 800 553-7672. The RCRA Hotline operates weekdays, from 9 a.m. to 6 p.m., e.s.t.

- ❖ **EPA Expands Comprehensive Procurement Guideline (CPG)** (EPA530-F-00-017). This fact sheet provides general information about the CPG and the development of affirmative procurement programs.
- ❖ **Federal Register (FR)** notices promulgating CPG I (60 FR 21370/EPA530-Z-95-006) and RMAN I (60 FR 21386/EPA530-Z-95-007), May 1, 1995. FR notices promulgating CPG II (62 FR 60961/EPA530-Z-97-009) and RMAN II (62 FR 60975/EPA530-Z-97-010), November 13, 1997. FR notices promulgating CPG III (65 FR 3070) and RMAN III (65 FR 3082), January 19, 2000.
- ❖ **Transportation Products Containing Recovered Materials** (EPA530-B-99-016). This list identifies manufacturers and suppliers of traffic cones, barricades, parking stops, and other traffic control devices containing recovered materials. (Each listing is based on information provided by the manufacturer and does not constitute an endorsement by EPA.)
- ❖ **A Study of State and Local Government Procurement Practices that Consider Environmental Performance of Goods and Services** (EPA742-R-96-007). This report provides important program elements and case studies of state and county agencies purchasing environmentally preferable products and services. For a copy of the report or more information on EPA's Environmentally Preferable Purchasing (EPP) program, contact the Pollution Prevention Information Clearinghouse at 401 M Street, SW. (7409), Washington, DC 20460. Phone: 202 260-1023. Fax: 202 260-4659. Visit the EPP Web site at www.epa.gov/oppt/epp.



Other Sources of Information

- ❖ **Buy Recycled Business Alliance.** The Alliance includes over 3,200 companies and organizations committed to increasing their use of recycled-content products and materials in their day-to-day operations. The Alliance offers educational materials, a quarterly newsletter, and product-specific guides. Public purchasing entities can join for free. For more information, contact Kevin Barry, National Recycling Coalition, 1727 King Street, Suite 105, Alexandria, VA 22314-2720. Phone: 703 683-9025, Ext. 210. Fax: 703 683-9026. Web site: www.nrc-recycle.org/brba/index.htm E-mail: brbainfo@nrc-recycle.org
- ❖ **U.S. General Services Administration (GSA).** GSA publishes various supply catalogs, guides, and schedules for recycled-content products available through the Federal Supply Service. For copies of the following documents and other information, contact GSA, Centralized Mailing List Service (7CAFL), 4900 Hemphill Street, P.O. Box 6477, Fort Worth, TX 76115. Phone: 817 334-5215. Fax: 817 334-5561. You also can access GSA Advantage!, GSA's online ordering system, to order any GSA product at www.fss.gsa.gov/cgi-bin/advwel.
 - **Environmental Products Guide.** This GSA guide is designed to help procurement officials identify environmentally preferable products and services. It contains nearly 3,000 items, including many recycled-content products.
 - **New Item Introductory Schedule.** This GSA schedule lists parking stops that contain recovered rubber materials.
- ❖ **Greening the Government: A Guide to Implementing Executive Order 12873.** This guide provides detailed information on establishing and implementing federal affirmative procurement plans. Updated in the summer of 1997, it is available without charge from the Office of the Federal Environmental Executive, Ariel Rios Building, Mail Code 1600S, 1200 Pennsylvania Avenue, NW., Washington, DC 20460. Phone: 202 564-1297. Fax: 202 564-1393. Web site: www.ofee.gov
- ❖ **National Association of Counties (NACo).** NACo can provide sample county procurement ordinances and distributes buy-recycled information. For more information, contact Naomi Friedman, Senior Project Manager, Solid Waste and Pollution Prevention, 440 First Street, NW., Washington, DC 20001. Phone: 202 942-4262. Fax: 202 737-0480 or 202 393-2630. Web site: www.naco.org

- ❖ **National Association of State Purchasing Officials (NASPO).** NASPO's Internet-based Database of Recycled Commodities (DRC) includes information from states on their recycled product procurement. Data include product distributors, manufacturers, brand names, recycled and postconsumer content, Energy Star® rating, units purchased, unit of measurement, unit price, and type of procurement. Visit the NASPO Web site at <fcn.state.fl.us/bpsr/drc_notice.html>.
- ❖ **Official Recycled Products Guide.** This directory lists more than 5,000 manufacturers and distributors of recycled-content products, including those for traffic cones, traffic barricades, traffic control devices, and parking stops. For more information, contact the Recycling Data Management Corporation, P.O. Box 577, Ogdensburg, NY 13669. Phone: 800 267-0707. Fax: 315 471-3258.
- ❖ **Recycled Plastic Products Source Book.** This booklet lists more than 1,300 plastic products from approximately 300 manufacturers, including parking stops and traffic control devices. For more information, call the American Plastics Council (APC), 1801 K Street, NW., Suite 7010, Washington, DC 20006. Phone: 202 974-5400. Fax: 202 296-7119. Visit the APC Web site at <www.plasticsresource.com>.



Internet Sites

- ❖ **The Comprehensive Procurement Guidelines:** <www.epa.gov/cpg>. This site describes EPA's effort to facilitate the procurement of products containing recovered materials, including information on CPG, RMANs, and the Buy-Recycled Series.
- ❖ **Environmentally Preferable Purchasing (EPP):** <www.epa.gov/oppt/ep>. EPA's Environmentally Preferable Purchasing program encourages and assists executive agencies to purchase environmentally preferable products and services. The site explains EPA's guiding principles for including environmental performance in purchasing decision-making and posts case studies of successful pilot projects in both the public and private sectors.
- ❖ **Office of the Federal Environmental Executive (OFEE):** <www.ofee.gov>. OFEE's mission is to advocate, coordinate, and assist environmental efforts of the federal community in waste prevention, recycling, affirmative procurement of CPG items, and the acquisition of recycled and environmentally preferable products and services.
- ❖ **Federal Trade Commission:** <www.ftc.gov/bcp/grnrule/guides980427.htm>. The Federal Trade Commission issued Guides for the Use of Environmental Marketing Claims in May 1998.
- ❖ **Jobs Through Recycling:** <www.epa.gov/jtr>. EPA's Jobs Through Recycling program stimulates economic growth and recycling market development by assisting businesses and supporting a network of state and regional recycling contacts. This Web site provides information on financing and technical assistance for recycling businesses, as well as other market development tools.
- ❖ **California Recycled-Content Product Database:** <www.ciwmb.ca.gov/RCP>. This site contains information on why to buy recycled-content products, how to procure them, and provides access to a database with information on products, as well as manufacturers, distributors, reprocessors, mills, and converters across the country.
- ❖ **King County Recycled Product Procurement Program:** <www.metrokc.gov/oppis/recyclea.html>. This site describes the tools and techniques developed by King County, Washington, agencies for purchasing recycled products.
- ❖ **Municipal Solid Waste:** <www.epa.gov/msw>. This site includes information on recycling, source reduction, and reuse. Contains state municipal solid waste data and the latest facts and figures on waste generation and disposal.
- ❖ **WasteWise:** <www.epa.gov/wastewise>. WasteWise is a free, voluntary EPA program through which organizations eliminate costly municipal solid waste, benefitting their bottom line and the environment. The program provides hands-on assistance to members to help them purchase or manufacture recycled-content products, prevent waste, and recycle solid waste materials.
- ❖ **Recycling Data Network Information Services:** <www.epa.gov/cpg/links.htm>. This commercial Web site provides access, on a subscription basis, to a recycled-content products database of over 4,500 listings in 700 product classifications. It also provides a reference library and a newsletter. Managed by the publisher of the *Official Recycled Products Guide*, the product database is considered to be the largest of its kind.

In addition, contact your state solid waste management agency for information about local and regional businesses that produce or distribute recycled-content products.



United States
Environmental Protection Agency
(5306W)

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