

Recycled Content Park and Recreation Products in Alameda County

Buying recycled content *playground equipment, playground surfacing, and parks furnishings* is cost-effective, easy to do, and a good way to keep our outdoors “green”. If you specify or purchase park and recreation products, buying recycled can turn the materials we collect for recycling into budget-friendly quality products.

“Asphalt-concrete pathways were recycled and ground-in-place... for new concrete pathways. Site furnishings ...utilized plastic made from recycled milk jugs as slats for benches. The finished park was well received by the public, and to date, all of the recycled materials have exceeded our expectations.”

Michael Fulford, City Landscape Architect, City of Pleasanton

Park and Recreation Products Containing Recovered Materials

The U.S. Environmental Protection Agency (EPA) recommends recycled content levels to look for when purchasing park and recreation products, as shown in the table below. Rather than specifying just one level of recycled content, ranges are offered that reflect actual market conditions.

EPA's Recommended Content Levels for Park and Recreation Products*	
Park and Recreation Products	Recovered Material Content
Park Benches & Picnic Tables	
Plastic	90-100% postconsumer/100% total
Plastic Composites	50-100% postconsumer/100% total
Plastic Fencing for Specified Uses	60-100% postconsumer/90-100% total
Playground Equipment	
Plastic	90-100% postconsumer/100% total
Plastic Composites	50-75% postconsumer/95-100% total
Playground Surfaces	
Plastic or Rubber	90-100% postconsumer
Running Tracks	
Plastic or Rubber	90-100% postconsumer
Signage	
Plastic	80-100% postconsumer
Plastic Sign Posts/Supports	80-100% postconsumer

*EPA also includes steel, concrete and aluminum products.

For details on playground equipment meeting EPA's content levels, Table 2 (in Appendix A) provides the recycled content of the plastic components by equipment manufacturer. Only a sample of manufacturers is listed.

Sample Specifications

The Commonwealth of Massachusetts, Operational Services Division, uses the following procurement language for recycled plastic playground equipment, recycled plastic lumber benches and tables, and athletic and playground surfaces:

PLAYGROUND EQUIPMENT

General Description

The Commonwealth desires contractors who can provide a variety of playground equipment that contains postconsumer recycled plastic. Playground equipment may include, but is not limited to, composite structures, individual components, and sand boxes.

Mandatory Product Specifications

- ❖ All non-moving plastic and metal parts **must** be warranted for a minimum of ten (10) years against structural failure due to warping, sagging, cracking, corrosion, deterioration, or manufacturing defects.
- ❖ All playground equipment **must** include postconsumer recycled plastic lumber in at least two (2) of the following applications: decking, sandbox borders, roofing, walls/partitions, fascia inserts, other.
- ❖ All recycled plastic elements used in playground equipment **must** contain a minimum of 85% postconsumer plastic and **must** not contain any fiberglass or other materials which may cause adverse skin reaction or other skin sensitivities.
- ❖ All plastic lumber **must** contain ultraviolet (UV) stabilizers and be color-fast throughout the entire material.

Desirable Product Specifications

- ❖ It is **desirable** that additional portions of playground equipment be made from recycled plastic lumber than those required above.
- ❖ It is **desirable** that Bidders use plastic lumber in playground equipment that is at least 90% postconsumer plastic material.
- ❖ It is **desirable** that Bidders use manufacturers that have achieved ISO 14001 certification.

PLASTIC LUMBER BENCHES AND TABLES

General Description

The Commonwealth is looking for contractors who can provide a range of outdoor benches and tables which are made from either all recycled plastic lumber or a combination of recycled plastic lumber and metal frames. These products may be used by state and local agencies at a variety of locations, including, but not limited to parks, campgrounds, bicycle paths, recreation areas, beaches, public health facilities, universities, schools, and roadway rest areas.

Mandatory Specifications

- ❖ All benches and tables offered by Bidder **must** consist of surface areas (all seating and table tops) which are made with recycled plastic lumber.

- ❖ Products may be offered with recycled plastic frame/legs or metal frame/legs.
- ❖ All plastic lumber **must** contain UV inhibitors and be consistent in color through the entire profile.
- ❖ All plastic lumber for seating and table tops **must** contain a minimum of 90% postconsumer recycled plastic and may be composed of a single resin or co-mingled plastic.
- ❖ All plastic lumber used for seating and table tops **must** not contain any fiberglass or other material which may cause skin irritation or other adverse reactions.
- ❖ If plastic lumber is used for framing/legs, it **must** contain a minimum of 70% postconsumer plastic, and may contain fiberglass or other materials designed to provide additional structural strength.
- ❖ All plastic lumber materials except for frames **must** be offered in at least three (3) different colors.
- ❖ Benches and tables **must** be of sufficient strength for frequent year-round outdoor use in all Commonwealth facilities listed above.
- ❖ All Bidders **must** not use Polyvinyl Chloride (PVC) in any components.
- ❖ All plastic lumber in benches and tables **must** be guaranteed against undue warping, sagging, cracking, splitting, and rotting for a minimum of twenty (20) years under normal use conditions.

Desirable Specifications

- ❖ It is **desirable** that Bidders offer plastic lumber for seating and table tops that contain a minimum of 95% postconsumer recycled plastic and may be composed of a single resin or co-mingled plastic.

ATHLETIC AND PLAYGROUND SURFACES

General Description

The Commonwealth is seeking contractors to offer various types of athletic and playground surfaces made from recycled tires or other rubber products.

Mandatory Specifications

- ❖ The product **must** contain a minimum of 80% postconsumer recycled rubber.
- ❖ All Bidders **must** specify the type and length of warranty for each product being bid.

Desirable Specifications

- ❖ It is **desirable** that Bidders offer a variety of standard colors, textures and other product features.
- ❖ It is **desirable** that Bidders offer pavers that are water-permeable.

General Contract Specifications

All Contractors in each category **must** agree to:

- ❖ Use recycled plastic or plastic lumber elements (when required) which is free of splinters, generally smooth to the touch (unless textured), and free of significant voids, holes, structural and aesthetic defects.
- ❖ Provide products which meet all specified minimum recycled content requirements; recycled content shall be based on the dry weight of the raw materials, exclusive of any additives such as adhesives, binders, coloring agents, or UV inhibitors.

It is **desirable** that:

- ❖ Bidders offer recycling options to collect damaged or out-of-date products and recycle them into new product.
- ❖ Bidders offer decals, plaques, plates, or other types of products that can be affixed to or imprinted on products sold by the Bidder which identifies products as containing recycled plastic and other relevant information. There will be no markup on decals, plaques or other such types of products whenever they are offered.
- ❖ Bidders offer additional products with recycled content in appropriate categories which may not be listed as part of this Request for Response (RFR). Such products will be reviewed by the Procurement Management Team (PMT) and accepted based on whether products meet the criteria established by the PMT; to receive contract award for additional products, Bidders must use Response Form A to submit information on the recycled content, source materials, performance standards and other relevant data as may be required by the PMT.

General Definitions

Postconsumer content, as used in this RFR, means materials in a recycled product which are derived from businesses or consumers after having served their intended uses, and which have been separated or diverted from solid waste for the purpose of collection, recycling and disposition.

Post-industrial materials/content refers to materials generated by manufacturers or product converters, such as trimmings, overruns, and obsolete products that are incorporated back into the manufacturing process of the same or a different product.

Recyclability is the ability of a product or material to be recovered from or otherwise diverted from the solid waste stream for the purpose of recycling.

Recovered materials are those materials recovered from either industrial or consumer waste streams, including post-industrial, pre-consumer, and postconsumer content.

Virgin products are those made with 100% new/raw materials and contain no recycled content.

Case Study

City of Pleasanton - Recycled Materials in Park Construction

In 1995, the Parks and Recreation Commission for the City of Pleasanton suggested that staff investigate the possibility of using recycled materials for the various aspects and components of park construction. The first of the new parks to utilize recycled materials was Valley Trails Park. This six-acre neighborhood park was first constructed in 1971, and was completely re-built in 1996 - the park designer essentially treated the park property as "raw land."

The original asphalt-concrete pathways were recycled and 'ground in-place' to create a suitable base for the new concrete pathways. Site furnishings were selected that utilized plastic made from recycled milk jugs as slats for benches. These and other recycled solutions were employed to create a new park - from old materials. The finished park was very well received by the public, and to date, all of the recycled materials have exceeded expectations. The City has continued to upgrade other parks in the same vein.

For more information, contact Michael Fulford, City Landscape Architect at (925) 931-5672.

Focus on Surfacing

A wide variety of athletic, recreational and playground surfaces are made from recycled plastic or rubber. "Poured-in-Place" surfacing can be made from up to 100% recycled tires.

Poured-in-Place systems:

- ❖ Create a softer play environment than pea gravel
- ❖ Unlike wood chips, will not rot or attract insects
- ❖ Are slip and water-resistant and accessible by wheelchairs and crutches
- ❖ Withstand damage from ice skates, cleats, golf spikes, and heavy traffic



The California School for the Blind in Fremont, California replaced the tan bark in three of the schools' playgrounds with poured-in-place rubberized surfacing material. According to Mike Wooten, Supervisor of Building Trades, California Department of Education, it was a good decision.

"Oh, it's great to see. It's 100% better than tan bark or sand. The material is so spongy and nice. My only complaint is that it's so expensive. However, it prevents infectious control issues associated with open playgrounds and I even have drains underneath for water runoff. I like it so much I am putting in a few more of these!"

Rubber surfacing products may have color integrated into the rubber as flecks or binding matrix, or the color may be incorporated into a thick wear layer. Colors can be mixed and varied to complement other equipment or incorporate colors, logos or shapes from the surrounding setting.

King County, Washington – Synthetic Turf Fields

The Facilities Management Division, in conjunction with the Parks and Recreation Division, installed four synthetic-turf soccer fields at Marymoor Park in 2007. The installation included recycled rubber mixed with sand, which provides traction for the playing surface. This is the same product that is used at Qwest Field and Husky Stadium in Seattle. This turf requires less maintenance, as they require grooming only once per month with leaf-blowers, and eliminates the need to use water and chemicals.

King County and others are finding that the synthetic turf fields are superior to grass or sand fields because they can be used for various sports, are less expensive to maintain and can be used year-round. It is more expensive to purchase and install these fields, but they last longer and require less maintenance.

(King County Environmental Purchasing 2007 Annual Report)

A sampling of *recycled playground safety surfacing material* products, purchasing information and local applications are listed in Table 3 in Appendix A. For safety in playground surfacing, you may want to specify that the product meets ASTM F-1292, the industry's standard test for evaluating shock absorption developed by the American Society for Testing Materials (ASTM). ASTM F-1951-99 is the Determination of Playground Surface Accessibility in addition to the requirements of the Americans with Disabilities Act.

Park Furnishings and Outdoor Containers

Performance and Durability



“Park benches made with plastic lumber work great for us. We haven’t had any problems in the last two or three-year period. It holds up well, whereas our wooden benches need on-going maintenance.”

Supervisor, Area Maintenance and Plumbing,
City of Oakland



Examples of product lines for *park furnishings made with recycled plastic* are listed in Table 1 in Appendix A.

Containers for trash or recyclables are also a common purchasing need. Table 1 also lists a sampling of product and purchasing information for *outdoor containers made with recycled content*.

Product information is supplied by the manufacturers and is not verified. Exercise sound judgment and research products for your specific application.

Salvaged and Recycled Content Materials in the Landscape

Bay-Friendly Landscaping Guide to Recycled Content and Salvaged Materials This Guide from StopWaste.Org shows how to add value, reduce greenhouse gas emissions and create attractive landscapes using salvaged and recycled content materials. Examples and how-to’s are offered as well as resources for where to find (& send) salvaged materials. Suggestions include:

- ❖ Salvaged bricks for patios, walkways and edging
- ❖ Broken concrete for constructing benches, garden walls and raised beds
- ❖ Salvaged windows and doors to make cold frames, greenhouses and outdoor rooms
- ❖ Recycled glass pavers and tiles
- ❖ Mulch and compost from local plant debris, food scraps and wood chips
- ❖ Recycled plastic and composite lumber for decking, railings and raised beds
- ❖ Recycled plastic products like edging, garden and soaker hoses, and lawn and patio furniture

[Download as a PDF](http://www.stopwaste.org/docs/salvaged.pdf) from www.stopwaste.org/docs/salvaged.pdf

More Product and Source Information

- ❖ “*Pointers on Using Recycled-content Plastic Lumber*,” StopWaste.Org, Green Building Program. Quick and easy information about why and where you should use plastic lumber. Visit www.BuildGreenNow.org and look under Publications.
- ❖ “*Green Product Directory*,” Build It Green. Search the Directory to conveniently locate suppliers of recycled content plastic and composite lumber products within the 9-County San Francisco Bay Area. (www.builditgreen.org/green-product-directory/)
- ❖ *Recycled-Content Product (RCP) Database*, CalRecycle. Access to information on RCPs and the manufacturers, distributors, reprocessors, mills, and converters that manufacture or supply these products or the recycled materials to make them. (www.calrecycle.ca.gov/BuyRecycled/)
- ❖ *US EPA Environmentally Preferable Purchasing Database*, including contract language and specifications, environmental standards and guidelines, lists of vendors and product brands, and other useful sources of information. (www.epa.gov/opptintr/epp)
- ❖ Find waste reduction information, tools and resources for landscaping at StopWaste.Org, including the *Bay-Friendly Landscape Guidelines: Sustainable Practices for the Landscape Professional* and the *Bay-Friendly Landscaping Guide to Recycled Content and Salvaged Materials* (www.bayfriendly.org)
- ❖ *EPA’s Comprehensive Procurement Guideline* program helps agencies and businesses “close the loop” by buying recycled products. EPA published a series of fact sheets for buying industry specific products, including one for Park & Recreation Products. (www.epa.gov/cpg/factshts.htm)

Additional Resources

There are many resources available to help identify products and their performance, see sample bids and specifications, and read case studies of successful programs.

- ❖ **StopWaste.Org** offers technical assistance and grant funding for applicable recycled content product purchasing. See www.StopWaste.Org/EPP for an annotated list of resources and links to other environmental purchasing websites and documents.
- ❖ Alameda County businesses can contact **Rachel Balsley** at rbalsley@stopwaste.org for information about the StopWaste Partnership for technical assistance and funding. *See also* www.StopWaste.Org/partnership/

- ❖ Local governments in Alameda County can contact **Debra Kaufman** dkaufman@stopwaste.org or **Rachel Balsley** at rbalsley@stopwaste.org for information about environmental purchasing technical and financial assistance.
- ❖ Contact the **Alameda County Recycling Hotline**, toll-free at **1-877-STOPWASTE (786-7927)** for information about recycling and waste prevention opportunities in Alameda County.

Disclaimer

The information provided in this Fact Sheet should be considered by public agency and business purchasers who are interested in buying environmentally preferable products. It is provided as a public service by StopWaste.Org in an attempt to provide environmental benefits and reduce costs. The information on products listed is supplied by the manufacturers. Listing in this Fact Sheet is not a recommendation or an endorsement. This Fact Sheet is not a substitute for the exercise of sound judgment in particular circumstances and is not intended as recommendations for particular products or processes. StopWaste.Org is the Alameda County Waste Management Authority and the Alameda County Source Reduction and Recycling Board operating as one public agency.

This Fact Sheet was last updated in December 2010 by Kies Strategies and Tabor Consulting Group, on behalf of StopWaste.Org.

Appendix A: Table I

Sample Suppliers of Park Furnishings Made With Recycled Plastic

Updated In December 2010

Product information is supplied by the manufacturers and is not verified. Exercise sound judgment and research products for your specific application.

Company/Address/Phone/Website	Outdoor Furniture	Paving	Playground Structures	Racks	Receptacles	Signs	Other Products
American Plastic Lumber P.O. Box 514 Shingle Springs CA 95682 877 677-7701 www.american-plasticlumber.com	Benches, Tables, Chairs	No	No	No	Trash, Planters	YES	Plastic Lumber
Barco Products Batavia, IL 800-338-2697 www.buybarco.com	Tables, Benches, Chairs	Speed Bumps, Parking Stops	No	Bike Racks	Planters, Trash Recycling	No	Landscape Timbers
Bright Idea Shop 1500 Firestone Parkway Suite D Akron, OH 44301 800-886-8990 (EST) www.brightideashops.com	Benches, Tables, Seating	Parking Stops, Speed Bumps	YES (train, trucks, pirate ship)	Bike Racks	Trash, Recycling, Planters	YES	Spa Accessories
Columbia Cascade Timber Co. Portland, OR 800-547-1940 Ext. 850 www.timberform.com	Tables, Benches, Chairs	No	YES (Replay)	Bike Racks	Trash, Recycling Ash Urns	YES	Plastic Lumber, Fitness Course Equipment
DuMor Site Furnishings Distributor: Ross Recreation Equipment 100 Brush Creek Rd. Suite #206 Santa Rosa, CA 95404 707-538-3800 www.dumor.com	Benches, Tables	No	No	No	Trash, Recycling, Planters, Ash Urns	No	
Epic Plastics 104 E. Turner Rd. Lodi, CA 95420 209-333-6161 www.epicplastics.com	No	No	No	No	No	No	Plastic Lumber, Landscape Edging
Fibrex Group 800-346-4458 www.buyrecycledproducts.com	Benches, Tables	No	YES	YES	Recycling, Planters	No	
Landscape Forms Distributor: Rebecca Casey Berkeley, CA 800-430-6206 www.landscapeforms.com	Benches, Tables, Seating	No	No	No	Trash, Planters, Ash Urns, Recycling	No	
Litchfield Industries Inc. Earthcare Series Distributor: DCS & Associates Covina, CA 800-221-3992 www.litchfieldindustries.com	Benches, Tables	Parking Stops, Speed Bumps	No	Bike Racks	Trash, Recycling	No	Landscaping Bollards

Company/Address/Phone/Website	Outdoor Furniture	Paving	Playground Structures	Racks	Receptacles	Signs	Other Products
R.J. Thomas Mfg. Co., Inc. Pilot Rock Park Equipment P.O. Box 946 Cherokee, Iowa 51012-0946 800-762-5002 www.pilotrock.com	Benches, Tables	Parking Stops, Speed Bumps	No	Bike Blocks	Trash, Recycling, Planters	No	Plastic Lumber
Victor Stanley, Inc. 800-368-2573 Distributor: M.J.B. Corporation Grass Valley, CA 530-272-8005 www.victorstanley.com	Benches, Tables	No	No	No	Recycling, Trash, Ash Urns	No	

Table 2
Recycled Content of Plastic Parts in Playground Equipment by Manufacturer

Updated December 2010

The chart below provides the percentage of postconsumer recycled content in plastic components of various playground systems. Steel, concrete and aluminum items are excluded from the list, as they are commonly recycled commodities. Where metal is used in playground systems, most manufacturers certify using recycled metal in their systems.

This chart separates the two types of recycled plastics used in play structures.

Extruded plastic, such as the plastic lumber used in slat roofs or decks, is a high-density polyethylene (HDPE), commonly made with recycled content (from milk jugs, for example).

Rotationally molded plastic (or rotomolded plastics), such as in slides and tubes, is a polyethylene terephthalate (PET). Many manufacturers do not offer parts with postconsumer recycled content.

Percentage of Postconsumer Recycled Plastic by Manufacturer

MANUFACTURER	EXTRUDED PLASTIC PARTS					ROTOMOLDED PLASTIC PARTS		
	Plastic Roofs	Plastic Landings, Decks	Plastic Posts, Uprights	Plastic Walls, Panels	Plastic Bridges	Plastic Roofs	Plastic Slides	Plastic Walls, Panels
Columbia Cascade Company www.timberform.com 800-547-1940	80%	Available Upon request	NA	NA	NA	0%	0%	0%
Game Time www.gametime.com 800-235-2440	100%	100%	NA	NA	NA	0%	0%	0%
Landscap Structures www.playlsi.com 707-538-3800	97%	97%	NA	97%	NA	0%	0%	0%
Little Tikes www.littletikescommercial.com 800-788-8855	NA	NA	NA	NA	NA	0%	0%	0%
Miracle Recreation www.miracle-recreation.com 800-879-7730	70%	70%	NA	70%	NA	0%	50%	70%
Play Mart www.playmart.com 800-437-5297	95%	95%	95%	NA	95%	NA	NA	NA
Playworld Systems www.playworldsystems.com 800-233-8404	NA	NA	NA	NA	NA	0%	0%	0%
Progressive Design www.pdplay.com 760-597-5990	100%	100%	100%	100%	100%	NA	0%	NA

Table 3.
Sample Sources for Recycled Rubber Playground Safety Surfacing

Updated December 2010

Product information is supplied by the manufacturers and is not verified. Exercise sound judgment and research products for your specific application.

Safety Surfacing Manufacturer	Product	Type	Recycled Material	Distributors	Play Equipment Distributed	Local Applications
Dinoflex Manufacturing 877-713-1899 www.dinoflex.com	Playground Tiles	Tiles	Tire rubber	First Service, Petaluma 800-227-1742 Contact: Tom Helms		Woodstock Park, McKinley Park, and Little John Park, Alameda; Jewish Community Center, Berkeley
Environmental Molding Concepts Moreno Valley, CA 888-836-2665 www.emcmolding.com	EMC Tiles	Tiles	Tire rubber	Gametime Norcal, 415-899-9090 Contact: Elizabeth Sack	Game Time	Stonehurst Elementary, Oakland
	Kid Krete	Poured-in-place				
NO FAULT Sport Group Baton Rouge, LA 866-NFSPORT www.nofault.com	Playground 2x2 tiles	Tiles	100% Postconsumer Tire rubber	No Fault Sport Group 866-NFSPORT		Child Family Community Service, Hayward; Pac Bell Park Playground, San Francisco; Siebel Systems, Emeryville
	No Fault Safety Surface	Poured-in-place	75% Postconsumer Tire rubber			
	Bonded Mulch	Poured-in-place	100% Postconsumer Tire rubber			
Progressive Design 760-597-5990 www.pdplay.com	PD Playpad	Poured-in-place	Tire rubber	Progressive Design 760-597-5990 Contact: Mark Baker	Progressive Design Outdoor, Learning Environments	Golden State Park, St. John's Church, Alameda
Robertson Industries Phoenix, AZ 800-858-0519 www.totturf.com	TotTurf	Poured-in-place	Tire rubber	Gametime Norcal, 415-899-9090 Contact:	Game Time	Kids Kingdom Preschool/First Baptist Church, Castro Valley; School for the Blind, Fremont; Child Development Center, Oakland; St. Beedes School, Hayward; Nicole Park, Oakland
				Community Playgrounds, 415-892-1707 Contact: Kurt Wear	Various playground equipment products	Oakland Unified School District, Berkeley Unified School District, Oakland Park and Recreation, Alameda Park and Recreation
				TotTurf by Robertson Industries Contact: Alex Tsitovich 510-381-8294		Berkeley Campus Montessori, Berkeley; Albany Children's Center, Albany; Alameda Headstart, Alameda; Oceanview Park, Albany; Krusi Park, Alameda

Safety Surfacing Manufacturer	Product	Type	Recycled Material	Distributors	Play Equipment Distributed	Local Applications
Spectra Turf Corona, CA 800-875-5788 www.spectraturf.com	SpectraPour SpectraBound	Poured-in-place, tiles	Tire rubber	Miracle Play Systems, Inc., 800-879-7730, Contact: Kit Stevea	Miracle Recreation Equipment	Orloff Park, Pleasanton
Surface America 800-999-0555 www.surfam.com	PlayBound Tiles and Poured-in-Place	Poured-in-place, tiles	Tire rubber	Ross Recreation Equipment, 707-538-3800 Contact: Cheri Yokoi	Landscape Structures	Norris Canyon Estate Park, San Ramon (tile); Step One School, Berkeley; Patterson Elementary School, Fremont; 85th Head Start, Oakland
West Coast Rubber Recycling 831-634-2800 www.groundrubbersolutions.com	GroundRubber Play	Loose fill, Ground rubber, Nuggets	Tire rubber	Factory direct Contact: Cameron Wright 831-634-2800		St. Teresa School, Oakland