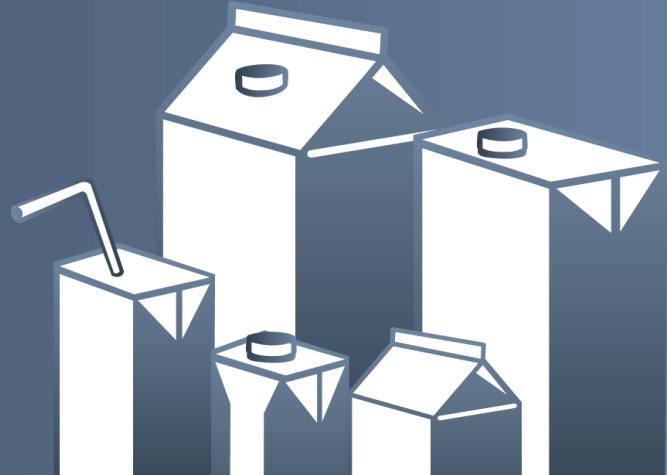


Opportunities for Carton Recycling September 2018



Cartons are Recyclable

- Carton recycling is a standard practice globally
- Cartons have been recycled in the U.S. for more than two decades
- Good domestic and export demand for Grade 52



Current Status of Carton Recycling in U.S.

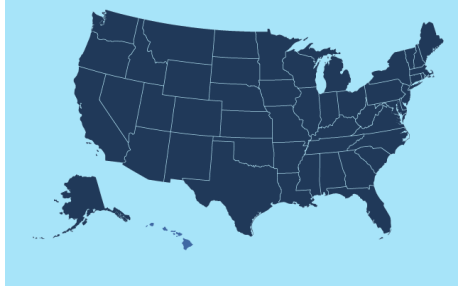
62.7% HOUSEHOLD ACCESS



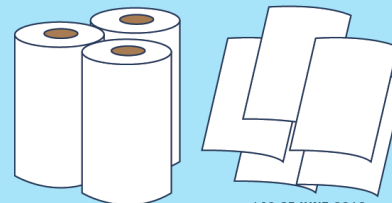
13,399 COMMUNITIES WITH ACCESS



49 STATES



STRONG CARTON RECYCLERS IN NORTH AMERICA



*AS OF JUNE 2018

Over 60% Access = Mainstream

1. Food and beverage carton recycling is now recognized as **mainstream**
2. The standard recycling logo can be used on all food and beverage cartons (according to the FTC Green Guidelines)
3. A broad, national call to action can be communicated



RECYCLECARTONS.COM

Cartons are Recyclable

Recognized by ISRI:
World's Leading
Recycling Markets
Organization in latest
advisory (Wastecon)

**– A GUIDE TO –
A BETTER BIN**
RECOMMENDED PRACTICES BY THE RECYCLING INDUSTRY

ACCEPTABLE/PREFERRED*

- Corrugated Cardboard**
(Waxy outer layer, ~~no wax paper~~)
- Boxboard**
(Dry-food boxes, egg cartons, & rolls, ~~NO wax paper~~)
- Junk Mail, Periodicals, & Office Paper**
(Envelopes, catalogs, & soft cover books, ~~NO wax or shredded paper~~)
- Food & Beverage Cartons**
(Aseptics such as milk, juice, and broth cartons)
- Rigid Plastic Bottles & Containers**
(#1, #2, & #5 plastics)
- Metal & Food Cans**
(Aluminum, tin, & foil)
- Glass Bottles & Jars**
(Food & beverage bottles & jars)

PROHIBITED

- BATTERIES OF ANY KIND**
DON'T BELONG
- TANGLES**
DON'T BELONG
- PLASTIC BAGS**
DON'T BELONG
- BAGGED RECYCLABLES**
DON'T BELONG
- CLOTHING/TEXTILES**
DON'T BELONG
- FOOD WASTE/ LIQUIDS**
DON'T BELONG
- SCRAP METAL ITEMS**
DON'T BELONG
- ELECTRONIC WASTE ITEMS**
DON'T BELONG
- NO Medical Waste**
(Rubber gloves, sharps, pills, etc.)
- NO Hazardous Materials or Explosives**
(Find safe and secure disposal near you)
- NO Toys, Hangers, or Shoes**
(Donate gently used items)
- NO Coated Paper Items**
(Items with a plastic lining such as waxed coffee or soda cups, & waxed paper plates)
- NO Plastic Wrap, Films, or Tarps**
(Food bags or wrappers, plastic wrap, shrink wrap, or tarps)
- NO Wood, Waste, or Tires**
(Wood, chips, human/pet or yard waste, or rubber)
- NO Disposable Items**
(Styrofoam™, napkins, paper towels, tissues, plastic utensils, dirty recycling, regular tops, condiment packets, straws, stirrers, & coffee pods)
- NO Ceramics or Baking Glass**
(Donate gently used items)

ISRI
Voice of the Recycling Industry™

For more information on what makes a Better Bin, visit ABetterBin.org

*Source: ISRI's guidelines for inbound recyclables for Materials Recovery Facilities. Artwork provided courtesy of Cassella Waste Systems, Inc.

Myth: China, Mixed Paper and Cartons



cartonopportunities.org

Facts

- China has never been a home for US Post Consumer Aseptic and Gable top Cartons
- Carton Council has always advocated for the sorting of Grade 52 because of overall value
- PC Carton bales are worth more than mixed paper bales

Best Way to Ensure Cartons are Recycled

Cartons (Grade #52):

- Carton pricing generally follows Sorted Office Paper (SOP) pricing – varies by location of source, fiber mix, etc.
- Good domestic and export demand for sorted cartons
- Export pricing varies based on shipping container weights and locations



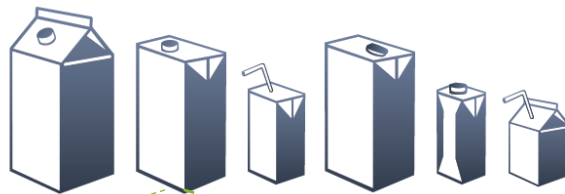
Regional Sorters of Grade 52

- Waste Management/Deffenbaugh – Overland Park, KS
- Republic – St Louis, MO
- Midwest Shredding – Kansas City, KS
- Waste Management – Little Rock, AR
- Hamm – Lawrence, KS

Demand for Post Consumer Cartons, Grade 52

A variety of different uses for cartons

With 100% virgin fiber,
cartons contain some of
the best fiber in the
stream



Fiber -
Pulp



Poly/Al Mix -
Pulp
Byproduct



Whole Cartons



recycled
carton pulp

Tissue and Paper Products



Plastic Products



Building Products

Existing Recycling Infrastructure for Grade 52

Fox River Fiber-De Pere, WI: 500 TPM capacity for Grade 52

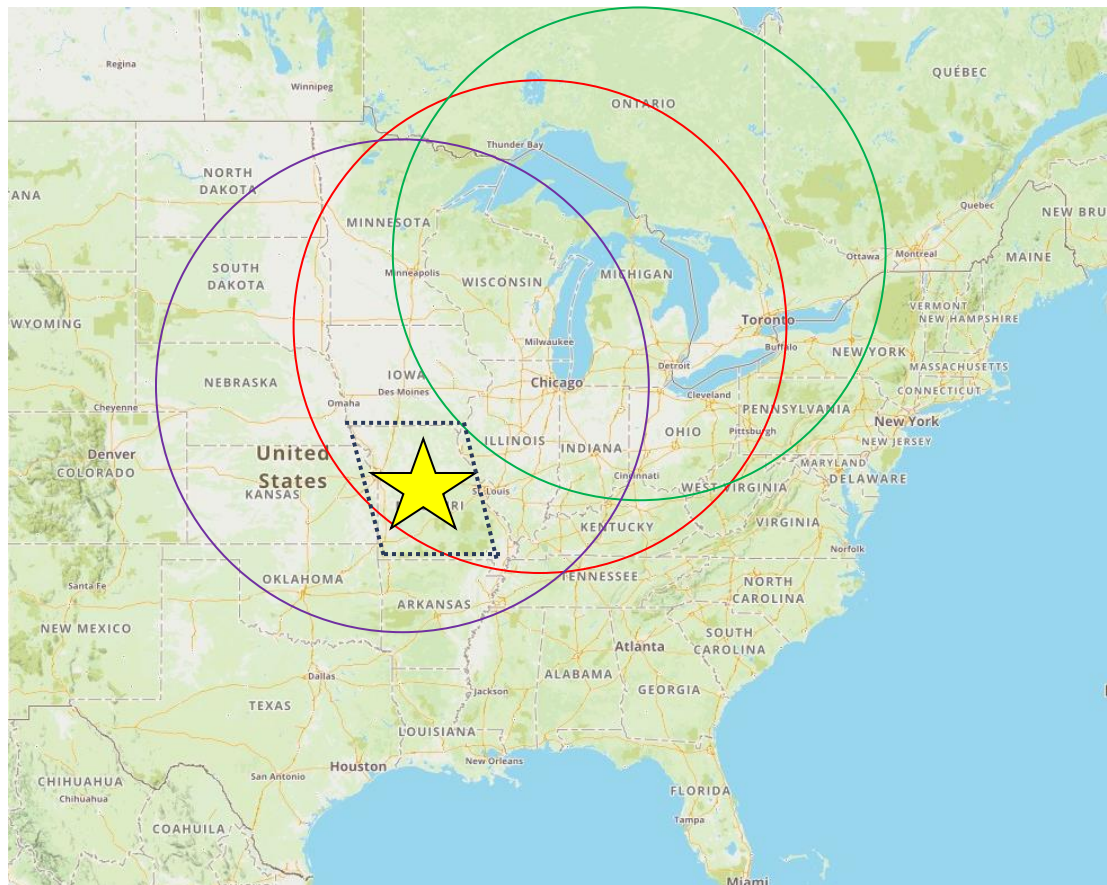
CMR/Rewall, Des Moines, IA: 600 TPM capacity for Grade 52

Great Lakes Tissue-Cheboygan, MI: 800 TPM capacity for Grade 52

KC Mexico (Ecatepec & Bajio Mill): 500-1000 TPM Capacity for Grade 52. KC Mexico's purchasing capabilities are throughout the US. They import loads via sea container, railcar and truck.

Additional recyclers in Malaysia, Thailand, Japan and South Korea

****Circles show 650 mile radius of coverage**



New and Expanding End Markets for Grade 52

CMR/Rewall	Existing facility in Iowa. Looking to expand in US.
Ecomelida	New facility to be built in Orangeburg County, SC. Capacity of 10,000 TPM of Grade 52. Will use both fiber and poly & poly/Al residuals for finished products. Start up expected in Q2 2019.
Paper Corea	Recently installed pulping system at Gunsan, South Korea location. Capacity for North American Grade 52 is 1100 TPM. Plans to commence purchasing in Q4 of 2018.

Expected Recycling Infrastructure for Grade 52 in NA by Q3 2019



Export Opportunities to Recycle Cartons

- South Korea
- Japan
- India
- Thailand

-China is not an end market for Grade 52

The Value of Recycling Cartons

- Cartons represent some the highest-quality fiber in the stream.
- Programs that sort cartons as Grade 52 are moving materials for a competitive price
- Demand for higher quality of paper and containers in current market is a perfect opportunity to begin sorting Grade 52 out of other materials
- It's a win for your customers – they want to recycle as much as possible (CCNA research; 2015, 2017)

Let's Solve the Right Problem...Contamination

- Disruption has happened before and will happen again
- Removing cartons from your recycling list will not lead to China lifting its ban on mixed paper.
- Sorting cartons into their own grade will create a valuable and marketable commodity
- Resources and time to communicate/re-educate consumers; just as a “rising tide lifts all boats” on adding materials, it can have the opposite negative effect when removing materials