



# Recycling Steering Committee

Modernizing Oregon's recycling system with support from Oregon Consensus

## Materials Definitions, 7/12/19

The following definitions are intended for reference use only when describing materials for collection and processing research and do not define any statement of work for infrastructure research conducted by Cascadia Consulting and DEQ contract 057-19.

### GLASS

**Container Glass** means any color glass bottle or jar used to package food, beverages and other consumable liquids. Includes bottles that are returned by consumers to be washed and refilled. Includes bottles and jars for:

- Food
- Beer
- Liquor
- Wine
- Juice
- Soft drinks
- Medicine

### METAL (FERROUS AND NON-FERROUS)

**Aluminum** means aluminum beverage cans and food containers, aerosol and other non-food cans, aluminum foil, pans and trays, and scrap aluminum such as lawn furniture and screen doors.

**Metal Containers** means tin, steel and aluminum cans or containers used to contain products such as beverages, food or aerosolized products.

**Scrap Metal** is the combination of ferrous and non-ferrous waste metal, metallic material and any product that contains metal that is capable of being recycled from previous consumption or product manufacturing. For curbside collection programs, scrap metal typically cannot be longer than 30 inches and must weigh less than 30 pounds. Scrap metal can include aluminum pie pans, trays, and foil. For some depots it may include bulky materials such as appliances (e.g., discarded stoves, washers, dryers, refrigerators, and other large household appliances or “white goods”)

**Tinned Cans** means steel food and beverage cans with a tin coating and may include other coatings.

## **PAPER**

**Aseptic Packaging** means shelf-stable packaging made up of five layers of separable material: Outer Polyethylene coating (liquid barrier), paperboard (for stability), middle Polyethylene coating, aluminum (for light, odor and oxygen protection) and inner Polyethylene coating (liquid barrier). Roughly 74% paper, 22% Polyethylene and 4% aluminum, aseptic packaging is typically used with juice, milks, soups and broths and wine.

**Coated Freesheet Papers** means a paper made in a process that removes lignins that is a high gloss, high quality papers often used for high-end brochures, some magazines, and similar uses.

**Coated Mechanical Papers** means mechanical paper and coated with a material to have smooth surface and used for some magazines, catalogs and coupons.

**Containerboard** means the versatile, lightweight, strong material used to make corrugated boxes. Containerboard can be made from pulp made from virgin fiber (i.e., wood chips) or from recovered paper.

**Corrugated Boxes** means boxes made of three or more layers (unwaxed) of unbleached Kraft paper.

**Waxed Corrugated Boxes** means boxes made of three or more layers that has been layered/impregnated with a wax substance, which prevents the boxes from taking on moisture. Waxed boxes are commonly used for transporting of fresh produce (waxed).

**Corrugated Cardboard and Kraft Paper** means kraft linerboard and container-board cartons of corrugated paper (waxed or unwaxed) and kraft paper bags.\*

**Envelope Paper** means any uncoated printing-writing paper used in the manufacture of envelopes. Desirable properties include smooth fold, strength at crease, good printability, and lack of tendency to curl. Envelope paper can be made of brown kraft paper, white kraft paper or woven.

**Gable-Top Carton** means a refrigerated carton product made of three separable layers: An inner and outer layer of Polyethylene with a layer of paperboard sandwiched in between. Roughly 80% paper and 20% Polyethylene, gable-top cartons are typically used with milks, juices, creams and egg substitute products.

**High-Grade Paper/Office Pack** means computer printout, ledger-grade printing and writing paper, and other bleached papers that can be de-inked and that are relatively free of ground wood and coatings. Includes office paper programs such as Sorted Office Pack.\*

**Kraft Paper** means a paper made essentially from wood pulp produced by a modified sulfate pulping process. It is a comparatively coarse paper particularly noted for its strength, and in unbleached grades is primarily used as a wrapper or packaging material.

**Kraft Bag Paper** means a paper bag made of sulfate pulp that normally has a greater bulk and a rougher surface than usual kraft wrapping paper.

**Mechanical Paper** means papers made from substantial proportions of ground wood pulp, has lignins, and used for printing or converting.

**Mixed Paper** means a mixture of papers such as unsorted junk mail, telephone directories, and low-valued grades of paper not listed above, such as chipboard and other folding boxboard, molded paper containers, envelopes with plastic windows or pressure-sensitive labels, and paper with thin plastic coatings.\*

**Newsprint** means a lightweight paper, made mainly from mechanical wood pulp, engineered to be bright and opaque for the good print contrast needed by newspapers. Newsprint also contains special tensile strength for repeated folding. It does not include printing papers of types generally used for purposes other than newspapers such as mechanical printing papers for catalogs, directories, etc.

**Packaging Papers** means papers used to wrap or package consumer and industrial products such as grocer's bags and sacks, shopping and merchandise bags, and multiwall shipping sacks used for shipping such products as cement, flour, sugar, chemicals and animal food. "Specialty" packaging papers are used for cookies, potato chips, ice cream, and similar products. May be made of various non-paper materials such as a metallic or plastic coating.

**Paperboard** means paper products that are heavier in basis weight, thicker, and more rigid than paper. Versions of paperboard include:

- **Bleached Board/Bleached Paperboard** means any board composed of 100% bleached fiber, such as milk and juice cartons, drink boxes, cosmetic boxes, and many frozen food boxes.
- **Bleached Packaging Paperboard** means paperboard made from approximately 85 percent virgin bleached chemical pulp.
- **Boxboard** means paperboard used for fabricating boxes that may be made of wood pulp or paper stocks or any combinations of these and may be plain, lined, or clay-coated.
- **Clay-Coated Boxboard** means paperboard that has been clay-coated on one or both sides to create whiteness or smoothness.
- **Folding Boxboard** means paperboard suitable for making folding cartons or other products such as clay-coated boxboard, white patent coated news, manila lined news, and fourdrinier bleached kraft board.
- **Linerboard** means paperboard used as the facing material in the production of corrugated and solid fiber shipping containers.
- **Medium** means paperboard grade used to form the inner layer of corrugated board that can be made of recycled material or wood pulp.

- **Recycled Paperboard** means paperboard manufactured using 100% recovered paper. Products include linerboard and corrugating medium; folding boxboard (both clay-coated and uncoated) used for packaging food products, laundry detergent, among other similar products.
- **Solid Bleached Kraft** means paperboard used primarily in clay-coated folding boxes for such products as frozen foods, butter, ice cream, and cosmetics, as well as in cartons for milk, juice and other moist, liquid and oily foods. Additional uses include plates, dishes, trays, and cups.
- **Unbleached Kraft** means the primary grade here is linerboard, used as facing material for corrugated boxes. Unbleached kraft folding boxboard is usually clay-coated.
- **Wet Machine Board (aka Fiberboard)** means a very thick paperboard, used for bookbinders, shoeboard, automotive board, chair seat backing, coaster board, and the like.

**Printing-Writing Paper** means any paper suitable for printing, such as book paper, writing paper, envelopes, etc. This category is made of Uncoated Freesheet Paper, Coated Freesheet Paper, Coated Mechanical Paper, and Uncoated Mechanical Paper.

**Other Polycoated Containers** means paper containers made from polyethylene-coated bleached paper. Includes hot and cold drink cups.

**Uncoated Free Sheet Paper** means papers in a process that removes lignins, commonly used for office reprographics (copy paper), books, paper and business form paper.

**Uncoated Mechanical Papers** means paper from groundwood often used for newspaper and flyer inserts, financial publications, directories, and paperback books.

## PLASTICS

**HDPE Natural Bottle** means any blow-molded, high-density polyethylene bottle containing the ASTM D7611 “#2, HDPE” resin identification code that is unpigmented and has a neck or mouth that is smaller than the base.

**HDPE Colored Bottle and Jars** means any whole, blow-molded, high-density polyethylene bottle or jar containing the ASTM D7611 “#2, HDPE” resin identification code that is pigmented and opaque.

**Mixed Bulky Rigid Plastic** means any large rigid #5 PP and/or #2 HDPE plastic bulky items. Examples include:

- Buckets up to five gallons in size
- Baskets
- Crates

- Pallets
- Pipes
- Lawn furniture
- Large plastic toys
- Totes

**PET Bottle and Jars** means any PET blow-molded bottle or jar with a screw-neck top that contains the ASTM D7611 “#1, PET or PETE” resin identification code.

**PET Thermoform** means any PET package labeled with the ASTM D7611 “#1, PET or PETE” resin identification code, not including bottles and jars, but including and not limited to:

- Egg cartons
- Baskets
- Clamshell containers
- Cups
- Lids
- Cake domes
- Covers
- Blister pack without paperboard backing
- Tubs
- Deli containers
- Trays
- Folded PET sheet containers

**PE Film** means polyethylene plastic bags and wrap, and other thin film plastic commonly marked HDPE #2 or LDPE #4. Examples include carry out bags, bread bags, tissue overwrap, air pillows, plastic only shipping envelopes, and pallet wrap.

**Plastic Pouches** means flexible containers, many of which are stand up pouches, for food and non-food products. Focus is on those replacing other packaging types, such as rigid plastic packaging. Layers may be multi-resin and multi-material. The material is highly varied with polyethylene, EVOH, PP, PET, nylon, and metals.

**PP Bottle** means a bottle with a #5 PP resin code has a neck or mouth that is smaller than the base.

**PP Tubs** means a container, with a #5 PP resin code, that has a neck or mouth similar in size to its base such as:

- Ice cream tubs
- Margarine tubs
- Tofu tubs
- Yogurt cups

**PP Rigid Plastics** means container or product, with a #5 PP resin code, such as:

- Cold drink cups
- Dishwasher safe storage containers
- Flip-type lids
- Prescription bottles
- Microwavable trays
- Screw-type caps

**Polystyrene Foam** means a polystyrene container or product injected with gas. Examples may include:

- Foam protective packaging
- Foam deli and takeout containers and clamshells
- Foam drink cups and other food service items

**Solid Polystyrene** means any non-foam container or product, that may have a #6 PS resin code. Examples include:

- Yogurt cups and tubs
- Red party cups
- CD “jewel” cases
- Disposable coffee lids
- clamshell containers

**HDPE Tubs** means a whole container, with a #2 HDPE, resin code that has a neck or mouth similar in size to its base. Examples include:

- Margarine tubs

- Ice cream tubs
- Yogurt cups

**LDPE Tubs** means a container, with a #4 LDPE resin code, that has a neck or mouth similar in size to its base. Examples include:

- Margarine tubs
- Ice cream tubs
- Yogurt cups

\* As defined in DEQ's 2016-2017 [\*Oregon Solid Waste Characterization and Composition Study\*](#).