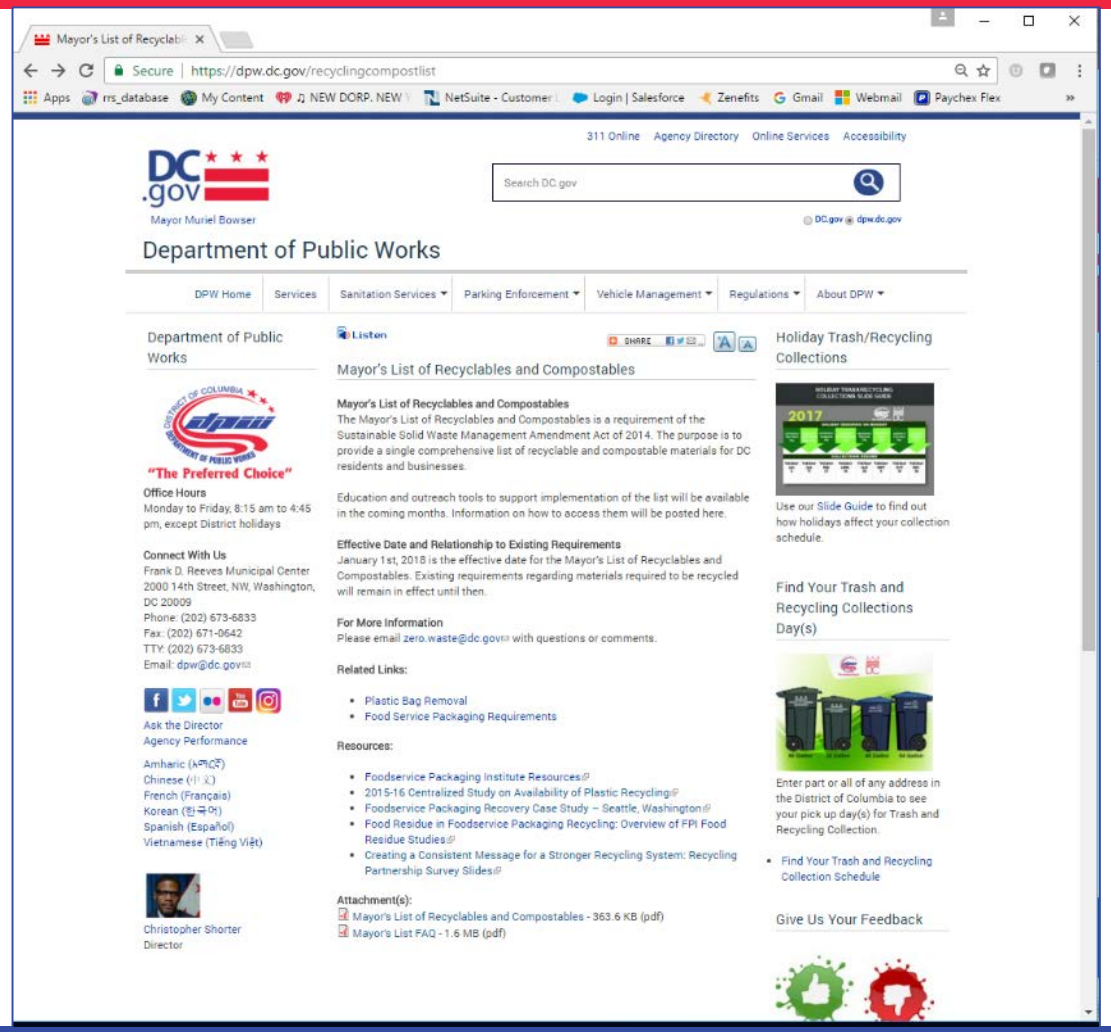
WASHINGTON D.C.: New List of Materials to be Recycled

July 20, 2017

NEW RECYCLING LIST



- A requirement of the Sustainable Solid Waste Management Amendment Act of 2014
- Provides a single comprehensive list of recyclable and compostable materials for DC residents and businesses.
- **Effective Date:** January 1st, 2018
- Existing requirements will remain in effect until then
- http://dpw.dc.gov/recyclingcompostlist/

HOW WAS THE RECYCLING LIST DEVELOPED?

1. A survey of eight regional MRFs was performed for over 70 product types.
2. MRFs were asked to indicate which materials they accept, accept but do not want, or reject.
3. Materials added to the list were accepted by the majority of MRFs in the region. Materials removed from the list were not accepted or not desired by a majority of these facilities.

FOODSERVICE PACKAGING: MAIN CHANGE IN MATERIALS REQUIRED TO BE RECYCLED

All Materials should be **clean & empty**

RESOURCES AVAILABLE NOW

https://dpw.dc.gov/recyclingcompostlist

- FAQ
- Mayor's List Fact Shee

Residences (Three or Fewer Units)	6/29/2017	12pm-1pm	Twitter Chat
General (All Other Stakeholders)	7/6/2017	2pm-3pm	Webinar
DCPS, Private, Charter Schools	7/13/2017	10am-11am	Webinar

For More Information
Please email zero.waste@dc.gov with questions or comments.

Related Links:

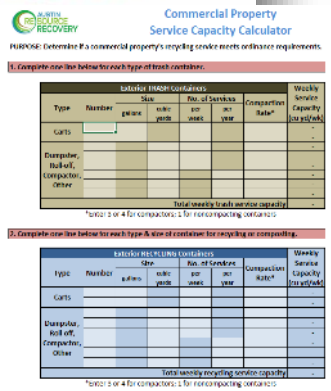
- Plastic Bag Removal
- Food Service Packaging Requirements

Resources:

- Foodservice Packaging Institute Resources
- 2015-16 Centralized Study on Availability of Plastic Recycling
- Foodservice Packaging Recovery Case Study – Seattle, Washington
- Food Residue in Foodservice Packaging Recycling: Overview of FPI Food Residue Studies

Attachment(s):
DC Recycling Fact Sheet - 1.0 MB (pdf)
Mayor's List of Recyclables and Compostables - 363.6 KB (pdf)
Mayor's List FAQ - 1.6 MB (pdf)

TOOLS & RESOURCES



TIMELINE

Dec 2016

2018 Recycling List Requirement Issued. MRFs, Haulers, Trade Associations notified

Spring 2017

-Notify District businesses

-Stakeholder Engagement

-Conduct Education & Outreach

-Develop tools & resources for businesses & residents

Fall 2017

-Continue Education & Outreach

-Publish tools and resources to transition to the new recycling List

Jan 1, 2018

-New Recycling List Effective

-All properties in the District must source separate recyclables

THANK YOU

Questions or Feedback:

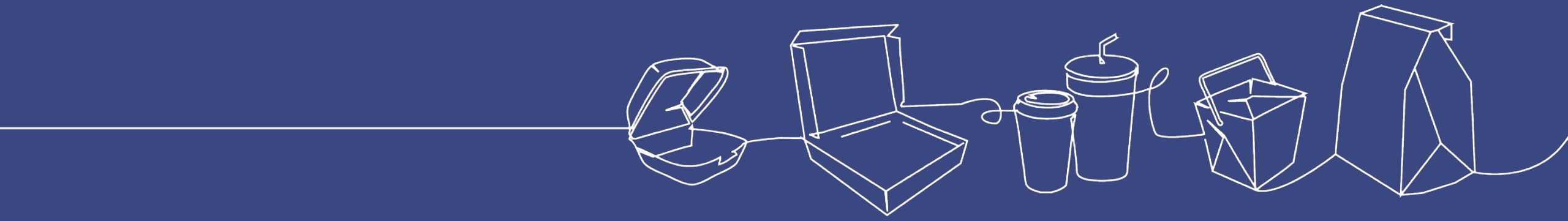
- Annie White: Annie.White4@dc.gov
  (202) 640-1218
- Helen Lee: helen.lee@dc.gov
  (202) 640-1295

- Please visit us at dpw.dc.gov/recyclingcompostlist

FOODSERVICE PACKAGING INSTITUTE®

Increasing the Recovery of Foodservice Packaging

Metropolitan Washington Council of Governments
Thursday, July 20, 2017



Foodservice Packaging Institute

- Established in 1933
- Based in Falls Church
- Only industry trade association in North America solely focused on all single-use foodservice packaging products
- Members include:
  - Converters and their raw material and machinery suppliers (represents about 85% of the industry)
  - Foodservice distributors and operators

Foodservice Packaging

Single-use foodservice ware and packaging used by foodservice establishments

Specifically, our work focuses on:

- Cups (including sleeves)
- Containers
- Boxes
- Paper bags











Recovery Goals

FPI aims to:

- Increase the recovery of foodservice packaging through recycling and composting
- Utilize a systems-based approach emphasizing strong collaboration with value chain partners to develop effective collection and recycling programs

Our Systems Approach

MRF Buy-In
Operations

MRF Buy-In
End Markets (impact, options, location)

Haulers
Community contracts, Suite of materials collected

Community Buy-In
Director of Public Works, Solid Waste Director, Solid Waste/Recycling Staff

Market Assurances
Trade Association and Oversight Organization support

End Market Buy-In
What can they handle? Volume, quality, overall impact?

Foundational Work

How Much Material is Available?
Material Generation Study

Who's Recycling FSP?
MRF Benchmarking Study

Are there End Markets for FSP?
Published End Markets Map

What are the Access Rates for FSP?
SPC Centralized Study on the Availability of Recycling (co-sponsor)

Will the Material Flow to the Right Bale?
MRF Material Flow Study (co-sponsor)

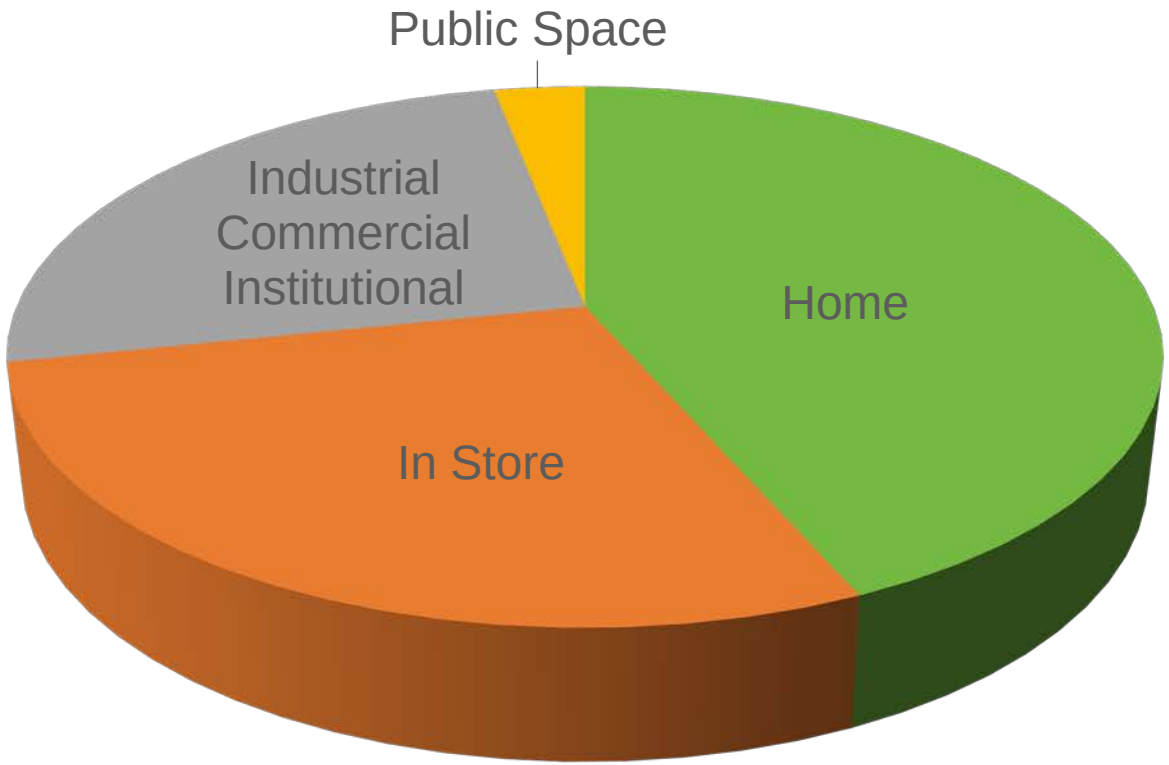
Are there End Markets for FSP?
End Market Outreach, Partnerships, & Development

2012	2013	2014	2015	2016	2017
Learned curbside had greatest volume for collection	**Is Food Residue a Problem?** • Food Residue Study (Boston) • Food Residue Study (Delaware) **How will FSP impact the bale?** Bale Impact Study		**How much FSP arises in bales?** • Mixed Paper Bale Audits (Seattle and NYC) • Rigid Plastics Bale Audit (co-sponsor)	**What Messaging is Clearest for Residents?** National Resident Messaging Study	**How to add FSP to Program Materials?** • Library of FSP Images • Flyers, ads • Best Practice FSP Language

Should MRFs, End Markets Want FSP?

- Yes!
  - Reality is that new, valuable materials are entering the recycling stream, including FSP
    - Helps public officials reach environmental goals
    - Helps with changing waste stream and increase supply for MRFs and end markets
    - Growing interest in and use of recycled materials
    - Makes good business sense

Where Can FSP be Collected?



Isn’t FSP Too Contaminated?

No!

- 2013 study in Boston: No appreciable difference in the amount of residue on FSP and food contact packaging recycled curbside (but samples were exceptionally clean)
- 2014 study in Delaware: FSP had only marginally more residue than other food contact packaging recycled curbside (but samples were exceptionally dirty)

BUT… we acknowledge that increased food contamination is an issue for all packaging

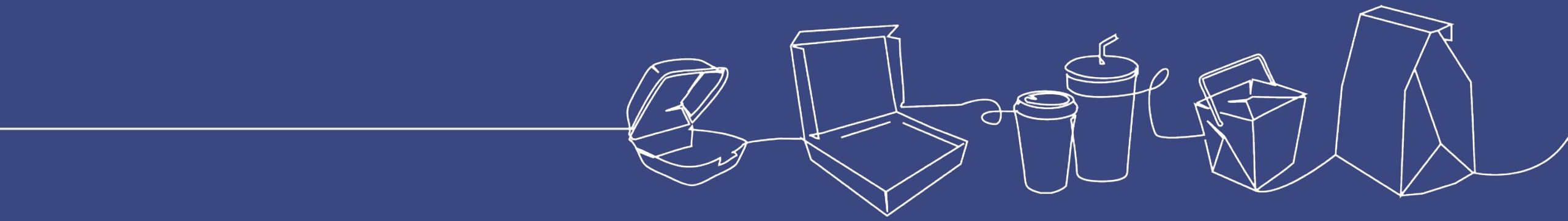
What about Paper Cups?

- Paper cups in context:
  - ~13% of all FSP (by weight)
  - ~8% of paper FSP (by weight)
  - Nearly all poly coated (mostly PE, some PLA); almost no wax coated
- Are There End Markets for Bales with Paper Cups?
  - Yes – both domestic and export markets
    - Some mills can process cups in mixed paper bales and carton bales
    - Additionally, testing is underway in several mills interested in processing cups (and other paper FSP) in existing bales such as SOP and OCC

What about Pizza Boxes?

- Informal survey of the top 10 North American OCC markets (2014)
  - Nearly all readily accept OCC bales containing pizza boxes; all are aware of receiving some pizza boxes in OCC.
  - Pizza boxes can easily be included in the single stream curbside recycling programs but resident education is essential to minimize residue.
  - Although perceived as a major concern for OCC mills, moderate amounts of residual grease and cheese are not problematic
- As changing waste compositions has led many recycled paper mills to look for new sources of fiber, OCC is in high demand

End Market Perspectives



Greg Archambault

Fox River Fiber Overview

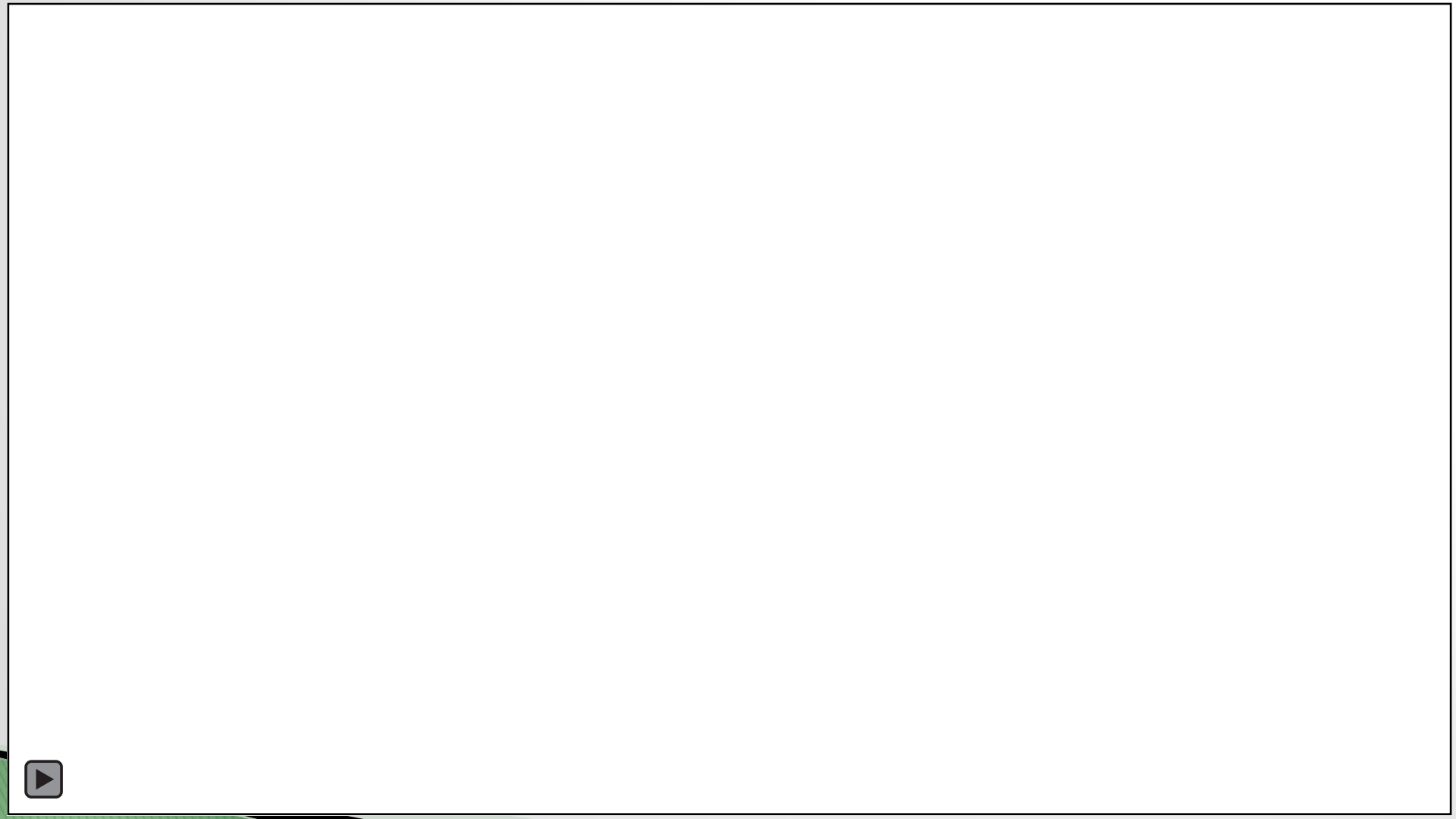
- Established in 1992 as a *Green Field Project.*
- Deink facility converting sorted office, post consumer, and other recycled papers into high quality bleached pulp.
- FSC & NAID Certified facility.
- Process up to 30 truckloads of post-consumer wastepaper daily
- Process yields 70% usable fiber.
- Plant capacity is 450 ADST/Day of pulp.

“Yes – Polycoat Cartons and Cups Can be Recycled

Cartons: Fox River has worked closely with the Carton Council, MRF’s, Paper Mills, Manufacturers and retailers to develop a successful process. Fox River uses 200-800 tons per month of post-consumer cartons PSI Grade 52.

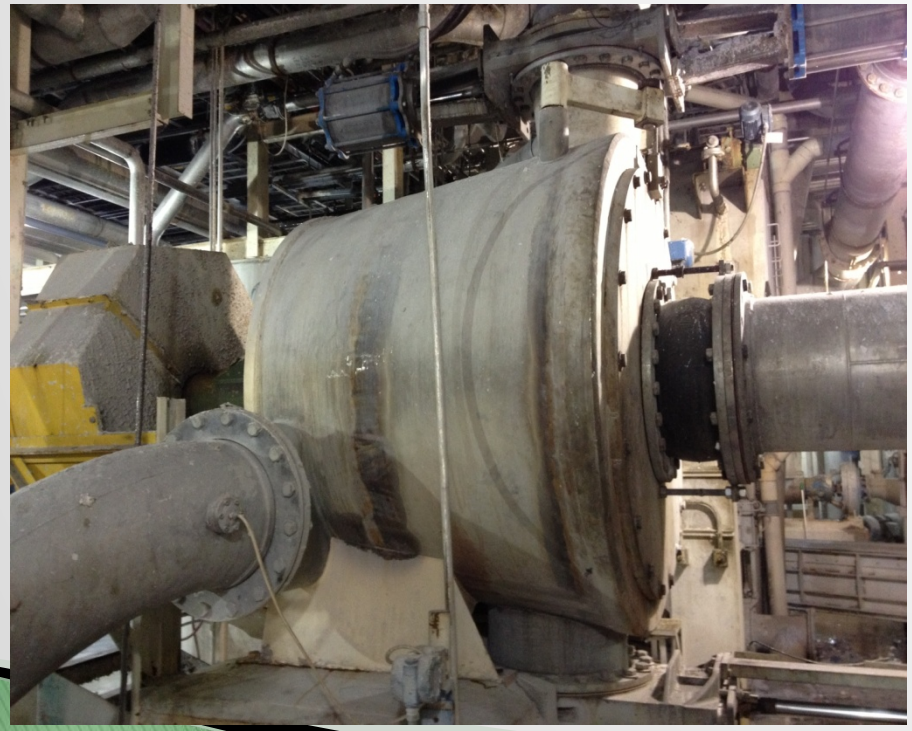
Paper Cups: Fox has run up to 50% paper cups successfully within Grade 52

Feedstock and Pulping



Screening/De-Trashing

- After pulping is complete, material enters course screening for poly removal.
- Poly/Poly Aluminum material is collected and alternative uses have been developed.



High Density Cleaning

- Cleaners take out paper clips and staples.

Course Screening

- Course screening removes small plastics, rubber bands etc.

Fine Screening

- Fine screening removes small particles and stickies.

Cleaning

- Cleaners remove grit, inks and any materials heavier than paper fiber.

Washing

Washing removes coatings, fillers, fines and ink particles. Improves brightness.

Disperging

- Disperging reduces sticky and ink particle size for easier removal in the following floatation steps.

Floatation

- Floatation is a frothing of the stock with air and surfactant. Ink particles and micro-stickies float off with the foam and are removed.

Peroxide Bleaching

- The first stage of bleaching is done with peroxide, a Process Chlorine Free (PCF) bleaching step. This increases pulp whiteness.

Second Stage Bleaching

- This stage uses Sodium Hydrosulfite which is a PCF bleach.
- It brightens and removes color from dyes and inks.

Finished Pulp

- The pulp is sheeted, baled and shipped to customers.

Grades of Pulp Produced

- Printing and Writing Grades
- Tissue and Toweling Grades
- Packaging Grades
- FDA Compliant Grades
- Can be used in all Applications of Use.
- Substitution up to 100%.
- Used in cup and food services areas.
- Growing interest.

July 20, 2017

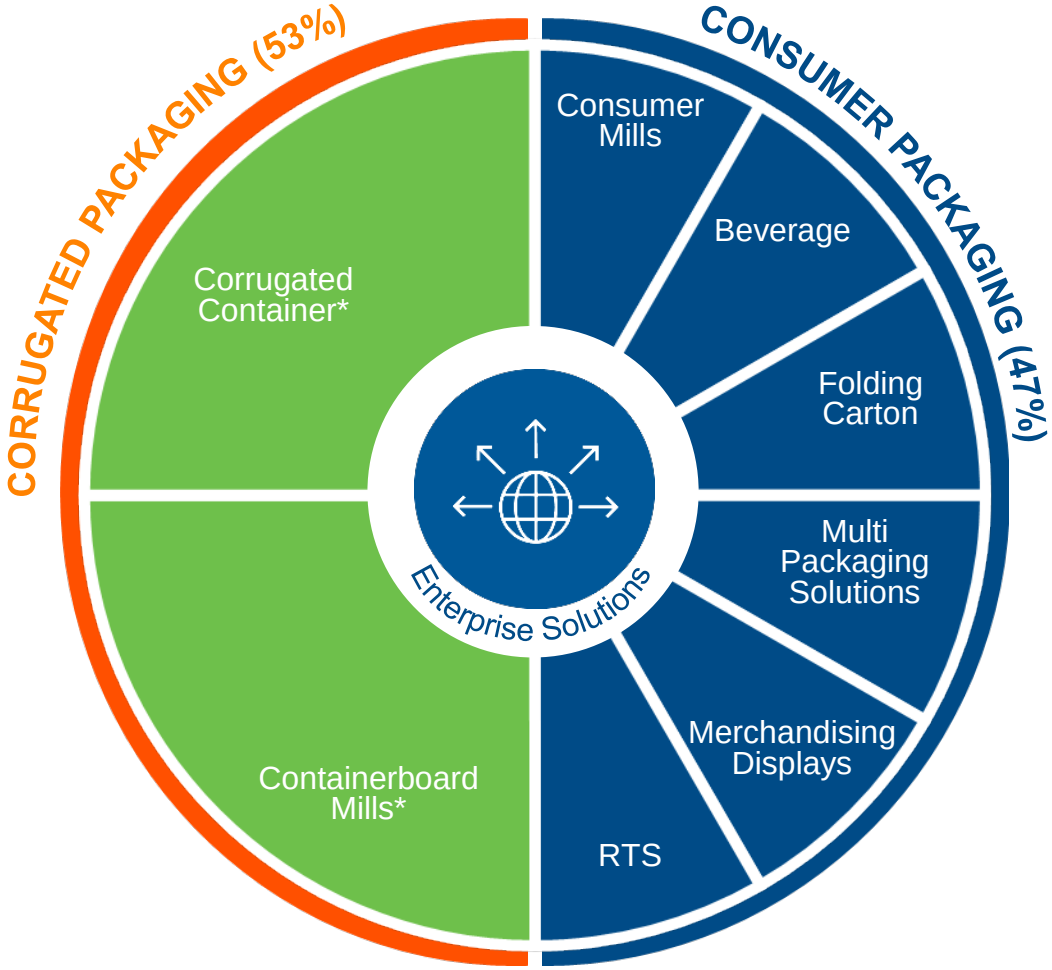
Paper Foodservice Packaging Recycling

Metropolitan Washington Council of Governments

Recycling Committee

WestRock

Who is WestRock



Note: *Includes North America, Brazil and India; pie pieces not to scale
(1) Includes LTM sales March 2017 for WestRock, MPS and U.S. Corrugated; excludes Home, Health & Beauty, and Land & Development. Source of rankings: Company and market research. Rankings are based on capacity.

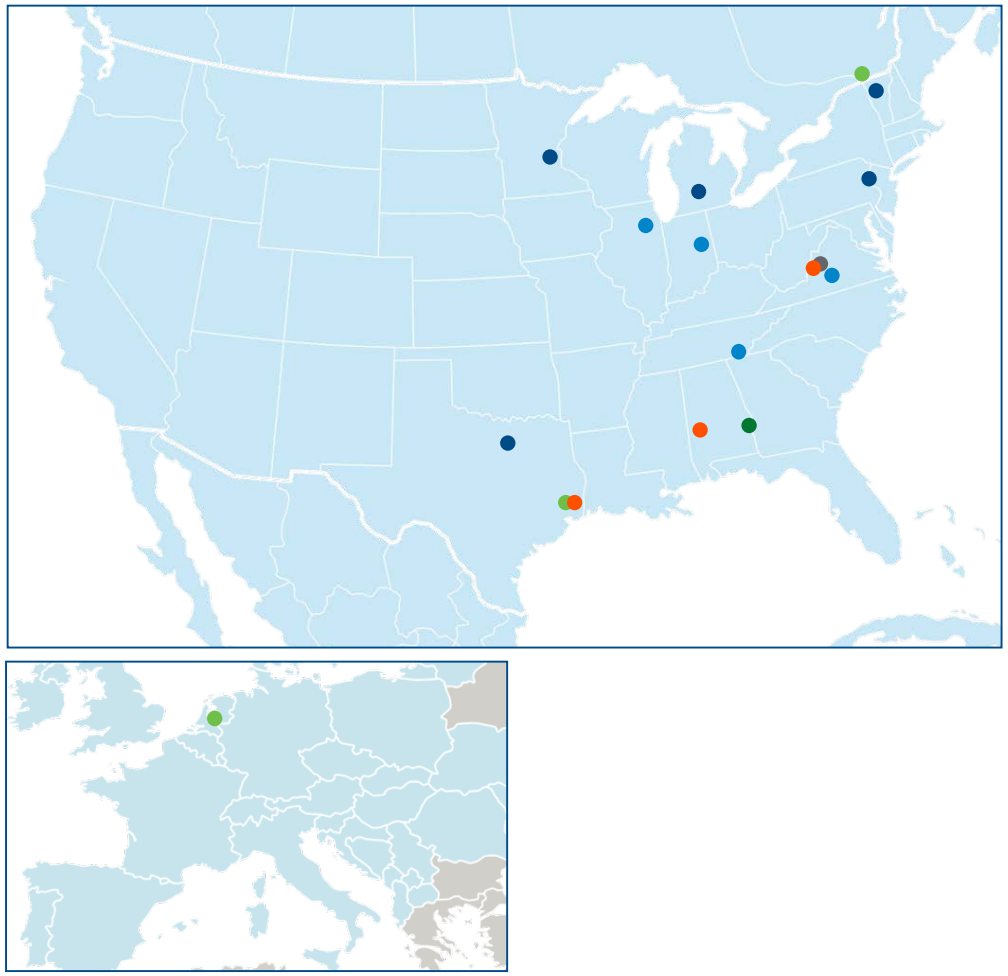
WestRock

Recycling Locations

Recycling Locations

- Anchorage, AK
- Atlanta, GA (East)
- **Atlanta, GA (West)**
- Augusta, GA
- Bakersfield, CA
- **Chattanooga, TN**
- Chicago, IL
- Cleveland, TN
- Columbus, OH
- Fresno, CA
- Ft. Lauderdale, FL
- Huntsville, AL
- Indianapolis, IN
- Jacksonville, FL
- **Knoxville, TN**
- Lawrenceville, GA
- Louisville, KY
- Maple Grove, MN
- Nashville, TN
- **Portland, OR**
- Sacramento, CA
- Tampa, FL

Consumer Packaging
Consumer Mills



Consumer Mills

Solid Bleached Sulfate (SBS)

- Covington, VA
- Demopolis, AL
- Evadale, TX

Coated Recycled Board (CRB)

- **Battle Creek, MI**
- **Dallas, TX**
- Sheldon Springs, VT (Missisquoi)
- **St. Paul, MN**
- Stroudsburg, PA

Uncoated **Recycled Board (URB)**

- **Aurora, IL**
- **Chattanooga, TN**
- **Eaton, IN**
- Lynchburg, VA

Coated Unbleached Kraft (CUK)

- Mahrt, AL

Sheeting & Extrusion Facilities

- Low Moor, VA
- Pointe-aux-Trembles, Quebec
- Silsbee, TX
- Venlo, Netherlands

Corrugated Packaging
Containerboard Mills

Containerboard Mills

- **Dublin, GA**
- Fernandina Beach, FL
- Florence, SC
- Hodge, LA
- Hopewell, VA
- **Jacksonville, FL (Seminole)**
- La Tuque, Quebec
- Morai, India
- Panama City, FL
- **Solvay, NY**
- **St. Paul, MN**
- Stevenson, AL
- Tacoma, WA
- Três Barras, Brazil
- West Point, VA

WestRock efforts to promote recycling of foodservice packaging

Founding member of the Foodservice Packaging Institute's Paper Recovery Alliance (PRA) whose mission is to increase the recovery of foodservice packaging.

WestRock's Chattanooga TN Recycling facility will begin accepting foodservice packaging, including polycoated paperboard, in September 2017. (Working in partnership with FPI and City).

Participated as a stakeholder in City of St. Paul Sustainable "To Go" Food Packaging Workgroup.

WestRock conducted a successful full scale recycling trial at our St. Paul, MN recycled paperboard mill to determine its ability to accept post consumer polycoated foodservice packaging furnish.

Active in ISRI Paper Stock Industries bale specification revisions

St. Paul Polycoated Paper Recycling Trial

St. Paul ran ~5 tons of PE coated sheets over 8 hours

Loads ranging from 800 to 2000 lbs were added once every hour

The coated sheets were added to the filler pulper accounting for about 3% of the total furnish.

- The percentage of Filler Pulper stock coming from the PE coated sheet was estimated to be above 25% for a short period when the large pallets of poly coated paper were added

60% of the sheets were Poly two sided (P2S), and the remainder Poly one sided (P1S)

Three different calipers (fiber weights) were tested

WestRock

Trial Observations

Drum Screen rejects monitored; no polycoated fiber observed

Combisorter light rejects monitored; where polycoating is removed (slight increase in weight)

Differential Pressures on screens in Stock Prep saw no noticeable increases during the trial.

Machine runnability during the trial was positive.

Variables identified as potential places for contamination and build-up due to the increased load of PE were not observed to have changed.

Sticky count (quality measure) normal (below historical averages)

Results

The trial did not noticeably impact: quality of the final product, production run rate, runnability, or cause any additional safety concerns.

Rolls produced during this trial, which met all quality specifications, were shipped to an internal customer as prime product.

Those rolls were verified to have been converted, with no negative feedback reported to-date from the carton plant.

After this trial, a conclusion can be drawn that in the short term the observed maximum amount of LDPE coated material would not cause any significant concerns.

A second conclusion is that both single sided and double sided LDPE material can be used at trial levels for the creation of recycled paperboard at the WestRock St. Paul facility.

Thoughts

Hypothesis is that it will repulp cleanly (100% fiber/poly separation) and will be present in such small quantities it won't impact yield, process, product quality. Need to prove it.

Volume and yield impact estimates are important

- 3000 tons of FSP generated in a city of 250,000 (2400 paper, 600 plastic). Less than half of FSP is polycoated. (Source FPI)
- 2400/250,000 = .0096 per capita x Recovery Rate

Ability of a Mill to take foodservice packaging dependent on detrashing system and color tolerance.

Not sure separation is possible due to low expected volumes, but could enable inclusion in a wider range of bales beyond mixed paper and more control over which Mills receive it.

Food contamination and FDA requirements

Who is WestRock Recycling & Waste Services?

We are one of the largest integrated recycler and non-landfill based waste consolidator in North America

8 million
tons of recyclables
recovered and managed annually

5 million
tons of recyclables consumed internally, annually

23 mills
consuming recycled fiber, globally

22 recycling
facilities in 12 states and
4 geographical regions

600+ employees
in 22 recycling facilities, 1 fulfillment center and 4 sales, brokerage and waste services offices

700 thousand
tons of recycled fiber generated at WestRock converting facilities annually and managed by WestRock recycling

400 thousand
transactions annually

5 thousand
supply points

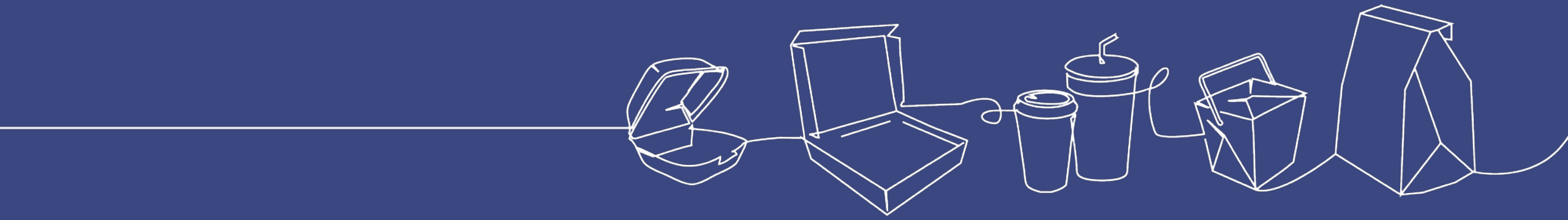
2 thousand
truckloads daily

managed by our Fulfillment Center

29 countries
where we sell recycled material which includes the US, Mexico, Canada and Puerto Rico

38 thousand
locations in the US & Canada serviced by WestRock Waste Services which accounts for ~ $140M in managed waste spend

Community Partnership Program



Community Partnerships

GOALS

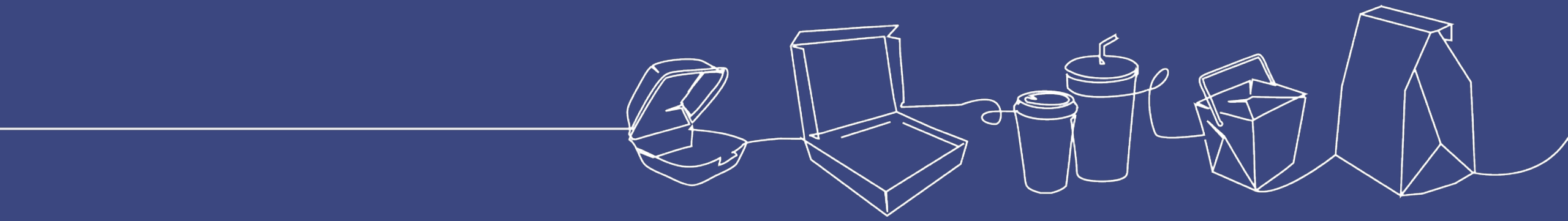
FPI's overall goal is to develop and promote economically viable and sustainable recovery solutions for foodservice packaging.

The purpose of FPI's Community Partnership program is to add a suite of foodservice packaging to **curbside recycling programs**.

Why A Regional Approach?

- To increase regional diversion and recycling rates
- To provide consistent recycling programs to all residents in the area
- To collaborate on regional outreach and recycling education efforts
- To leverage local synergies and efficiencies
- To optimize regional processing capacity and end markets

Regional MRF Partners



Maryland Environmental Service

Jerald Boyd

Senior Operations Manager

Prince George's County
Material Recycling Facility

Maryland Environmental Service

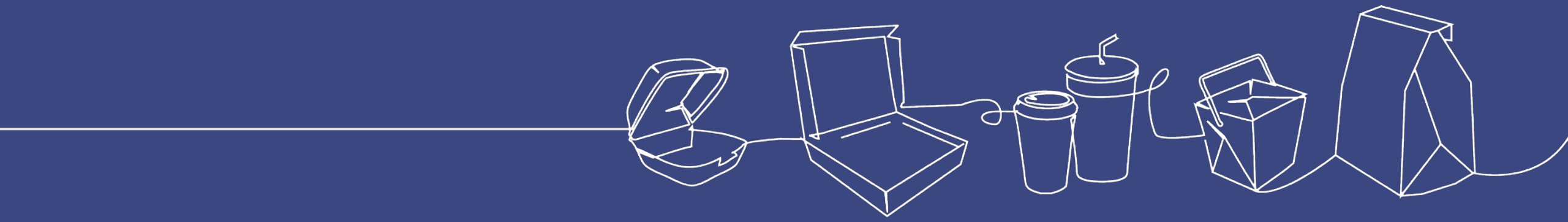
- Prince George's County has over 900,000 residents, with over 172,000 households receiving recycling collection
- Prince George's County Materials Recycling Facility, which is owned by the County, opened as a dual stream plant in October 1993.
- Converted to a Single Stream recycling facility in November 2007
- Designed to process more than 250 tons of recyclable materials per day
- In November of 2015, Prince George's county contracted with Maryland Environmental Service to handle the daily operations of the plant.

MES Acceptable Items

- Glass
  - Food and beverage containers
- Metals
  - Aluminum foil
  - Aluminum, bimetal, ferrous, and steel food and beverage containers
  - Empty aerosol cans
- Plastics
  - Drinking cups/glasses
  - Flower pots
  - Narrow-neck containers with code identification numbers 1 through 7
  - Prescription bottles
  - Wide-mouth containers with code identification number 1 through 7, including peanut butter, yogurt, cottage cheese, sour cream, mayonnaise and whipped topping and margarine/butter tubs
- Mixed Paper/Corrugated Cardboard
  - All paper
  - Aseptic/gable-top milk and juice cartons
  - Catalogs
  - Flattened corrugated cardboard (boxes)
  - Frozen food packaging
  - Hard- and soft- covered books
- Kraft paper bags and wrapping paper
  - Magazines
  - Newspapers with inserts
  - Paper board (cereal and cracker boxes)
  - Telephone books

The list of acceptable items can be found here:
http://www.princegeorgescountymd.gov/571/Acceptable-Items

Community Partnership Details

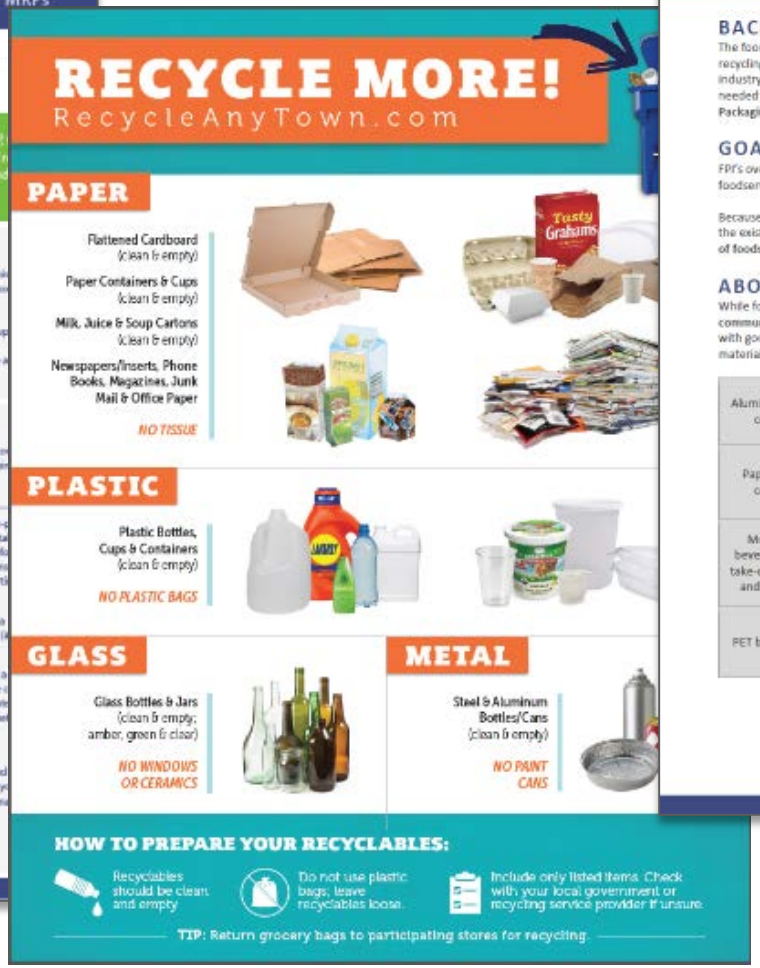


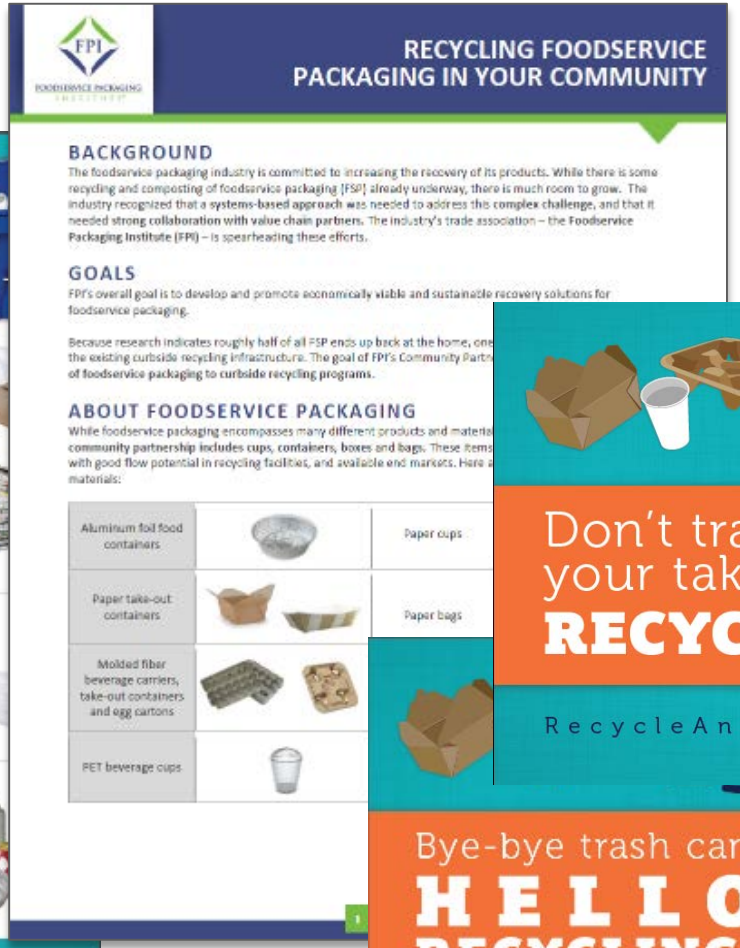
What FPI Can Provide

- Information, research data
- Technical assistance, e.g. on operational questions, as needed
- Support in end market dialogues, as needed
- Communications planning
- Assistance in developing educational materials for residents (flyers, templates, graphics, etc.)

Resources


RECYCLING DETAILS FOR PAPER & PLASTIC FOODSERVICE PACKAGING
Resources for MRFs
MATERIAL STREAM VOLUME
MARKETS
PAPER FOODSERVICE PACKAGING:
PLASTIC FOODSERVICE PACKAGING:
For more information about North American end markets and an interactive map, visit our end markets page.

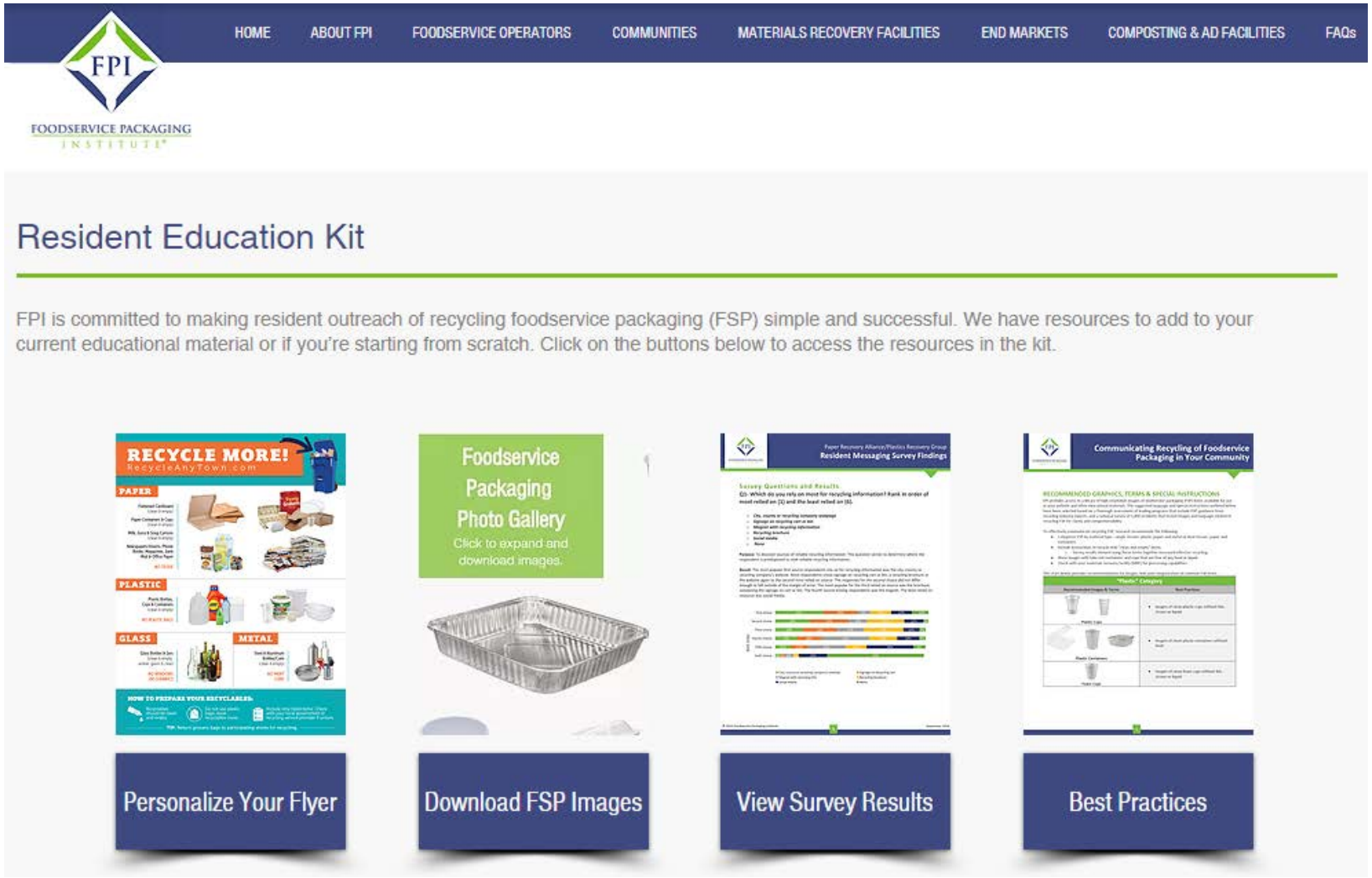

RECYCLE MORE!
RecycleAnyTown.com
PAPER
Flattened Cardboard (clean & empty)
Paper Containers & Cups (clean & empty)
Milk, Juice & Soup Cartons (clean & empty)
Newspapers/Inserts, Phone Books, Magazines, Junk Mail & Office Paper
NO TISSUE
PLASTIC
Plastic Bottles, Cups & Containers (clean & empty)
NO PLASTIC BAGS
GLASS
Glass Bottles & Jars (clean & empty; amber, green & clear)
NO WINDOWS OR CERAMICS
METAL
Steel & Aluminum Bottles/Cans (clean & empty)
NO PAINT CANS
HOW TO PREPARE YOUR RECYCLABLES:
Recyclables should be clean and empty
Do not use plastic bags; leave recyclables loose.
Include only listed items. Check with your local government or recycling service provider if unsure.
TIP: Return grocery bags to participating stores for recycling.


RECYCLING FOODSERVICE PACKAGING IN YOUR COMMUNITY
BACKGROUND
GOALS
ABOUT FOODSERVICE PACKAGING
Aluminum foil food containers
Paper take-out containers
Molded fiber beverage carriers, take-out containers and egg cartons
PET beverage cups
Paper cups
Paper bags


Don't trash your takeout...
RECYCLE IT!
RecycleAnytown.org


Bye-bye trash can.
HELLO RECYCLING!
RecycleAnytown.org

Resident Education Kit



Visit RecycleFSP.org for more info:

Contact:
Matt Todd
mtodd@recycle.com

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ldyer@fpi.org