Beyond Bottles: Recycling Plastic Packaging

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APR
The Voice of Plastics Recycling®

- APR is the international trade organization representing the plastics recycling industry.
- APR believes that functional, attractive, and economical plastic products can be designed that are also fully compatible with material recovery and plastics reclamation systems.
- The APR is committed to working across the plastics value chain to ensure that recycled plastics retain quality and value during collection, recovery, and reprocessing.
Recycling Beyond Bottles

- Containers
- Bulky Rigids
- Caps On!
- Bags and Film
Recycling Beyond Bottles

Recycling Rigid Plastics Beyond Bottles: CONTAINERS

Recycling Rigid Plastics Beyond Bottles: RESIDENTIAL BULKY

Recycling Rigid Plastics Beyond Bottles: CAPS ON!

The Association of Plastic Recyclers

Marketable Material, Growing Demand
APR’s Website
Success Stories

Bulky Rigid Plastics
Oneida-Herkimer
Solid Waste Authority

Day 9 Bulky Rigid Plastics
Market Information

Reliable markets, strong demand and clear bale definitions are all key components to successful recycling. The APR has gathered the resources below to assist local governments and/or MRFs in effectively marketing their recyclable residential bulky rigid plastics.

How should residential bulky rigid plastics be sorted?

Sort For Value: Determining the right level of sorting for your program

A large percentage of bulky rigid plastic products are made of Polyethylene (PE) and Polypropylene (PP) making bulky rigid plastic a valuable stream of material, particularly when separated from other rigid plastic (bottles and non-bottle containers). The decision to sort bulky rigid plastic depends on a number of factors including market availability, MRF bunker space, and the flow of material in the MRF.

The Sort for Value Online Calculator developed by APR and Moore Recycling Associates, is an analysis tool to determine the value of various plastic sorting options and help understand the benefits of increased sortation. The results are impacted by the price for various commodities at any given time and the percent breakdown of the rigid plastic (bottles, non-bottle containers and bulky rigid plastic) processed at the MRF.
Education

Want to Recycle Even More?
Add cups & containers!

Many communities are successfully including plastic foodservice packaging in their residential programs. FPI offers a toolkit for communities, MRFs, reclaimers, and foodservice operators. Visit the toolkit at recyclefsp.org

Free Resources!
Download and Customize

Fight Contamination, Recycle with Carts & Boost Participation

The Recycling Partnership

Plastics Recycling Terms & Tools

Take the ambiguity out of plastics recycling. Clear, consistent recycling terminology can help your community (and the nation) recycle more plastics.

Recycling Journey of a Plastic Cap

The flowchart below highlights how a typical plastic cap travels through the entire recycling process. Although a PET bottle is used in the flowchart, the same steps can be taken to recycle plastic caps on many other types of containers including: laundry detergent and other cleaning products, shampoo, conditioner, body wash, as well as condiment, snack, and other food bottles. The video below takes the flowchart further with detailed descriptions of each step in the process.

Recycling Journey of a Plastic Cap from APR

RECYCLING JOURNEY OF A PLASTIC CAP

The Association of Plastic Recyclers

WWW.PLASTICRECYCLING.ORG

Recycling Journey of a Plastic Cap from APR on Vimeo.
Recycling Beyond Bottles: Communication & Outreach

- Targeted Outreach
- Surveys
- Plastics Recycling Newsletter
- Press Release

- Articles
- 2017 Webinar
- Conference Presentations
Bags and Flexible Film Packages
Current Status of Flexible Film Recycling

• Today’s flexible plastic packaging infrastructure has been built for polyethylene film - LDPE, LLDPE, HDPE

• Amount of polyethylene film recovered for recycling:
  – Commercial 859MM lbs
    • Marketplace characterized by captive supply, clean predictable stream, highest value
  – Residential Store Drop-off 136MM lbs
    • Marketplace characterized by many access points - 18,000 retail locations -, capacity to manage wraps/film as well as bags, but only 7% recycling rate
  – MRF 9.7MM lbs
    • Marketplace characterized by severe operational and market challenges

• New or adapted infrastructure will be needed for multi-layer, high-performance flexible packaging that incorporates other resins or materials with PE to protect contents

Source: FFRG, Moore Recycling, 2014
What are the Environmental Benefits of Flexible Packaging over Rigid Packaging?

• A 30% reduction by weight of food and beverage packaging in North America would result in:
  – Reduction in total environmental costs of $7.3 billion per year
  – Reduced greenhouse gas emissions of 28 million metric tons per year

ACC/Trucost, “Plastics and Sustainability”, July 2016
Challenges with Recyclability of Flexible Packaging

**Consumer**

– Consumers need to be reminded to recycle their grocery bags and other wraps at their local retail store
– Bags and wraps are definitely recyclable and markets want this material!
Challenges with Recyclability of Flexible Packaging

**MRFs**
- SOME communities recover and market plastic bags and films in their MRFs
- Most MRFs discourage curbside film due to safety and operational issues
- Consumers need education about what to put in curbside carts
Challenges with Recyclability of Flexible Packaging

Reclaimers

– MRF sorted material may be contaminated and costly to process
– For multi-layer packages, sorting technology is challenged to identify the materials under the top layer and the layers do not readily separate in the recycling process
– New markets will be needed for the mixed materials produced in the recycling process.
Work is being done!

- Package Design, Consumer Education, and Market Development
  - APR Design® Guide for Plastics Recyclability
  - SPC How2Recycle
  - WRAP
  - MRFF
Design for recyclability is a key driver for packaging innovation. APR’s Design® Guide is a primary source of guidance to brand owners on designing for recyclability through a rigorous testing and peer review “Critical Guidance” process. APR represents the entire value chain, including brand-owners, package manufacturers, and recyclers, requiring collaboration and consensus. 

http://www.plasticsrecycling.org/apr-design-guide/apr-design-guide-home
Wrap Recycling Action Project

• WRAP is a consumer and retail focused initiative to increase bag and film recycling in communities.

• Messaging:
  – Other “wraps” besides grocery bags should be recycled.
  – Bring material back to retail, don’t put it in curbside cart.

• Communities can sign up as WRAP Partners and Champions to access great resources along with tips and help for the most impact.

http://www.plasticfilmrecycling.org/wrap/wrap-1.html
Communities can educate residents to look for the How2Recycle label and promote its use.

APR and SPC are collaborating on a process to use the APR Design® Guide as the foundation of How2Recycle evaluation.

http://www.how2recycle.info/
Companies collaborating on important research to explore the question: “Under what conditions might it be possible to recover flexible packaging in a MRF?”

https://www.materialsrecoveryforthefuture.com/
How will Innovation Happen?

• Expect Innovation to be driven by the private sector stakeholders
  – Recycling Partnership
  – Closed Loop Fund
  – Energy Bag Pilot
  – Recyclers
  – Brand Owners
  – Retailers

• Established Companies
  – Brand demand will drive innovation
  – Motivation comes from Corporate Sustainability Goals and challenges of doing business in a resource constrained world
  – Engagement with supply chain on design will optimize package performance throughout lifecycle

• Entrepreneurs
  – New and adaptive solutions are needed
  – Directed capital through grants and loans will inspire solutions
  – Demand for material will drive commercialization

• Education
  – Post-consumer PE resin is valuable, despite short term market challenges
Questions about APR’s Recycling Beyond Bottles Toolkits?

Contact Kara Pochiro
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Questions about Bag and Flexible Film Package Recycling?

Contact Sandi Childs
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