



Adding rigid plastics to municipal recycling

by Roger Guttentag

General information

Association of Postconsumer Plastic Recyclers (APR) – The APR site is probably the best starting point for learning more about the key issues affecting the recycling of post-consumer plastics in general as well as those that affect specific non-container products. APR is a trade organization that includes companies and organizations involved in the manufacturing, collection, processing or promotion of post-consumer plastic products. Its site provides technical support to its membership as well as information for manufacturers on how they can reduce or eliminate barriers to the recycling of their plastic products. This latter goal is accomplished through the publication of APR's "Design Guides for Plastics Recyclability" for various categories of plastic products such as PET bottles, thin wall packaging and PET thermoforms. These guidance documents address the various components of the final products such as closures, attachments, layers, labels, adhesives and inks.

Other useful resources on the APR site are directed to MRF operators and municipal recycling program managers in the form of recommended bale specifications for different plastic grades and the Sort for Value Matrix, which can found under "Webinars in the Resources" section. The Sort for Value Matrix was developed in response to the reduction of export opportunities due to China's Green Fence customs initiative. It shows the potential market value per ton (in 2013 dollars) of different sort compositions. Finally, a directory of post-consumer plastic buyers and service providers can be researched in the "Markets" section of the site.

Recycle Your Plastics – This site, sponsored by the American Chemistry Council, has a number of information resources on plastics as well as links to

others developed by APR and the Curbside Value Partnership. The resource listing in the "Rigids" section provides links to a number of recent reports on non-bottle rigid plastics, including "Growth Trends and New Drivers for Recycling of Non-Bottle Mixed Rigid Plastics" (March 2013), which summarizes research conducted by Resource Recycling, Inc., the parent company of this publication. The key findings presented in this report indicate non-bottle rigid plastics recycling is expanding due to greater domestic market acceptance, the growing adoption of single-stream collection systems and available capacity to handle non-bottle rigid plastics in facilities receiving single-stream collections.

Food services

Recycle Grocery Rigid Plastics – This APR program, developed with help from the American Chemistry Council, concentrates on showing supermarkets how they can recover HDPE and polypropylene containers generated by their bakery, deli, seafood and pharmacy operations. A 45-page guide, "How to Recycle Grocery Rigid Plastics," can be downloaded from this site, and the guide covers the fundamentals of developing an in-store program. It walks store managers through determining what can be recovered, establishing in-store logistics, developing employee training and marketing the recovered materials. The guide also has appendices that provide supporting information such as sample work forms and employee training handouts.

PET Thermoforms – Clear PET thermoforms represent another type of non-bottle rigid plastic growing in usage. They are especially prevalent in supermarkets, where they are used for such purposes as packaging baked goods and serving as food service takeout containers.

Municipal plastic recovery programs seem to undergo significant evolutionary changes over 10-year periods. In the mid-1990s, the focus was initially on how to add PET and HDPE containers to curbside and drop-off recycling collection systems and then process them economically through the facilities that received these materials. Ten years later municipalities were evaluating the feasibility of including Nos. 3-7 bottle collections and implementing them on the basis of positive operational and marketing data. We are now in the process of seeing another potential advance in post-consumer plastic recycling through the addition of non-bottle rigid plastics to municipal and commercial collection streams.

Non-bottle rigid plastics encompass a wide variety of products such as clear food service takeout containers, thin-walled containers (e.g. yogurt cups, microwave containers, small buckets), trays and bulky rigids like housewares and toys. Unlike PET and HDPE containers, which are made through blow molding, other types of processes such as thermoforming and injection molding are used for non-bottle rigid plastics manufacturing (see the Wikipedia article reference for a description of how they work). This, in turn, affects how they can be recycled and what markets can use them as raw materials.

This month's column will discuss some of the principal Web resources that are available on this topic from industry sources.

A YouTube video published by Modern-Pak, a Singapore-based manufacturer, provides a nice introduction to how thermoform packaging is made. The National Association for PET Container Resources (NAPCOR) has also recently expanded its attention from bottles to include thermoform packaging. Information can be downloaded from the NAPCOR site on the various challenges facing PET thermoform recycling, how these materials can be incorporated within existing PET container recovery systems and where they can be marketed.

An even more extensive explanation of these issues can be found in an April 2014 webinar, "PET Thermoforming Progress Report," which was sponsored by the National Recycling Coalition and the Pennsylvania Recycling Markets Center. The information is provided in a visually accessible manner and is highly recommended to anyone who wants to consider adding PET thermoforms to a residential recycling collection mix.

Foodservice Packaging Institute (FPI)

– FPI is a trade organization that focuses on promoting the use of food service packaging by businesses and institutions such as

Web Address Directory

The Association of Postconsumer Plastic Recyclers
Foodservice Packaging Institute – Markets
Modern-Pak: Introduction to Thermoforming
NAPCOR – PET Thermoform Recycling
NRC/PRMC Webinar – PET Thermoform Recycling
Recycle Grocery Rigid Plastics (APR)
Recycle Your Plastics (American Chemistry Council)
Wikipedia – Thermoforming

plasticsrecycling.org
fpi.org/recovery/markets
tinyurl.com/MP-Thermoform
napcor.com/PET/thermoforms.html
tinyurl.com/NRC-Thermoform
recyclegroceryplastics.org
recycleyourplastics.org
tinyurl.com/Wiki-Thermoform

restaurants, supermarkets and cafeterias. Many of the non-bottle rigid plastics recovered through municipal recycling programs are food service products such as cups, clamshell takeout containers and trays. To facilitate the recovery of food service packaging, FPI has developed an interactive map showing end markets for many non-bottle rigid plastics.

recycling will continue by looking at how the material is being handled by individual states and communities across the country as well as in Canada and the U.K.

Roger M. Guttentag is a recycling and solid waste consultant located in Harleysville, Pennsylvania. He can be contacted at (610) 584-8836 or rguttentag@comcast.net. Guttentag has a website, recyclingandreuse.com, which houses all of his Recycling Online columns and other resources for recycling professionals of all stripes.

Next month

My discussion of non-bottle rigid plastics

E-SCRAP NEWS

The definitive source for marketing new equipment and services, contacting buyers and sellers, and keeping up to speed on the latest developments in this fast-paced environment.



VISIT **E-SCRAPNEWS.COM** FOR MORE INFO

2015 CONFERENCE ON CANADIAN STEWARDSHIP UNDER THE BIG TOP RCA WASTE REDUCTION CONFERENCE

**SEPTEMBER 30
to OCTOBER 2**
The Fairmont Banff
Springs, Banff, AB

SESSIONS

- Provincial ADM Panel
- Measurement, Standards, Accountability
- Sharing/Reuse Economy
- EPR World Stage
- Organics Diversion
- Markets and Innovation
- EPR and Business

EVENTS

- Local Tours
- Gala Banquet
- Rs of Excellence Awards
- Exhibits and Networking Opportunities

KEYNOTE SPEAKER

ADAM MINTER - author of
Junkyard Planet

EARLY-BIRD REGISTRATION DEADLINE JULY 15

Registration, exhibit or sponsorship info:
www.recycle.ab.ca • www.canadianstewardship.com