

Attachment 1 DRMS Affirmative Procurement Program EPA Comprehensive Procurement Guidelines Established Designated Items and Levels of Recycled Material Content

Category 1. Paper and Paper Products.

Post Consumer Fiber means paper, paperboard, and fibrous wastes from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item; and all paper, paperboard, and fibrous wastes that enter and are collected from municipal solid waste.

Recovered Fiber means all postconsumer fiber and manufacturing wastes such as dry paper and paperboard generated after completion of the papermaking process; and repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.

a. Printing and Writing Papers.

Printing and writing papers are one of the largest categories of paper and paper products. Includes copier paper, stationery, computer printout, and note pads. Can be either coated or uncoated.

• EPA's Recommended Recovered Fiber Content Levels for Uncoated Printing and Writing Paper.

| Item | Postconsumer Fiber (%) | Recovered Fiber (%) |
|--|---------------------------|------------------------|
| Reproductive Paper (e.g., mimeo and duplicator paper, high speed Copier paper, and bond paper*) | 30 | 30 |
| Offset Paper (e.g., offset printing paper*, book paper*, and Bond paper) | 30 | 30 |
| Tablet Paper (e.g., offset paper such as note pads, stationery* And other writing papers*) | 30 | 30 |
| Forms Bond (e.g., forms, computer printout paper and Ledger*) | 30 | 30 |
| Envelope Paper; Wove, Kraft | | |
| - White | 30 | 30 |
| - Colored including manilla | 10-20 | 10-20 |
| - Unbleached | 10 | 10 |
| Cotton Fiber paper (e.g., cotton fiber papers, ledger* papers, Stationery and matching envelopes, and other writing papers) | 30 | 30 |
| Text and Cover paper (e.g., covers stock, book paper*, stationery* And matching envelopes and other writing* paper) | 30 | 30 |
| Supercalendered | 10 | 10 |
| Machine Finish Groundwood | 10 | 10 |
| Paperties | 30 | 30 |
| Check Safety Paper | 10 | 10 |

* These items can be made from a variety of printing and writing papers, depending on the performance characteristics of the item. Some of the papers are a commodity type and some are specialty type. EPA recommends that agencies determine the performance characteristics required of the paper prior to establishing minimum content standards.

• **EPA’s Recommended Recovered Fiber Content Levels for Coated printing and Writing Papers.**

| Item | Postconsumer Fiber (%) | Recovered Fiber (%) |
|-----------------------|------------------------|---------------------|
| Coated Printing Paper | 10 | 10 |
| Carbonless | 30 | 30 |

• **EPA Recommended Recovered Fiber Content Levels for Bristols.**

| Item | Postconsumer Fiber (%) | Recovered Fiber (%) |
|--|------------------------|---------------------|
| File folders (manila and colored) | 30 | 30 |
| Dyed Filing Products | 20 | 20-50 |
| Cards (index, postal, and other, including index sheets) | 20 | 50 |
| Pressboard Report Covers and Binders | 20 | 50 |
| Tags and Tickets | 20 | 20-50 |

Note: The content levels for all EPA recommendations should be read as X% recovered fiber, including Y% postconsumer fiber and not as X% recovered fiber plus Y% postconsumer fiber.

b. **Newsprint.**

Newsprint is a type of groundwood paper generally used to print newspapers

• **EPA’s Recommended Recovered Fiber Content Levels for Newsprint.**

| Item | Postconsumer Fiber (%) | Recovered Fiber (%) |
|-----------|------------------------|---------------------|
| Newsprint | 20-85 | 20-100 |

Note: The content levels for all EPA recommendations should be read as X% recovered fiber, including Y% postconsumer fiber and not as X% recovered fiber plus Y% postconsumer fiber.

c. **Commercial/Industrial Sanitary Tissue.**

Sanitary tissue products include bathroom and facial tissues, paper towels, napkins, and general purpose industrial wipers.

• **EPA’s Recommended Recovered Fiber Content Levels for Commercial/Industrial sanitary Tissue Products.**

| Item | Postconsumer Fiber (%) | Recovered Fiber (%) |
|-----------------------------------|------------------------|---------------------|
| Bathroom Tissue | 20-60 | 20-100 |
| Paper Towels | 40-60 | 40-100 |
| Paper Napkins | 30-60 | 30-100 |
| Facial Tissue | 10-15 | 10-100 |
| General Purpose Industrial Wipers | 40 | 40-100 |

Note: The content levels for all EPA recommendations should be read as X% recovered fiber, including Y% postconsumer fiber and not as X% recovered fiber plus Y% postconsumer fiber.

d. Paperboard and Packaging.

This category covers two major types of board: “containerboard” used to make corrugated shipping containers, and “paperboard” used in a wide variety of packaging applications such as folding cartons, beverage carriers, and mailing tubes. Kraft padded mailers, Kraft bags, and wrapping paper made from old corrugated containers also falls under the packaging category

• EPA’s Recommended Recovered Fiber Content Levels for Paperboard and Packaging Products.

| Item | Postconsumer Fiber (%) | Recovered Fiber (%) |
|---|------------------------|---------------------|
| Corrugated Containers(1) (<300 psi) (300 psi) | 25-50 25-30 | 25-50 25-30 |
| Solid Fiber Boxes | 40 | 40 |
| Folding Cartons(2) | 40-80 | 100 |
| Industrial Paperboard (e.g., tubes, cores, drums, cans) | 45-100 | 100 |
| Miscellaneous (e.g., pad backs, covered binders, book covers, mailing tubes, protective packaging) | 75-100 | 90-100 |
| Padded Mailers | 5-15 | 5-15 |
| Carrierboard(3) | 10-15 | 10-100 |
| Brown Papers (e.g., wrapping paper and bags) | 5-20 | 5-40 |

- (1) The recovered fiber and postconsumer fiber content is calculated from the content of each component relative to the weight each contributes to the total weight of the box.
- (2) The recommended content ranges are not applicable to all type of paperboard used in folding cartons. Cartons made from solid bleached sulfate or solid unbleached sulfate contain no or small percentages of postconsumer fiber, depending on the paperboard source.
- (3) Carrierboard made from unbleached kraft contains up to 25% recovered fiber, while carrierboard made from recycled paperboard contains up to 100% recovered fiber.

Note: The content levels for all EPA recommendations should be read as X% recovered fiber, including Y% postconsumer fiber and not as X% recovered fiber plus Y% postconsumer fiber.

e. Miscellaneous Paper Products.

Tray liners currently are the only products in the miscellaneous category. Sometimes referred to as doilies or place mats.

• EPA’s Recommended Recovered Fiber Content Levels for Miscellaneous Paper Products

| Item | Postconsumer Fiber (%) | Recovered Fiber (%) |
|-------------|------------------------|---------------------|
| Tray Liners | 50-75 | 100 |

Note: The content levels for all EPA recommendations should be read as X% recovered fiber, including Y% postconsumer fiber and not as X% recovered fiber plus Y% postconsumer fiber.

Category 2. Non-Paper Officer Products

a. Binders.

A loose leaf binder contains split metal rings attached to a metal back that holds perforated sheets of paper. Chipboard, pressboard, plastic covered chipboard or paperboard, and cloth covered chipboard or paperboard binders can all be made with recovered materials.

• EPA’s Recommended Recovered Materials Content Levels for Binders.

| Material | Postconsumer Content (%) | Total Recovered Materials Content (%) |
|-----------------|--------------------------|---------------------------------------|
| Plastic Covered | -- | 25-50 |
| Paper Covered | 75-100 | 90-100 |
| Pressboard | 20 | 50 |

The chipboard, paperboard, or pressboard binders or components of plastic-covered binders, or binders covered with another material such as cloth, are covered under the recommendation for paper and paper products. EPA’s recommendation does not preclude purchasing binders covered with or manufactured using another material such as a cloth. It simply recommends that procuring agencies when purchasing binder types designated in the procurement guidelines, purchase these binders containing recovered materials.

b. Office Recycling Containers and Waste Receptacles.

Recycling containers and waste receptacles are used to collect and transport waste and recyclable materials in offices – either in deskside or larger more centralized containers. These items can be made from recovered paper, plastic, or steel.

• EPA’s Recommended Recovered materials Content levels for Office Recycling Containers and Office Waste Receptacles

| Materials | Postconsumer Content (%) | Total Recovered Materials Content (%) |
|-------------------------|--------------------------|---------------------------------------|
| Plastic | 20 – 100 | -- |
| Steel | -- | 25 – 100 |
| Paper | | |
| - Corrugated | 25 – 50 | 25 – 50 |
| - Solid Fiber Boxes | 40 | -- |
| - Industrial Paperboard | 40 – 80 | 100 |

EPA’s recommendations for office recycling containers and office waste receptacles containing recovered plastic, paper, or steel do not preclude procuring agencies from purchasing containers or receptacles manufactured using another material such as wood. It simply recommends that procuring agencies, when purchasing office recycling containers manufactured from plastic, steel, or paper, seek such containers made with recovered materials.

c. Plastic Desktop Accessories.

Plastic desktop accessories include desk organizers, desk sorters, desk and letter trays, and memo, note, and pencil holders.

• **EPA’s Recommended Recovered Materials Content Levels for Plastic Desktop Accessories**

| Product | Material | Post Consumer Content (%) |
|-----------------------------|-------------|---------------------------|
| Plastic Desktop Accessories | Polystyrene | 25 - 80 |

EPA’s recommendation does not preclude procuring agencies from purchasing a desktop accessory manufactured from another material such as paper, wood, or steel. It simply recommends that, when purchasing plastic desktop accessories, agencies purchase these items made from recovered materials.

d. **Plastic Envelopes.**

Plastic envelopes are used in heavy duty, security related, and other specialized mailing applications by the express mail, banking, legal, and other industries.

• **EPA’s Recommended Recovered Materials Content Levels for Plastic Envelopes**

| Material | Postconsumer Content (%) | Total Recovered Materials Content (%) |
|----------|--------------------------|---------------------------------------|
| Plastic | 25 | 25-35 |

EPA’s recommendation does not preclude procuring agencies from purchasing envelopes from another material such as paper. It simply requires that a procuring agency, when purchasing plastic envelopes, purchase these items made from recovered materials when these items meet applicable specifications and performance requirements

e. **Plastic Trash Bags.**

Plastic trash bags, also called trash can liners, are widely available with recovered material content including HDPE, LDPE, and LLDPE. The amount of recovered material content is affected by the color, size, and thickness of the bag.

• **EPA’s Recommended Recovered material Content Levels for Plastic Trash Bags**

| Product | Material (%) | Postconsumer Content (%) |
|--------------------|--------------|--------------------------|
| Plastic Trash Bags | Plastic | 10-100 |

EPA’s recommendations does not preclude procuring agencies from purchasing trash bags manufactured using another material, such as paper. It merely recommends that procuring agencies, when purchasing plastic trash bags, purchase items made from recovered materials.

f. **Printer Ribbons.**

Reinked printer ribbons are used ribbons in printer cartridges that are reinked using electromagnetic machinery. Ribbons can be reinked until they reach the end of their useful life. Reloaded printer ribbons are new fabric ribbons that are reloaded into reused cartridges when used ribbons run out of ink.

• **Recommended Recovered Materials Content Ranges:**

Minimum content standards are not appropriate for remanufactured items, such as printer ribbons, because a core part of the item is reused in the new product, even though certain components of a printer ribbon might contain recovered materials.

In lieu of content standards, EPA’s RMAN recommends that procuring agencies adopt one or both of the following approaches:

- ❑ Procure printer ribbons reinking or reloading services
- ❑ Procure reinked or reloaded printer ribbons

g. Toner Cartridges.

Toner cartridges are used in printers, photocopiers, and fax machines. When the toner is replaced, the cartridges can be returned to the manufacturer to be refilled, refurbished, and cleaned for resale.

• Recommended Recovered materials Content Ranges:

EPA's RMAN recommends that procuring agencies establish procedures and policies that give priority to remanufacturing the agencies' expended toner cartridges. EPA recommends that, under such policies and procedures, agencies procure remanufacturing services for expended cartridges and when such services are unavailable or not practicable, obtain remanufactured toner cartridges or new toner cartridges made with recovered materials from product vendors.

Category 3. Vehicular Products.

a. **Engine Coolants.** Recycled engine coolants, also known as antifreeze, meets nationally recognized performance specifications established by the American Society of Testing Engineers and the Society of Automotive Engineers.

- **Recommended Recovered Material Content Ranges.**

- ❑ EPA recommends that procuring agencies whose vehicles are serviced by a motor pool or vehicle maintenance facility establish a program for engine coolant reclamation and reuse that consists of either reclaiming the spent engine coolants onsite for use in the agencies' vehicles or establishing a service contract for reclamation of the agencies' spent engine coolant for use in the agencies' vehicles.
- ❑ EPA also recommends that procuring agencies request reclaimed engine coolant when having their vehicles serviced at commercial service centers. Additionally, EPA recommends that agencies purchase reclaimed engine coolant when making direct purchases of this item, such as when necessary to make up for losses due to leakage and spillage.
- ❑ EPA does not recommend one type of engine coolant over another. EPA recommends, however, that procuring agencies purchase engine coolant containing only one base chemical, typically ethylene glycol or propylene glycol, to prevent the commingling of incompatible types of engine coolant.

b. **Re-Refined Lubricating Oil.** Includes engine lubricating oil, hydraulic fluids, and gear oils. EPA's designation specifically excludes marine and aviation oils. Today, re-refined oil is subject to the same stringent refining standards as virgin oil for use in automotive, heavy duty diesel, and other internal combustion engines, hydraulic fluids, and gear oils. In addition, re-refined oil is equivalent to virgin oil and passes all prescribed tests. In fact, the three major US automakers now recognize that re-refined oil meets the performance criteria in their warranties.

- **Recommended Recovered Material Content Ranges:**

- ❑ EPA recommends that procuring agencies set their minimum re-refined oil content standard at the highest level of re-refined oil that they determine to meet the requirements of RCRA section 6002, but no lower than 25% re-refined oil.
- ❑ EPA recommends that procuring agencies review their procurement practices and eliminate those which would inhibit or preclude procurement of lubricating oils containing re-refined oil.

- **Product Specifications.** EPA recommends that procuring agencies use the following specifications when procuring lubricating oils containing re-refined oil.

Engine Lubricating Oils

| |
|---|
| A-A 52039 – Commercial Item Description. Lubricating Oil, Automotive Engine, API Service SG (replaced MIL-L-46152, Lubricating Oil, Internal Combustion Engine, Administrative Service) |
| API Engine Service Category SF – 1980 Gasoline Engine Warranty Maintenance Service (or current category) |
| A-A-52306 – Commercial Item Description, Lubricating Oil, Heavy-Duty Diesel Engine (for wheeled vehicles only) |
| API Engine Service Category CC – Diesel Engine Service (or current category) |
| MIL-L-2104, Lubricating Oil, Internal Combustion Engine, Combat/Tactical Service |
| API Engine Service Category CD – Diesel Engine Service (or current category) |
| MIL-L-21260D (or current version) – Lubricating Oil, Internal Combustion Engine, Preservative and Break-in |
| MIL-L-4616B (or current version) – Lubricating Oil, Internal Combustion Engine, Arctic |

Hydraulic Fluids

| |
|---|
| MIL-H-5606E (or current version) – Hydraulic Fluid, Petroleum Base, Aircraft, Missile, & Ordnance |
| MIL-H-6083 (or current version) – Hydraulic Fluid, Petroleum Base, For Preservation & Operation |

Gear Oils

| |
|--|
| MIL-L-2105D (or current version) Lubricating Oil, Gear, Multipurpose |
|--|

c. **Retread Tires.** Retread tires can be driven under the same conditions and at the same speeds as new tires with no loss in safety and comfort. Retreading tires also helps conserve oil. Every year, retreading saves more than 400 millions gallons of oil in North America.

- **Recommended Recovered Materials Content Ranges**

- ❑ **Procurement of Tire Retreading Services for Used Tire Casings.** EPA recommends that procuring agencies specify that tire repair and retread services must conform to Federal Specification ZZ-T-441H (or current version); obtain retreading services from retreaders participating in the US General Services Administration (GSA) Federal Tire Program’s Quality Assurance facility Inspection Program (QAFIP); and require bidders to submit a copy of their current certification under the QAFIP.
- ❑ **Procurement of Tires Through Competition Between Vendors of New Tires and Vendors of Retread Tires.** EPA recommends that procuring agencies specify that retread tires must meet the requirements of Federal Specification ZZ-T-381, “Tires, Pneumatic, Vehicular (Highway) (New and Retreaded)” and be listed on Qualified Products List QPL-ZZ-T-381.

Category 4. Construction Products.

a. **Building Insulation.** Insulation made from recovered materials is available for thermal insulating applications. The product is available in several forms including rolls, loose fill, and spray foam. Insulation can also include a range of recovered materials such as glass, slag, paper fiber, and plastics.

• **Recommended Recovered Material Content Levels for Building Insulation**

| Product | Material | Postconsumer Content (%) | Total Recovered Materials Content (%) |
|--|--|--------------------------|---------------------------------------|
| Rock Wool | Slag | -- | 75 |
| Fiberglass | Glass Cullet | -- | 20-25 |
| Cellulose Loose-Fill and Spray On | Postconsumer Paper | 75 | 75 |
| Perlite Composite Board | Postconsumer Paper | 23 | 23 |
| Plastic Rigid Foam, Polyisocyanurate/ Polyurethane | | | |
| Rigid Foam | -- | -- | 9 |
| Foam-in-Place | -- | -- | 5 |
| Glass Fiber Reinforced | -- | -- | 6 |
| Phenolic Rigid Foam | -- | -- | 5 |
| Plastic, Non-Woven Batt | Recovered and/or Postconsumer Plastics | -- | 100 |

Note: The recommended recovered materials content levels are based on the weight (not volume) of materials in the insulating core only.

b. **Carpet.** EPA designated recycled content polyester carpet for light and moderate-wear applications. Recycled fiber polyester carpet is manufactured from PET recovered soda bottles.

• **Recommended Recovered Materials Content Levels for Carpet**

| Product | Material | Postconsumer Content | Total Recovered Materials Content (%) |
|-----------------------------|----------|----------------------|---------------------------------------|
| Polyester Carpet Face Fiber | PET | 25-100 | 25-100 |

EPA recommends that, based on the recovered materials content levels shown in the table, agencies establish minimum content standards for use in purchasing polyester carpet for light and moderate-wear applications. This recommendation does not include polyester carpet for use in heavy-wear or severe-wear applications although agencies are encouraged to evaluate the use of polyester carpet in these applications. These recommendations do not preclude an agency from purchasing carpet made from other materials such as nylon, wool, or polypropylene. EPA recommends that agencies use the GSA contract GS-27F-5069C, Federal Supply Schedule 72, Part I, Section A to purchase carpets containing recovered material.

c. **Cement & Concrete.** Coal fly ash and ground granulated blast furnace (GGBF) slag are recovered materials available in some areas for use as concrete or cement ingredients. The level of fly ash in concrete typically ranges from 15 to 35 percent but can reach 70%. The level of GGBF slag usually ranges from 25 to 50%.

• **Recommended Recovered Materials Content Ranges.**

Agencies should prepare or revise their procurement programs for construction projects involving cement and concrete to allow the use of coal fly ash or GGBF slag. Agencies should consider the use of both and chose the one that meets the performance requirements, consistent with availability and price considerations.

Due to variations in coal fly ash, GGBF slag, cement strength requirements, costs, and construction practices, EPA does not recommend content levels for concrete and cement containing fly ash or GGBF slag. However, the following information is provided:

- ❑ Replacement rates of coal fly ash for cement in the production of blended cement generally do not exceed 20 to 30 %, although coal fly ash blended with cement may range from 0 to 40% coal fly ash by weight, according to the ASTM C 595, for cement types IP and I(PM). Fifteen percent is a more accepted rate when coal fly ash is used as a partial cement replacement.
- ❑ According to ASTM C 595, GGBF slag can replace up to 70% of the Portland cement in some concrete mixtures. Most GGBF slag concrete mixtures contain between 25 and 50 percent GGBF slag by weight. EPA recommends that procuring agencies refer, at a minimum to ASTM C 595 for the GGBF slag content appropriate for the intended use of the concrete or cement.

d. **Reprocessed and Consolidated Latex Paints.** Reprocessed paint is postconsumer latex paint that has been sorted by a variety of characteristics (i.e., color, finish, exterior/ interior). Consolidated paint is typically used for exterior applications or as an undercoat.

• **Recommended Recovered Materials Content Levels for Reprocessed and Consolidated Latex Paints**

| Product | Postconsumer Content (%) | Total Recovered Materials Content (%) |
|--|--------------------------|---------------------------------------|
| Reprocessed Latex Paint | | |
| ▪ White, Off-White, Pastel Colors | 20 | 20 |
| ▪ Grey, Brown, Earthtones, and Other Dark Colors | 50-99 | 50-99 |
| Consolidated Latex Paint | 100 | 100 |

EPA’s recommendations apply to reprocessed latex paints used for interior and exterior architectural applications such as wallboard, ceilings, concrete, wood, masonry, and metal, and to consolidated latex paints used for covering graffiti where color and consistency is not a factor.

EPA’s recommendation does not preclude agencies from purchasing paints manufactured from other, non-latex paints such as oil based paints. EPA recommends that when purchasing latex paints, purchase these items made from postconsumer recovered materials when these items meet applicable specifications and performance requirements.

• **Product Specifications.**

- EPA recommends that agencies use the GSA specification TT-P-2846, Paint, Latex (Recycled with Post Consumer Waste). GSA specification TT-P-2846 requires high content levels (50 to 90% postconsumer paint).

e. **Floor Tiles & Patio Blocks.** Floor tiles for heavy duty or commercial specialty applications can contain up to 100 percent postconsumer rubber. Floor tile containing 90 to 100 percent are also readily available. Patio blocks made from 90 to 100 percent recovered plastic and 90 to 100 percent postconsumer rubber are used in garden walkways and trails.

• **Recommended Recovered Materials Content Levels for Floor Tiles And Patio Blocks**

| Product | Material | Postconsumer Content | Total Recovered Materials Content (%) |
|---|---------------------------|----------------------|---------------------------------------|
| Patio Blocks | Rubber or Rubber Blends | 90-100 | -- |
| | Plastic or Plastic Blends | -- | 90-100 |
| Floor Tiles (heavy duty/commercial use) | Rubber | 90-100 | -- |
| | Plastic | -- | 90-100 |

The recommended recovered materials content levels are based on dry weight of the raw materials, exclusive of any additives such as adhesives or binders. EPA recommendations do not preclude agencies from purchasing floor tiles or patio blocks manufacturer from another material. It simply recommends that agencies, when purchasing these items, purchase these items made from recovered materials. These recommendations apply to heavy duty/commercial type applications only.

f. **Structural Fiberboard & Laminated Paperboard.** Structural fiberboard is a panel made from wood, cane, or paper fibers matted together which is used for sheathing, structural, and insulating purposes. Laminated paperboard is made from one or more plies of kraft paper bonded together and is used for decorative, structural, or insulating purposes. Examples include building board, insulating formboard, sheathing, and ceiling tile.

• **Recommended Recovered Materials Content Levels for Structural Fiberboard and Laminated Paperboard**

| Product | Material | Postconsumer Content | Total Recovered Materials Content (%) |
|-----------------------|--------------------|----------------------|---------------------------------------|
| Structural Fiberboard | -- | -- | 80-100 |
| Laminated Paperboard | Postconsumer Paper | 100 | 100 |

The recovered material content levels are based on the weight (not volume) of materials in the insulating core only

• **Product Specifications:**

EPA recommends that procuring agencies use ASTM Standard Specification C 208 and ANSI/AHA specification A194.1. EPA further recommends that, when purchasing structural fiberboard products containing recovered paper, agencies should do the following:

- Reference the technical requirements of ASTM C 208, “Insulating Board (Cellulosic Fiber), Structural and Decorative”.
- Permit structural fiberboard products made from recovered paper where appropriate.
- Permit products, such as floor underlayment and roof overlayment, containing recovered paper.

g. **Shower & Restroom Dividers/Partitions.** Shower and restroom dividers/partitions are made of 20 to 100 percent recovered plastic or steel.

• **Recommended Recovered Materials Content Levels for Shower and Restroom Dividers/Partitions Containing Recovered Plastic or Steel**

| Material | Postconsumer Content | Total Recovered Materials Content (%) |
|----------|----------------------|---------------------------------------|
| Steel | 16 | 20-30 |
| Plastic | 20-100 | 20-100 |

• **Product Specifications**

EPA recommends that procuring agencies use the following specifications when procuring shower and restroom dividers/partitions.

- The American Institute of Architects (AIA) has issued guidance for specifying construction materials, including plastic and steel dividers/partitions. The AIA guidance is known throughout the construction industry as “Masterspec” and is available through GSA.
- US Army Corps of Engineers’ Guide Specification CEGS-10160, “Toilet Partitions”.

Category 5. Landscaping Products.

a. **Garden and Soaker Hoses.** Garden hoses conduct water to a specific location while soaker hoses are perforated hoses that gently irrigate areas. EPA’s designation specifically covers garden and soaker hoses containing recovered plastic or rubber.

• **Recommended Recovered Materials Content Levels for Garden and Soaker Hoses Containing Recovered Plastic or Rubber**

| Product | Material | Postconsumer Content (%) |
|-------------|-----------------------|--------------------------|
| Garden Hose | Rubber and/or Plastic | 60-65 |
| Soaker Hose | Rubber and/or Plastic | 60-70 |

• **Product Specifications**

EPA recommends that procuring agencies use the following specifications when procuring garden and soaker hoses:

- ❑ ASTM D3901 Consumer Specification for Garden Hose. This specification addresses physical and performance characteristics (i.e., pressure, tensile, and ripping strength tests) and states that the material components are to be agreed upon by the purchaser and seller.
- ❑ Green Seal GC-2: Watering Hoses. This standard calls for use of 50 percent postconsumer rubber material in soaker hoses. EPA recommends that, when purchasing garden hoses, agencies reference the technical requirements of this specification but set a higher content standard.

b. **Hydraulic Mulch.** Hydraulic mulch is comprised of small pieces of cellulose fibers, which can be made completely from wood waste or recovered paper. Through hydroseeding, a mixture of seeds, water, and mulch is sprayed over bare ground to quickly promote plant growth.

• **Recommended Recovered Materials Content Levels for Hydraulic Mulch Products**

| Product | Material | Postconsumer Content (%) | Total Recovered Materials Content (%) |
|-----------------------------|----------------|--------------------------|---------------------------------------|
| Paper based Hydraulic Mulch | Paper | 100 | 100 |
| Wood Based Hydraulic Mulch | Wood and Paper | -- | 100 |

The recommended recovered materials content levels are based on the dry weight of the fiber, exclusive of any dyes, wetting agents, seeds, fertilizer, or other additives

c. **Lawn & Garden Edging.** Lawn and garden edging can be manufactured with scrap rubber, milk jugs, and other plastic containers. EPA’s designation specifically covers lawn and garden edging containing recovered plastic or rubber.

• **Recommended Recovered Materials Content Levels for Lawn and Garden Edging Containing Recovered Plastic or Rubber**

| Material: | Postconsumer Content (%) | Total Recovered Materials Content (%) |
|-----------------------|--------------------------|---------------------------------------|
| Plastic and/or Rubber | 30-100 | 30-100 |

EPA’s recommendation does not preclude an agency from purchasing lawn and garden edging manufactured from another material. It simply requires that an agency, when purchasing lawn and garden edging made from plastic and/or rubber, purchase these items made with recovered materials when these items meet applicable specifications and performance requirements.

d. **Yard Trimming Compost.** Yard trimming compost utilizes organic wastes from lawns and gardens to create an effective soil amendment. Yard trimmings constitute almost 14 percent of our national municipal solid waste stream.

• **Recommended Recovered Material Content Ranges:**

| |
|--|
| EPA recommends that agencies purchase or use compost in such applications as landscaping and seeding on roadsides and embankments. |
| EPA recommends that agencies that have an adequate volume of yard trimmings as well as sufficient space for composting, should implement a composting system to produce compost to meet their landscaping needs. |

• **Product Specifications:**

- ❑ Agencies shall ensure that there is no language in their specifications for fertilizers and soil amendments that would preclude or discourage the use of compost.
- ❑ EPA recommends that agencies obtain the following specification and adapt it or another suitable specification for their use in purchasing compost products:
 - ◆ The State of Maine developed quality standards for compost products that are used by its agencies. Quality standards were set for six types of compost products ranging from top soil to wetland substrate to mulch. For each of these types of compost product, standards for maturity, odor, texture, nutrients, Ph level, salt content, organic content, and several other standards have been established.

Category 6. Park and Recreation Products.

a. **Plastic Fencing.** Plastic fencing containing recovered materials can be used to control drifting snow and sand and as a warning or safety barrier at construction sites. Plastic fencing used in these applications goes by many names – snow fencing, temporary fencing, beach or dune fencing, warning barrier, and safety barrier.

• **Recommended Recovered Materials Content Levels for Fencing Containing Recovered Plastic**

| Material: | Postconsumer Content (%) | Total Recovered Materials Content (%) |
|------------------|---------------------------------|--|
| Plastic | 60-100 | 90-100 |

EPA’s recommendation does not preclude an agency from purchasing fencing manufactured from another material, such as wood. It simply requires that an agency, when purchasing plastic fencing, purchase these items made with recovered materials when these items meet applicable specifications and performance requirements.

b. **Playground Surfaces.** Playground surfaces can contain recovered rubber and PVC materials are often more desirable than wood chips, sand, or asphalt, because they provide more cushioning and thereby may be safer for children.

• **Recommended Recovered Materials Content Levels for Playground Surfaces**

| Material: | Postconsumer Content (%) |
|-------------------|---------------------------------|
| Rubber or Plastic | 90-100 |

The recommended recovered materials content levels are based on the dry weight of the raw materials, exclusive of any additives such as adhesives, binders, or coloring agents. EPA's recommendation does not preclude an agency from purchasing playground surfaces manufactured from another material. It simply recommends that an agency, when purchasing playground surfaces made from rubber or plastic, purchase these items made from recovered materials.

• **Product Specifications:**

- The Consumer Product Safety Commission requires that playground surfaces meet certain performance standards to reduce head injuries, including ASTM specification F 1292, pertaining to impact attenuation standards.
- Playground surfacing must also comply with the American with Disabilities Act.

c. **Running Tracks.** Running tracks can contain both recovered rubber and plastic.

• **Recommended Recovered Materials Content Levels for Running Tracks**

| Material | Postconsumer Content (%) |
|-------------------|---------------------------------|
| Rubber or Plastic | 90-100 |

The recommended recovered materials content levels are based on the dry weight of the raw materials, exclusive of any additives such as adhesives, binders, or coloring agents. EPA's recommendation does not preclude an agency from purchasing running tracks manufactured from another material. It simply recommends that an agency, when purchasing running tracks made from rubber or plastic, purchase these items made from recovered materials.

Category 7. Transportation Products.

a. **Channelizers, Delineators, & Flexible Delineators.**

Channelizers. Channelizers are barrels or drums that direct traffic around areas of road repair or construction. Channelizers can be constructed from recovered HDPE and rubber.

Delineators. Delineators are temporary pavement markers that come in many shapes, sizes, and designs. They are manufactured primarily from recovered and postconsumer HDPE.

Flexible Delineators. These products come in the form of stakes and are driven into the ground. They are used at golf courses, airports, military bases, shopping centers, and recreation areas.

• **Recommended Recovered Materials Content Levels for Channelizers, Delineators, and Flexible Delineators Containing Recovered Plastic, Rubber or Steel**

| Product | Material | Postconsumer Content (%) |
|----------------------|--------------------|--------------------------|
| Channelizers | Plastic | 25-95 |
| | Rubber (base only) | 100 |
| Delineators | Plastic | 25-90 |
| | Rubber (base only) | 100 |
| | Steel (base only) | 25-50 |
| Flexible Delineators | Plastic | 25-85 |

EPA’s recommendation does not preclude an agency from purchasing channelizers, delineators, or flexible delineators manufactured from another material. It simply recommends that an agency, when purchasing these items made from rubber, plastic, or steel, purchase these items made from recovered materials when these items meet applicable specifications and performance requirements.

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

b. **Parking Stops.** Commonly found in parking lots, parking stops are used to mark spaces and to stop vehicles pulling into a parking space.

• **Recommended Recovered Materials Content Levels for Parking Stops Made from Concrete or Containing Recovered Plastic or Rubber**

| Material | Postconsumer Content (%) | Total Recovered Materials Content (%) |
|---|--------------------------|---------------------------------------|
| Plastic and/or Rubber | 100 | -- |
| Concrete Containing Coal Fly Ash | -- | 20-40 |
| Concrete Containing Ground Granulated Blast Furnace Slag (GGBF) | -- | 25-75 |

EPA’s recommendation does not preclude an agency from purchasing parking stops manufactured from another material. It simply recommends that an agency, when purchasing concrete parking stops or parking stops made with plastic or rubber, purchase these items made from recovered materials when these items meet applicable specifications and performance requirements.

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.

Parking stops made with recovered plastics may also include other recovered materials such as sawdust, wood, or fiberglass. The percentage of these materials contained in the product would also count toward the recovered materials content level of the parking stops.

c. **Traffic Barricades.** Traffic barricades are used to redirect or restrict traffic. They are typically made from wood, steel, plastic, fiberglass, or a combination of these materials.

• **Recommended Recovered Materials Content Levels for Traffic Barricades**

| Material | Postconsumer Content (%) | Total Recovered Materials Content (%) |
|----------------------------|--------------------------|---------------------------------------|
| Plastic, (HDPE, LDPE, PET) | 80-100 | 100 |
| Steel | -- | 25-100 |
| Fiberglass | -- | 100 |

The recommended recovered materials content levels are based on the dry weight of the raw materials, exclusive of any additives such as adhesives, binders, or coloring agents.

d. **Traffic Cones.** Traffic cones are used to mark a road hazard or to direct traffic. Recovered plastics are used in the upper component, and crumb rubber and/or plastics are used in the base.

• **Recommended Recovered Materials Content Levels for Traffic Cones**

| Material | Postconsumer Materials (%) | Total Recovered Materials Content (%) |
|------------------------|----------------------------|---------------------------------------|
| Plastic (PVC and LDPE) | -- | 50-100 |
| Crumb Rubber | -- | 50-100 |

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

Category 8. Miscellaneous Products.

a. **Pallets.** Pallets can be made of wood, plastic, or paperboard. Wooden pallets can be repaired or rebuilt with wood from old pallets. Plastic and corrugated pallets can be manufactured from recovered materials.

• **Recommended Recovered Materials Content Levels for pallets Containing Recovered Wood, Plastic, or Paperboard**

| Product | Material | Postconsumer Content (%) |
|--------------------|------------|--------------------------|
| Wooden Pallets | Wood | 95-100 |
| Plastic Pallets | | |
| - Plastic Lumber | Plastic | 100 |
| - Thermoformed | Plastic | 25-50 |
| Paperboard Pallets | Paperboard | 50 |

EPA's recommendation does not preclude an agency from purchasing pallets manufactured from another material. It simply recommends that an agency, when purchasing pallets made from wood, plastic, or paperboard, purchase these items made from recovered materials when these items meet applicable specifications and performance requirements.

• **Product Specifications:**

EPA recommends that procuring agencies use the following specifications when procuring pallets:

- ❑ The Grocery Manufacturers of America issued a widely used standard for 48 by 40-inch stringer pallets known as the “GMA spec”. A copy of this specification is available from the RCRA Hotline at 800-424-9346.
- ❑ The National Wooden Pallet and Container Association (NWPCA) is developing a standard through the American National Standard Institute (ANSI) for repairable 48 by 40-inch lumber deck pallets. Contact NWPCA at 703-527-7667 for current information on this standard.
- ❑ U.S. Postal Service (USPS) specification USPS-P-1108, “Pallet, Nestable, Plastic, Thermoformed (Item No. 3919B)” is for thermoformed HDPE pallets. A copy of the current version USPS-P-1108E is available from the RCRA Hotline at 800-424-9346.