

APR Sorting Potential Protocols: Identifying Packages that Get Lost in the Recycling Process

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**The Association of
Plastic Recyclers**

Today's Presenters



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Association of Plastic Recyclers

Today's Session...

Brief Overview of APR

APR's Definition of Recyclability

APR's Recyclability Categories

Examples of Problem Packages

Sortation Process

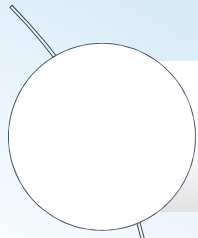
Sorting Potential Protocols

Questions

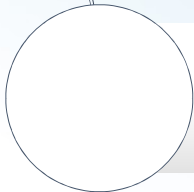


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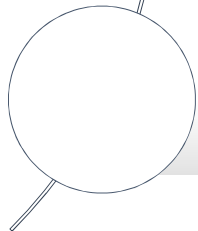
Who is APR?



International trade association



The Voice of Plastics Recycling®



Companies committed to the success of plastics recycling



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Increase
Supply



Enhance
Quality



Expand
Demand



Communicate
Value

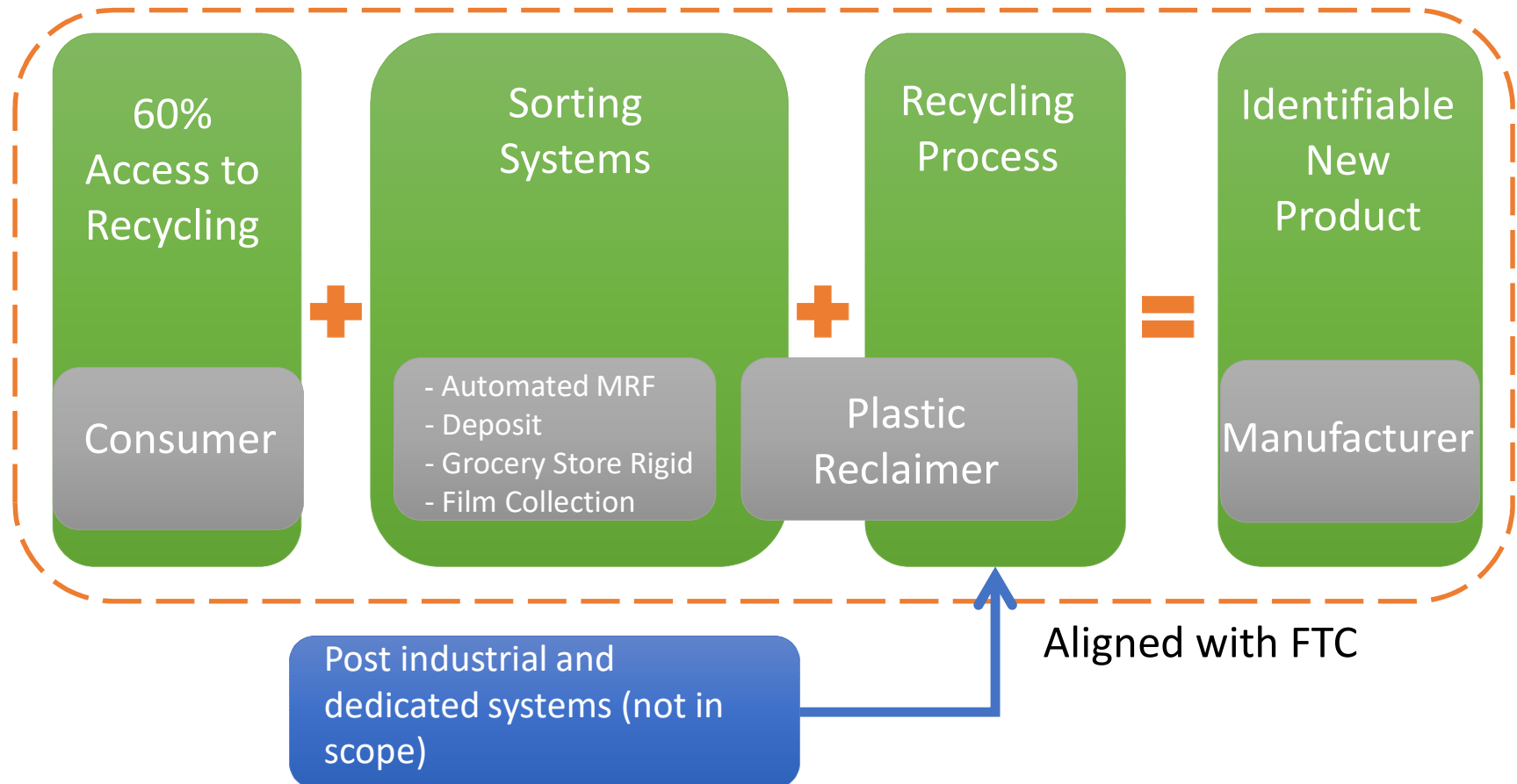


APR Primary Goals



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APR's Definition of Recyclable



APR's Recyclability Categories

Assess Design Features / Packaging Components

APR Design® Guide Preferred

Detrimental to Recycling

Renders Package Non-Recyclable per APR
Definition

Requires Testing



APR's Recyclability Categories

Some packaging features or components were categorized as detrimental or non-recyclable in the past, but are now “Require Testing” to determine recyclability.

**RECYCLABLE
WITH
DETRIMENTAL
FEATURES**

Do any features
REQUIRE TESTING
to classify?



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Dark Packaging

Near Infrared (NIR) sortation can not detect

The background of the slide is a bokeh effect featuring numerous out-of-focus circles in various colors including red, orange, yellow, green, blue, and purple. A bright, warm light source is visible in the upper right corner, creating a strong glow and illuminating the surrounding bokeh circles.

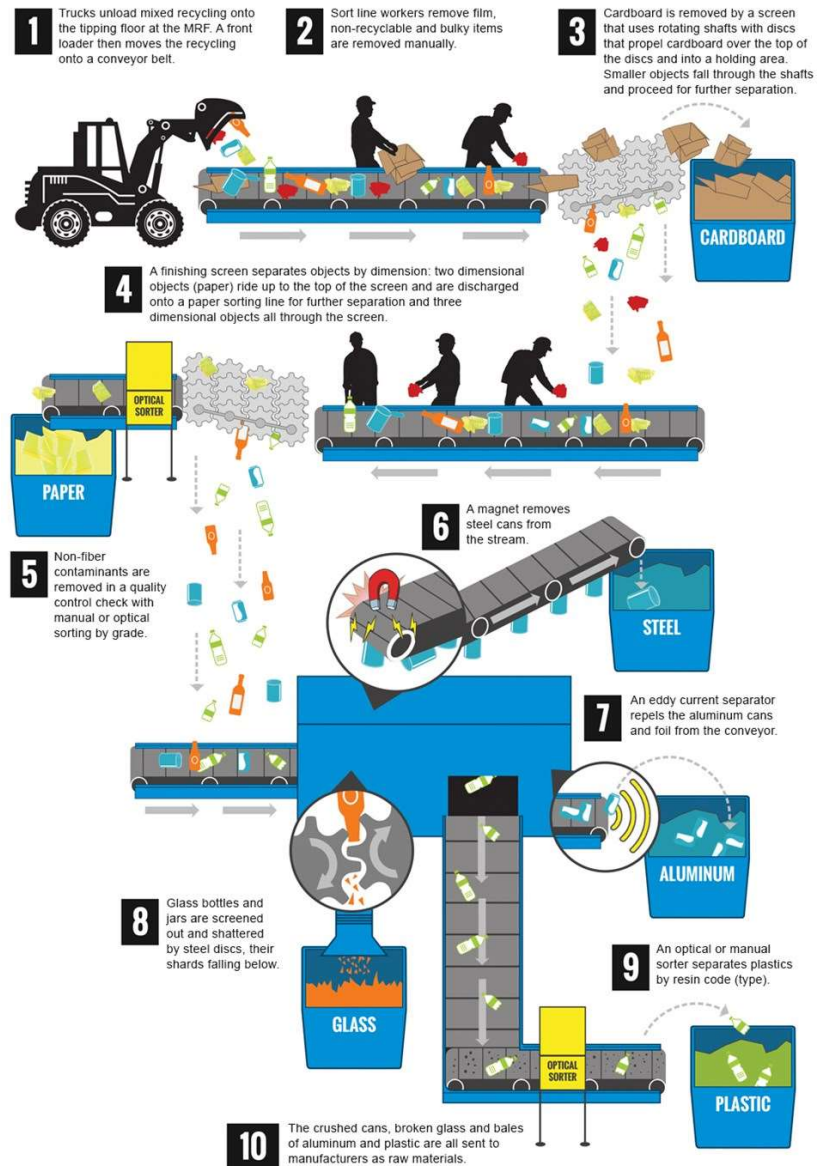
Small Packaging

Falls through screens

Metal Components

Separate from other plastic packaging by magnets or metal detectors

The MRF Sorting Processes



Plastics Reclaimers use the same process

Image – Advanced Disposal-
<http://www.advanceddisposal.com/formother-earth/education-zone/mrf-diagram.aspx>

Sorting Potential Protocols

Guidelines for package designers to create packaging that will pass through the sorting process

- ✓ Size
- ✓ NIR sorting
- ✓ Metal removal stages
- ✓ Shape

* Sorting is only PART of the requirement for APR's definition of recyclability.*

Compression Practice

Simulates trash truck



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NIR Test

- Compares sorting efficiency of 20 test articles to base line of a control mix.
- Applicable to:
 - dark items
 - full body shrink labels



Size Test

- Screen – average of 4 most common manufacturers
- 20 Articles – 10 rotations 30x
- Applicable to items with 2 sides < 2"



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Metals Tests

- Magnet test
- Metal detector limit test
- Applicable to: metal, metalized and metallic inks



2D - 3D Test

- Coming in 2018
- Applicable to thin items

Finding the Test Protocols

Plasticsrecycling.org

- Design Guide
- Test Methods

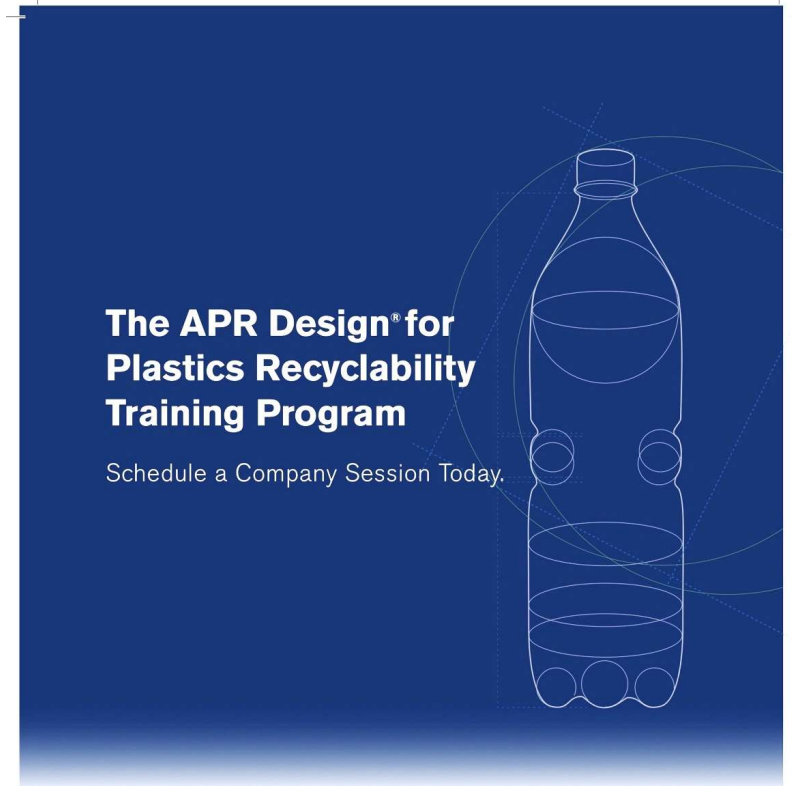
Type	Category	Code	New Title
HDPE	Application	HDPE-A-01	HDPE Bottle Application Test
HDPE	Critical	HDPE-CG-01	HDPE Critical Guidance
HDPE	Critical	HDPE-CG-02	Closure Test
HDPE	Screening	HDPE-S-01	HDPE Bleeding Label Test
HDPE	Screening	HDPE-S-02	HDPE Flake Wash Test
HDPE	Screening	HDPE-S-03	HDPE/PP Degradable Additives Test
PE Film	Benchmark	Film-B-01	Polyethylene(PE) Store Drop-off Films Benchmark Test
PET	Applications	PET-A-01	PET Bottle Applications Test
PET	Benchmark	PET-B-01	Flake to Plaque Bleeding Label Test
PET	Benchmark	PET-B-02	Flake to Plaque Thermoform Label Test
PET	Critical	PET-CG-01	PET Critical Guidance
PET	Critical	PET-CG-02	Closure Test
PET	Critical	PET-CG-03	Sleeve Label Test
PET	Critical	PET-CG-04	Pressure Sensitive Label Test
PET	Critical	PET-CG-05	Direct Print Label Test
PET	Reclaimers	PET-R-01	PET Oven Bake Test
PET	Reclaimers	PET-R-02	PET Barrier Test
PET	Reclaimers	PET-R-03	PET Dissolution Test
PET	Screening	PET-S-01	Bleeding Label Test
PET	Screening	PET-S-02	PET Flake Wash Test
PET	Screening	PET-S-03	Quick Test for Color
PET	Screening	PET-S-04	Thermoform Label Test
PET	Screening	PET-S-05	Labels, Closures and Attachments Floatability Test
PET	Screening	PET-S-06	PET Degradable Additives Test
PP	Benchmark	PP-B-01	PP Benchmark Test
PP	Critical	PP-CG-01	PP Critical Guidance
Sorting	Benchmark	Sort-B-01	Test Method to Evaluate the Near Infrared Sorting Potential of a Whole Plastic Article
Sorting	Benchmark	Sort-B-02	Evaluation of Size Sorting Potential for Articles with at least 2 Dimensions Less than 2 Inches
Sorting	Practice	Sort-PR-01	A Practice for Compressing Plastic Articles for Laboratory Evaluation

[Download Table Data](#)[Email Table Data](#)

Questions?

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www.PlasticsRecycling.org



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