PLASTICS DESIGN FOR RECYCLABILITY WEBINAR SERIES

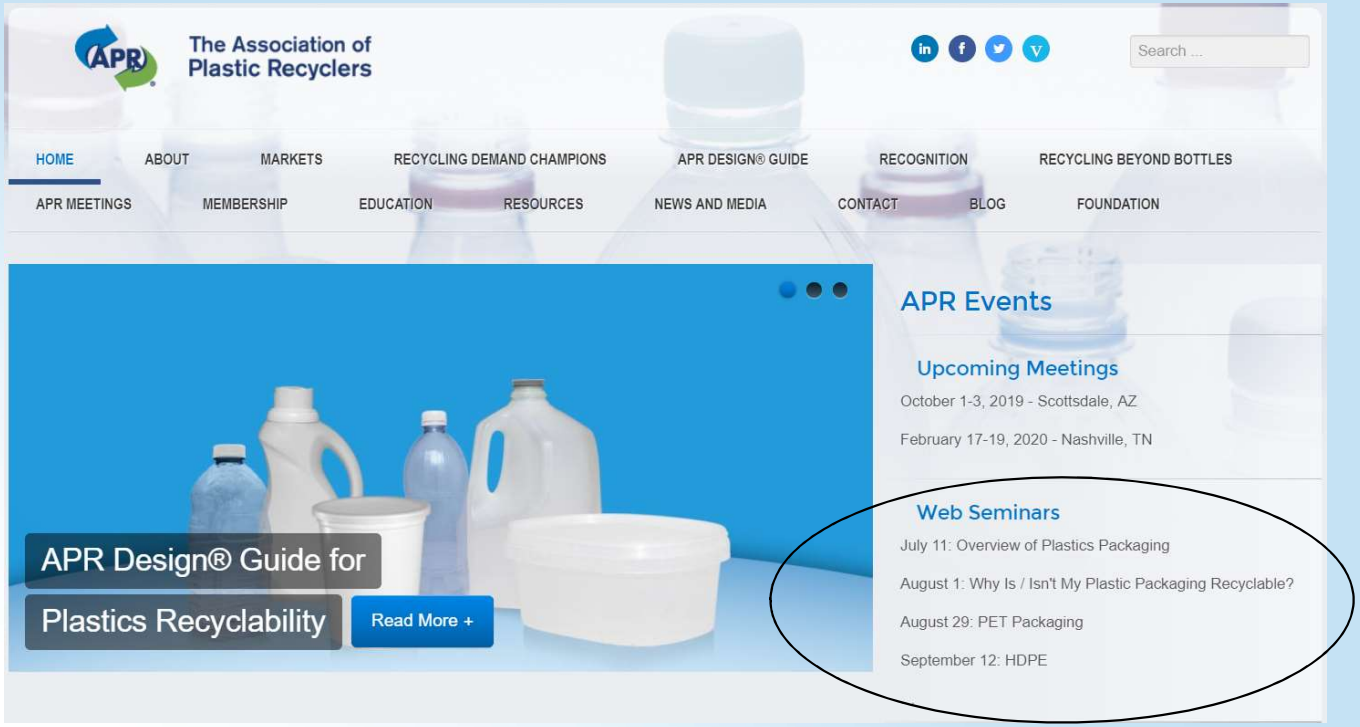
Part 6: Using More Postconsumer Recycled Material (PCR)

Hosted by:

Walmart

The Association of Plastic Recyclers

Registration links, presentation slides and recordings will be available on the APR Website and the Walmart Sustainability Hub



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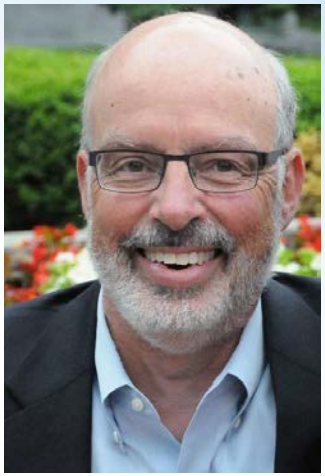
TODAY'S PRESENTERS



Steve Alexander

President,

APR

Ashley C. Hall

Sustainable Packaging Lead, Walmart

Curt Cozart

President, Common Sense Solutions, Inc

Kara Pochiro

VP of Communications & Public Affairs, APR

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AGENDA

1. Reminders:
   a. What Is This Series?
   b. Walmart goals
   c. Who is APR and what makes something recyclable.
2. PCR Quality – expectations and limitations
3. Locating PCR sources
4. Communication
5. Flake verses pellet
6. Implementation
7. Checks and balances
8. Resources
9. Questions

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WHAT IS THIS SERIES?

A series of webinars hosted by Walmart, and presented by The Association of Plastic Recyclers, discussing design for plastics recyclability and communicating the common messages within the Walmart Recyclability Playbook and the APR Design® Guide for Plastics Recyclability.

July 11	Overview of Plastics Packaging
August 1	Why Is/Isn't My Plastic Recyclable?
August 29	PET Packaging
September 12	HDPE and PP Packaging
October 17	Flexible Packaging (Bags/Wraps/Films)
October 31	Using More PCR

All webinars begin at 2:30 PM EST.

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OUR SUSTAINABILITY PRIORITIES

Key Focus Areas for Walmart Sustainability in FY20

PROJECT GIGATON

Working with suppliers to reduce 1 billion metric tons of GHGs by 2030

ProjectGigaton™

JOIN US!
WALMARTSUSTAINABILITYHUB.COM

PACKAGING & PLASTICS

Use less plastic.

Make it recyclable.

Label it for the customer.

USE SUSTAINABLE MATERIAL
SPECS AND LABEL PACKAGING

SUSTAINABLE PRODUCTS

Identify sustainability priorities based on your product category

ADVANCING EDLTC
ACROSS ALL PRODUCT CATEGORIES

OUR SUSTAINABLE PACKAGING COMMITMENTS

For Private Brands, Encouraged for National Brands

USE LESS PLASTIC	MAKE IT RECYCLABLE		LABEL IT
Reduce the use of plastic when possible	20% Recycled content in plastic packaging	100% Recyclable, reusable, or industrially compostable	100% Packaging labeled for recyclability
Remove unnecessary packaging	**Increased recycled content**	**Make packaging recyclable**	**Apply the How2Recycle label**

INNOVATE TOGETHER

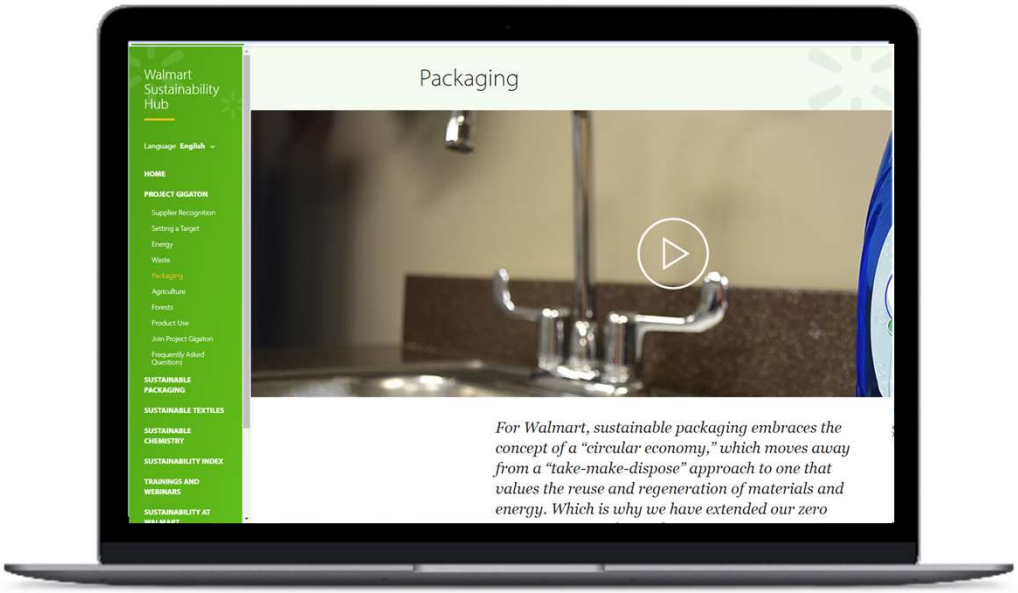
ProjectGigaton™

Project Gigaton is designed so that every supplier can participate in at least one pillar

Energy	Agriculture	Waste	Packaging	Product Use	Forests
Renewable Energy	*Fertilizer Optimization*	*Food and Solid Waste Reduction*	*Recycled Content*	*More Energy Efficient Products*	*Avoid Deforestation*
Energy Efficiency	*Animal Agriculture*		*Recyclability*	*Low-GWP Refrigerants*	*Restoration*
Fleet Efficiency			*Optimization*		

The Sustainability Hub, a one-stop shop

- ✓ Learn how to design for recyclability
- ✓ Download the recycling playbook
- ✓ Find webinar recordings
- ✓ Link to other resources



walmartsustainabilityhub.com

WHO IS APR?

International trade association

The Voice of Plastics Recycling®

Companies committed to the success of plastics recycling

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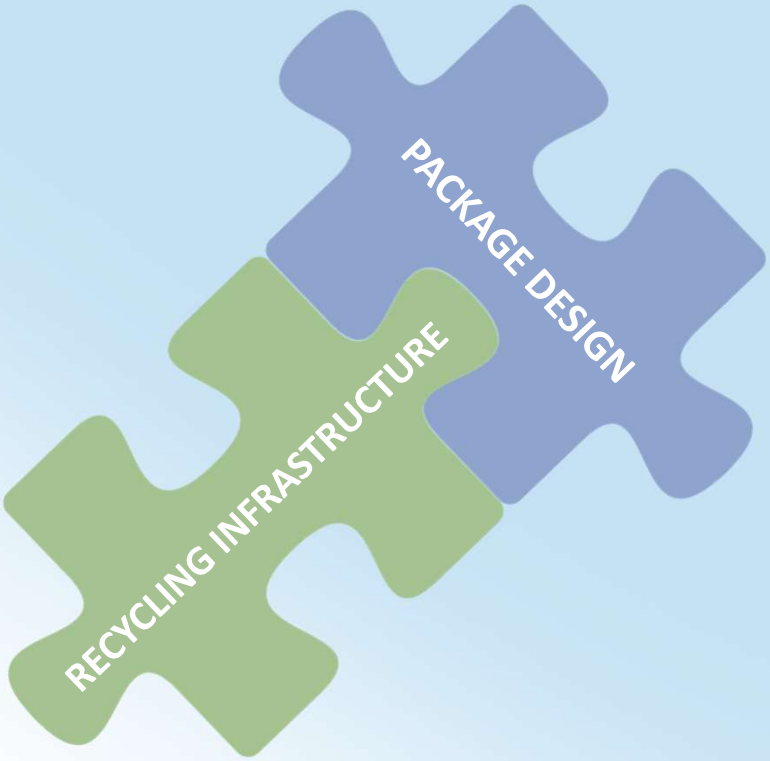
WHO IS APR? ENSURING PACKAGE DESIGN FITS WITH RECYCLING INFRASTRUCTURE

- APR Design® Guide for Plastics Recyclability
- Test Methods
- Training
- Communication
- Advocacy



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APR's DEFINITION OF RECYCLABLE

60% consumer access

Processed by existing infrastructure

- sort
- clean

Can be manufactured into identifiable product

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MISNOMER:

High quality end products cannot be made from recycled plastics. Recycling is really ”down cycling”

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PCR QUALITY

Expectations and Limitations

PCR is available that is

- Allowed by the FDA for direct food contact (PET, HDPE and PP)
- Capable of being made into very high quality products even at 100% (clear bottles, microfiber, blown film etc)

PCR generally

- Has wider properties than virgin
- May differ between suppliers
- May differ from virgin

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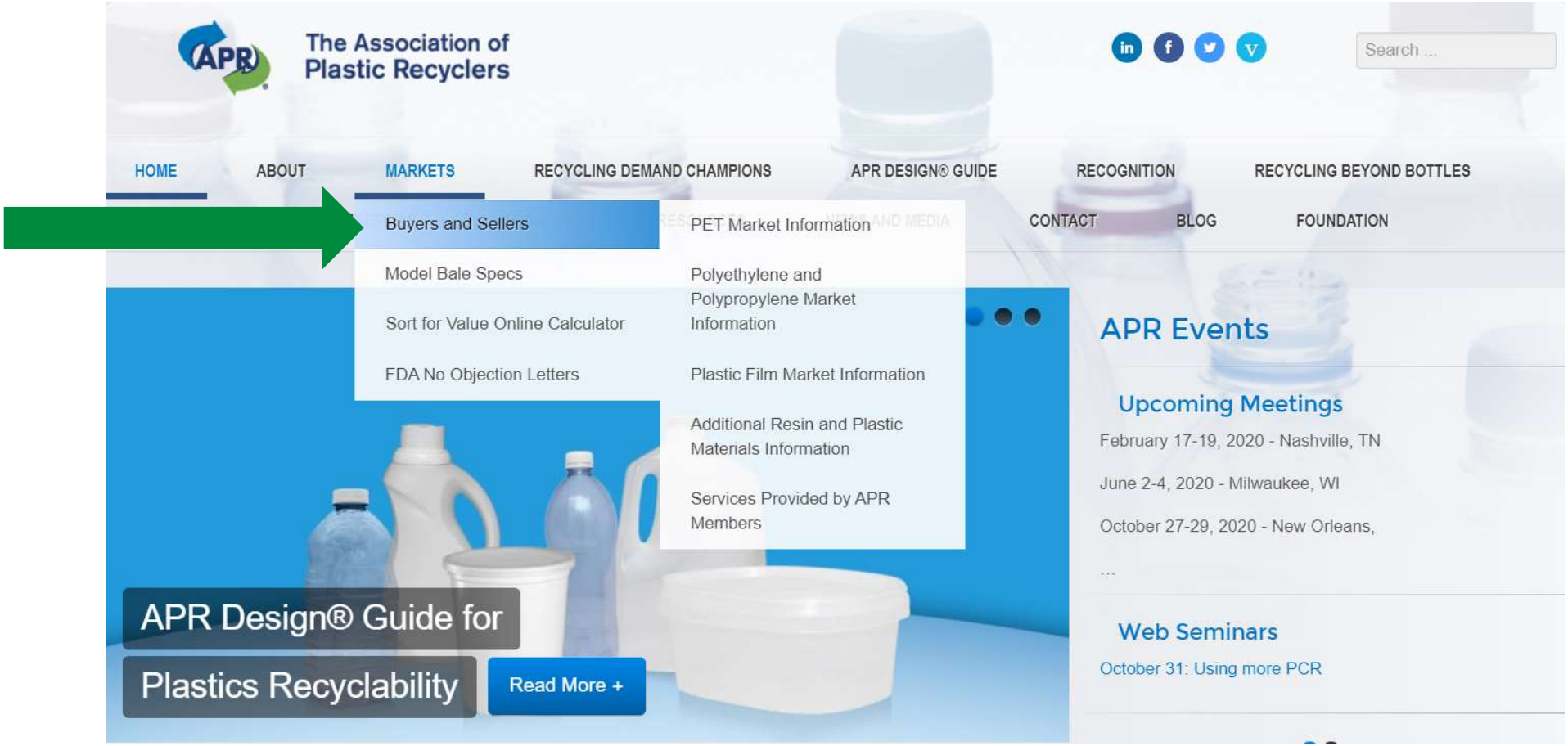
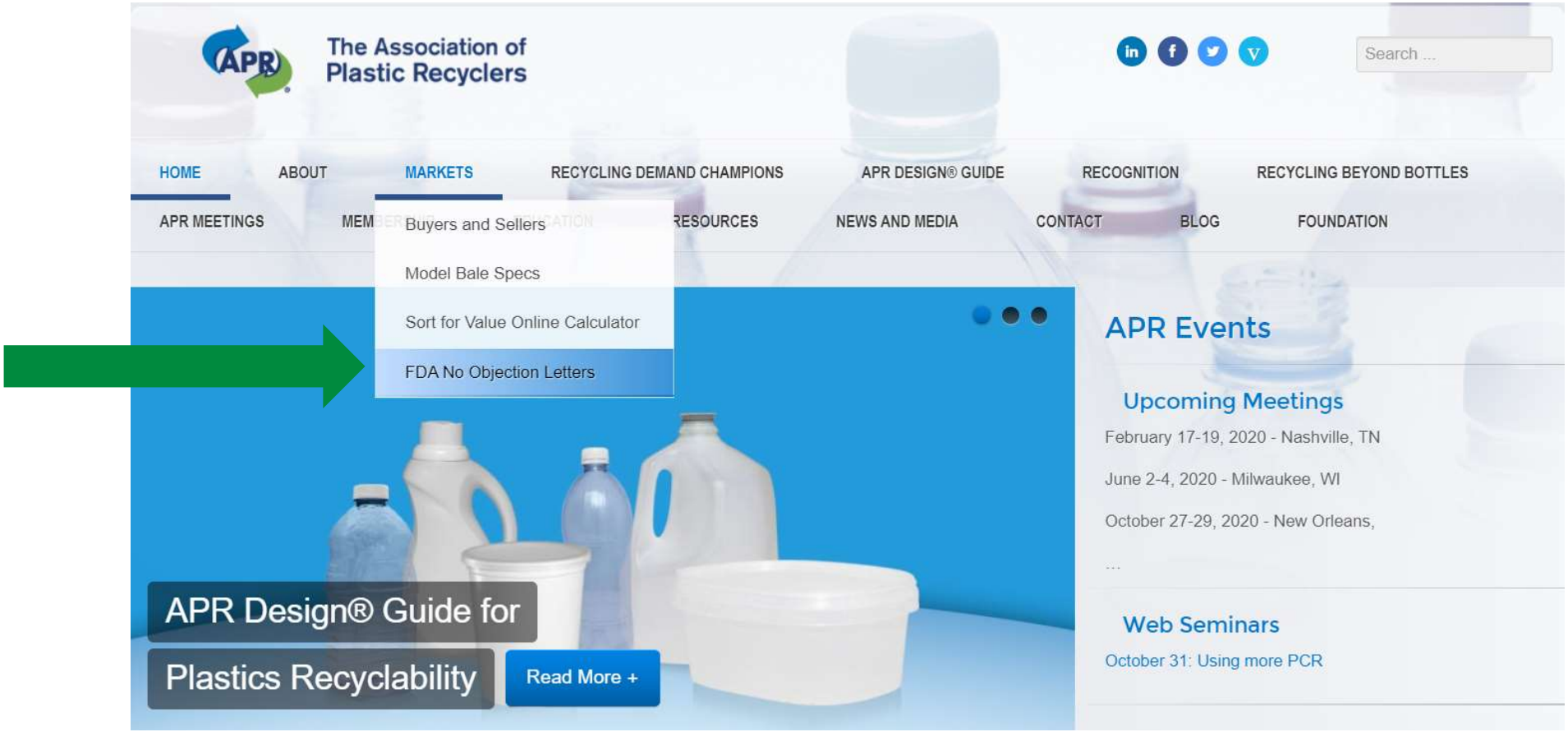
LOCATING PCR SOURCES

www.Plasticsrecycling.org



LOCATING *FDA* PCR SOURCES

www.Plasticsrecycling.org



LOCATING *FDA* PCR SOURCES

www.FDA.gov

U.S. FOOD & DRUG ADMINISTRATION

Home | Food | Drugs | Medical Devices | Radiation-Emitting Products | Vaccines, Blood & Biolo

Submissions on Post-Consumer Recycled (PCR) Pl for Food-Contact Articles

FDA Home › Food Ingredient & Packaging Inventories › Recycled Plastics in Food Packagi
Submissions on Post-Consumer Recycled (PCR) Plastics for Food-Contact Articles

This is a list of submissions for which FDA issued a favorable opinion on the suitability of a specific process for manufacturing of food-contact articles. The list includes the date of our **no objection letter** (NOL), the compan process is physical or chemical, and limitations on the conditions of use for the recycled plastic. Additional infor Recycled Plastics in Food Packaging.

Search and display hints:

- Select the Recycle Number below to view the record details, including its polymer recycling process and
- Select the Date of NOL to view the No Objection Letter.
- To sort by a specific field, click on the column header for that field.
- To browse the records, use the Show All, First/Previous/Next/Last, and Jump To options at the bottom of
- To search for a specific substance/term, enter the term in the Search box and select Show Items to displa results also includes terms not shown on this page, but included in the full record on the detail page.)
- The search results will return hits of records containing words that include the search term. For example, application. To limit results to only the searched term, place a space before and after the term in the basic

Download data from this searchable database in Excel format. If you need help accessing information in dif Players.

Basic Search | Advanced Search | Field Search

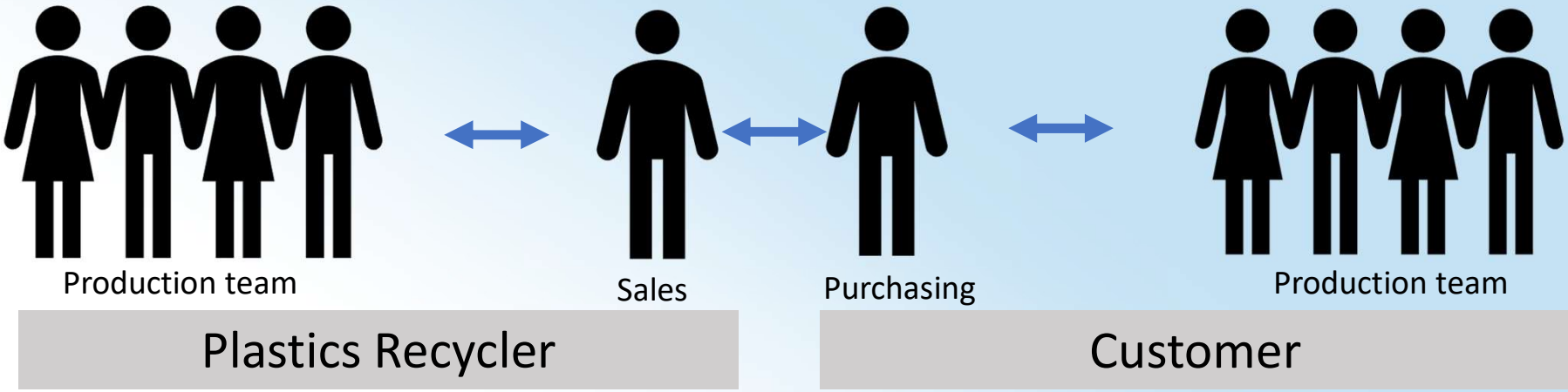
Search: Show Items Clear

Records Found: 219 Show All Page 1 of 5

Recycle Number (sorted Z-A)	Date of NOL	Company	Polymer
219	Jul 31, 2019 (PDF, 127kB)	Wiley & Rein on behalf of Envision Plastics Inc.	HDPE
218	Jun 13, 2019 (PDF, 130kB)	Keller & Heckman on behalf of Global Holdings and Development LLC	PET
217	May 28, 2019 (PDF, 125kB)	Wiley & Rein on behalf of Plastic Recycling Inc.	PP
216	May 23, 2019 (PDF, 124kB)	Keller & Heckman on behalf of Papier-Mettler KG	LDPE
215	Oct 18, 2018 (PDF, 44kB)	Intertek Health, Environmental & Regulatory Services on behalf of Aaron Industries Corporation	PP and HDPE
214	Aug 24, 2018 (PDF, 26kB)	Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Veolia Beteiligungsgesellschaft mbH	PET
213	Aug 13, 2018	Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Polymetrix AG	PET
212	Aug 9, 2018	Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Kreyenborg Plant Technology GmbH & Co. KG	PET
211	Jul 27, 2018	Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Resipol Comércio de Resíduos e Polímeros Plástico, Ltda	PET
210	Jul 27, 2018	Keller & Heckman on behalf of Nuvida Plastic Technologies Inc.	PP and HDPE
209	Mar 22, 2018	Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Reifenhäuser Cast Sheet Coating GmbH & Co. KG	PET
208	Mar 22, 2018	Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Total Research and Technology Feluy	HDPE
207	Feb 8, 2018	Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Kreyenborg Plant Technology GmbH & Co. KG	PET
206	Nov 29, 2017	Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Battenfeld Cincinnati Germany GmbH	PET
205	Oct 17, 2017	Wiley Rein LLP on behalf of KW Plastics	HDPE
204	Sep 6, 2017	Keller & Heckman on behalf of CORESA Compañía Recicladora S.A	PET
203	Jul 10, 2017	Fraunhofer-Institute for Process Engineering and Packaging (IVV) on behalf of Luigi Bandera S.p.A.	PET
202	Jul 7, 2017	Keller & Heckman on behalf of Envision Plastics	PP
201	Jun 22, 2017	Keller & Heckman on behalf of rePlanet Holdings, Inc.	PET
200	Jun 1, 2017	Keller & Heckman on behalf of Envision Plastics	HDPE

COMMUNICATION:

The key to a good relationship



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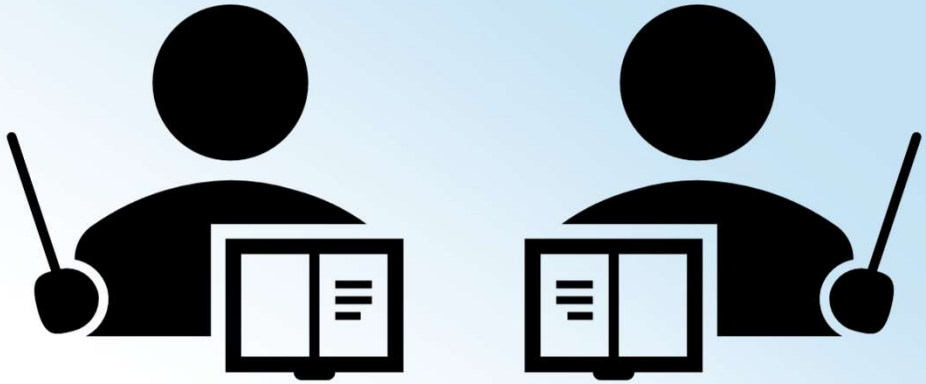
INITIAL COMMUNICATION:

Create and compare spec sheets



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Questions to Ask the Reclaimer:

FDA – Food Contact

Consistency

Bulk Density

Viscosity

Metal ppm

Color

Shipping Method

Dimensions

** ASSIGN A PROJECT MANAGER TO ADDRESS THESE QUESTIONS **

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CONSIDERATIONS

Flake or Pellet

Flake

- Is cheaper
- Conveys and stores differently than virgin
- Contains more fine solid particles
- Is not melt blended

Pellet

- Is more like virgin
- HDPE and film is not available in flake
- Is melt blended (less variable)

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CONSIDERATIONS

Blending

PCR is wider spec. Blending is key

- Evaluate the recyclers blending capabilities
  - Alternating material bales
  - Blending silos
  - Extruders

- Determine if additional blending is required at the purchaser and install if necessary

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IMPLEMENTATION

- ✓ START SMALL
- ✓ WORK GRADUALLY INTO LARGER BATCHES
- ✓ PROVIDE FEEDBACK TO THE RECYCLER AFTER EVERY STEP - Who can address the issue: the recycler or the purchaser?
- ✓ INVOLVE YOUR PRODUCTION AND ENGINEERING TEAMS – Have them communicate with the recycler
- ✓ COMPARE OTHER RECYCLERS
- ✓ USE CONSULTANTS WHO SPECIALIZE IN PCR IMPLEMENTATION
- ✓ EVALUATE RISK : HOW MANY RECYCLERS SHOULD BE QUALIFIED?

Become an APR Recycling

DEMAND CHAMPION

APR Recycling
DEMAND CHAMPIONS

Participating in this critical program is simple.

STEP 1

SIGN COMMITMENT LETTER

APR Recycling Demand Champion Pledge – I will be an APR Recycling Demand Champion!

"I commit to participate in the APR Recycling Demand Champion Program to drive PCR use of broad specification PCR. I will provide an initial list of future actions to the APR within 60 days and timely report progress so positive impacts may be anonymously aggregated and collectively reported. I believe demand creates value and value drives recycling."

See the full commitment letter on our website.

STEP 2

OPTION A – CHOOSE PCR CONTAINING ITEM(S) TO PURCHASE

Everyday use/catalog order items are easily available and actively being used. Examples include:

- trash bags
- mop buckets
- trash cans
- totes
- recycle bins
- safety signs

Also, many companies are purchasing WIP (work-in-process) items:

- pallets
- collapsible pallets
- crates
- totes
- large liquid containers

Visit our website to see vendors for Work in Process (WIP) Items containing PCR

OPTION B – EXPAND YOUR CURRENT USE OF PCR

Increase the amount of PCR in a current product or application, or develop a new product or application for PCR.

2019

APR Recycling
DEMAND CHAMPIONS

INCREASED THEIR PCR USE BY

25.9 MILLION
POUNDS OF POSTCONSUMER RESINS

PCR USES INCLUDE:
- PALLETS
- GAYLORD LINERS
- LABELS
- PACKAGING
- CAN LINERS
- TRASH & RECYCLING BINS
- FILM PRODUCTS

RESULTING IN THESE ESTIMATED IMPACTS

GREENHOUSE GAS EMISSIONS FROM **6,369 PASSENGER VEHICLES** DRIVEN FOR 1 YEAR*

JOB CREATION IN PLASTIC RECYCLING **FOR 337 PEOPLE****

ALL THE PLASTIC RECYCLABLES FROM A CITY THE SIZE OF **MINNEAPOLIS, MINNESOTA*****
(422,331 POPULATION)

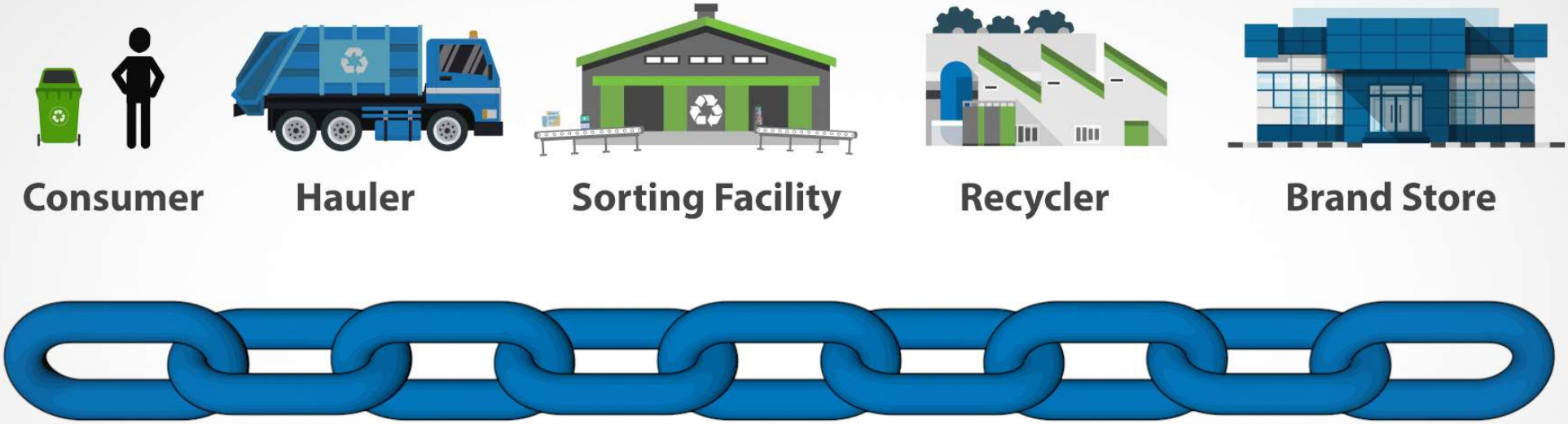
Data sources:
*EPA WARM Model
**Private consultant/industry experts
***The Recycling Partnership

THE APR RECYCLING DEMAND CHAMPIONS - STRENGTHENING AND INCREASING DOMESTIC DEMAND FOR RECYCLABLE PLASTICS


THE APR DESIGN® GUIDE
FOR PLASTICS RECYCLABILITY


APR Recycling
DEMAND
CHAMPIONS

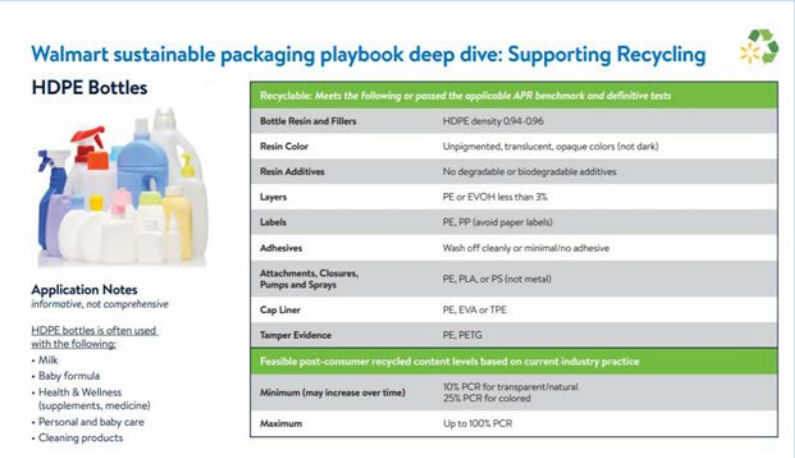

ProjectGigaton
Project Gigaton is designed so that every supplier can participate in at least one pillar
Energy
Renewable Energy
Energy Efficiency
Fleet Efficiency
Agriculture
Fertilizer Optimization
Animal Agriculture
Waste
Food and Solid Waste Reduction
Packaging
Recycled Content
Recyclability
Optimization
Product Use
More Energy Efficient Products
Low-GWP Refrigerants
Forests
Avoid Deforestation
Restoration



How the recycling chain works, from first use to reuse.

DESIGNING FOR RECYCLABILITY

- Leverage the Walmart Recycling Playbook and APR Design Guide for Plastics Recyclability
- Use the How2Recycle label for consumer messaging



Walmart sustainable packaging playbook deep dive: Supporting Recycling

HDPE Bottles

Application Notes
informative, not comprehensive

HDPE bottles is often used with the following:
- Milk
- Baby formula
- Health & Wellness (supplements, medicine)
- Personal and baby care
- Cleaning products

Recyclable: Meets the following or passed the applicable APR benchmark and definitive tests	
Bottle Resin and Fillers	HDPE density 0.94-0.96
Resin Color	Unpigmented, translucent, opaque colors (not dark)
Resin Additives	No degradable or biodegradable additives
Layers	PE or EVOH less than 3%
Labels	PE, PP (avoid paper labels)
Adhesives	Wash off cleanly or minimal/no adhesive
Attachments, Closures, Pumps and Sprays	PE, PLA, or PS (not metal)
Cap Liner	PE, EVA or TPE
Tamper Evidence	PE, PETG
Feasible post-consumer recycled content levels based on current industry practice	
Minimum (may increase over time)	10% PCR for transparent/natural 25% PCR for colored
Maximum	Up to 100% PCR

The Association of Plastic Recyclers

QUESTIONS

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