APR Workshop How to Navigate Our Complex Industry

Plastics Recycling Conference March 6, 2023



The Truth About Plastics Recycling: Facts, Data, and Solutions

Megan Byers Program Director

Plastics Recycling Conference March 6, 2023



WHO IS APR?



The only North American organization focused exclusively on plastics recycling.



Design For Recyclability (making plastic recycling possible)

APR Design® Guide for Plastics Recyclability

Sorting potential protocols

Global Design Catalog

Design Recognition

Critical Guidance

Meets Preferred Guidance

Responsible Innovation

Applications Guidance

Design Guide Training

On site or virtual

Full day or lunch &learn

Growth

Policy

Inclusion of design in legislation

EPR

PCR mandates

Bottle bills

Market Development

Buyers & Sellers

APR PCR Certification

Demand Champions

PCR Product Vendors

Grocery Rigid Plastics

Bale Specifications

Education & Thought Leadership

Social media

Blog

The Wrap

Library

Webinars

Podcast

Buy Recycled

APR Programs





TRUE OR FALSE?

"Only 8% of what goes in the bin gets recycled."



FALSE!

About 90% of the material that consumers put in their recycling bins does get recycled.

Accepted materials are recycled (ie, consumer packaging).

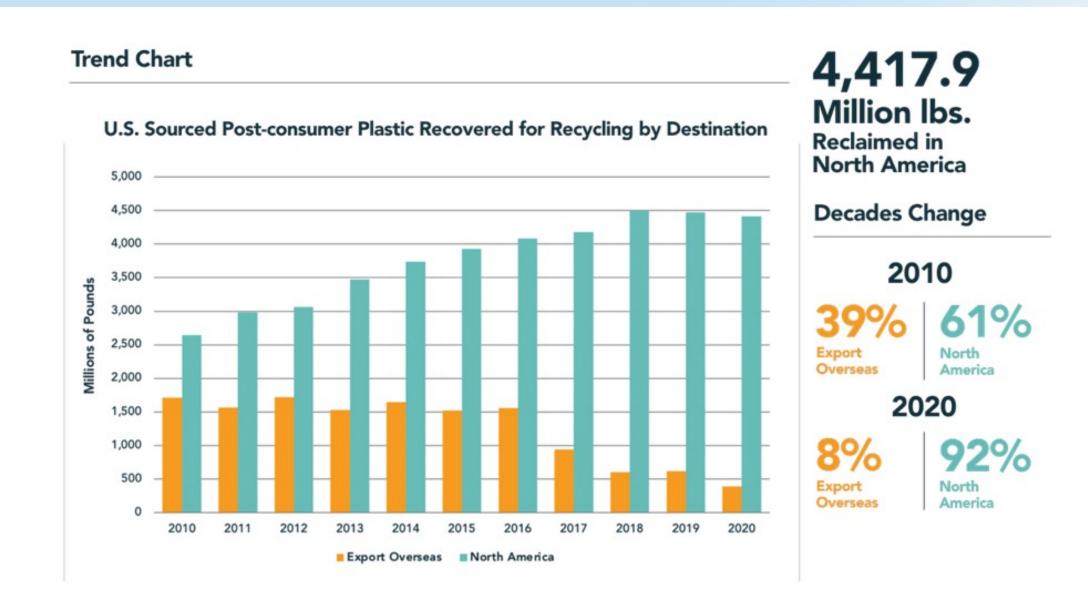
MRFs vary and sortation is imperfect, but garbage /contamination is the main source of yield loss for MRFs.

A few numbers to start with...

- 80% of plastic packaging generated in the U.S. is rigid PET, HDPE and PP.
- Based on the latest EPA data (2020), about 20% of this rigid plastic packaging is recycled.
- The combined recycling rate for PET and HDPE bottles is 28%.
- We have the reclamation capacity today to raise the PET and HDPE recycling rate to >40%.



>90% of plastics are recycled domestically

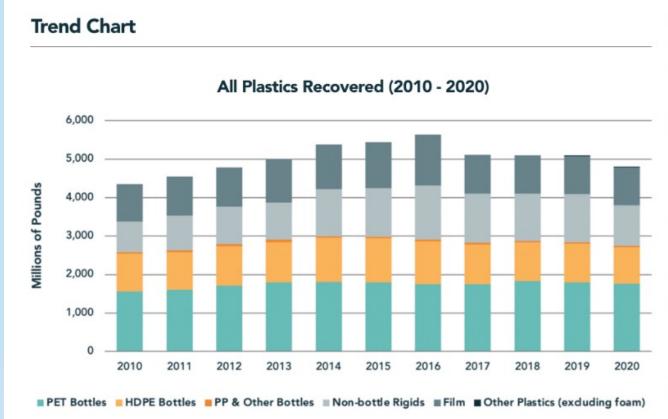


Sources:





2020 U.S. Post-consumer Plastic Recycling Data Report



In 2020, a minimum of 4,803.8 million pounds of post-consumer plastic material sourced in the U.S. was recovered for recycling in the categories of Bottles (by resin), Non-bottle Rigids, Film, and Other Plastics (excluding foam).

Since 2019

5.7% Decrease Overall

The categories of Bottles, Non-bottle Rigids, Film and Other Plastics (excluding foam) tracked in previous years, decreased by a combined 290 million pounds in 2020, or 5.7%.

Largest Increase - 0.8% t

Film

8.0 Million lbs.

Largest Decrease - 16.3% ↓

Non-bottle Rigids

206.1 Million lbs.





We need material!



Supply

- Recycling Program Fluctuations
- Consumer Participation
- Lack of Material
- Mixed Market Signals
- Market Consistency
- Consumer Brand Requirements







Plastic Recyclers Need More Supply and End Market Consistency

For a variety of reasons, including legislative activity and brand sustainability commitments, demand for recycled content is now at an all-time high.



The demand for clear, FDA (food grade) recycled plastics now outweighs the available supply.



We need strong, reliable demand for the colored, non-FDA material.





Long Term Contracts
Facilitate Market Growth.



- Ensure that all new products and packaging being made today are **Circular by Design™:** compatible with today's recycling system, reducing contamination, and enhancing the stream of PCR available to manufacture into new products.
- Harmonize the types of plastic at a minimum, PET, HDPE and PP that are placed on the market and collected in each community program so that plastic items are universally recyclable.
- Continue to promote and incentivize the use of recycled content. High demand for PCR is the essential driver for recycling.
- Streamline labeling to minimize consumer confusion and ensure that people know which products are recyclable and what to do with them.



- Increase the number of community recycling programs and varied points of access.
- Reach diverse and underserved communities, geographically and demographically, in urban and rural areas, including multifamily.
- Invest in upgrades to current community collection and sortation infrastructure so that they can handle more material.
- Encourage the consideration of the true costs of disposal and virgin materials.
- Policy must be a driver well designed EPR, deposit return systems, PCR mandates, standardized labeling.





Package Design



Communication



Policy



"Consumer product companies must design their packaging so that they are their own raw material suppliers in a circular economy.

It is difficult for recyclers to manufacture a clean supply of recycled resin if the material they receive is contaminated with non-recyclable packaging."

Steve Alexander

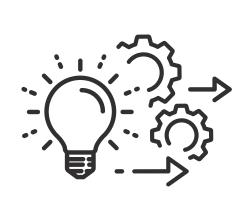
President & CEO





What can we do to boost plastics recycling? Package Design





APR Technical Programs

Curt Cozart COO

Plastics Recycling Conference March 6, 2023



TECHNICAL PROGRAM GOAL

Improving PCR quality and overall system efficiency by aligning package design and infrastructure capabilities



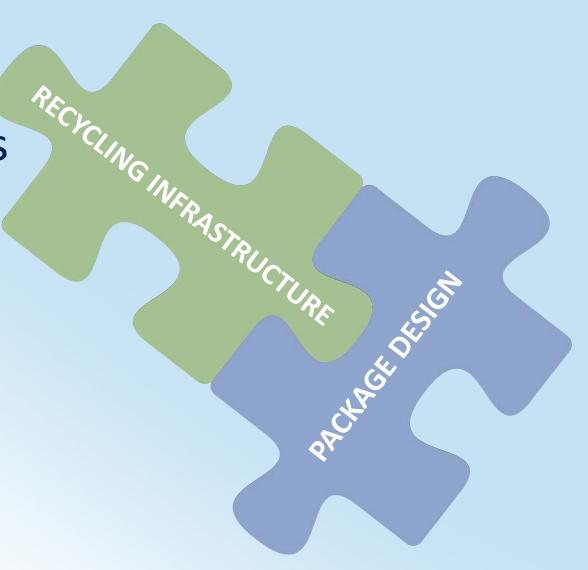




TECHNICAL PROGRAMS

 The APR Design® Guide for Plastics Recyclability

- Test protocols
- Design Recognition
- Training







CYCLINGURE



THE APR DESIGN® GUIDE FOR PLASTICS RECYCLABILITY

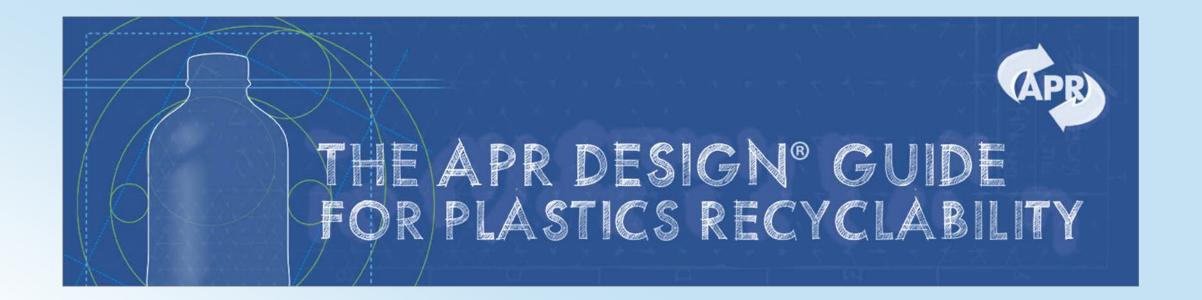


A package is a compilation of design features



Inks Layers Size **Attachments** ADMESIVE LABEL Color Polymer Shape Additives





Each design feature is classified into a recyclability category

- APR Design® Preferred
- Detrimental to recycling but recyclable
- Renders the package non-recyclable
- Requires testing





	RECYCLABILITY CATEGORIES			
DESIGN FEATURES	PREFERRED	DETRIMENTAL TO RECYCLING	RENDERS THE PACKAGE NON RECYCLABLE	REQUIRES TESTING
Inks				
Layers				
Size				
Attachments				
Adhesive				
Label				
Color				
Polymer				
Shape				
Additives				
etc.				
Recyclable?	Yes	Yes	No	Unknown



Is My Package Recyclable According to APR?

A package is a compilation of design features

Inks
Layers
Size
Attachments
ADHESIVE
LABEL
Color
Polymer
Shape
Additives

150

YES



Preferred Design

<u>All</u> Design Features "preferred"



Recyclable with Detrimental Features

Any Design Features "detrimental" <u>None</u> "not recyclable" NO



Non-Recyclable

Any Design Features "render the entire package not recyclable"

Alignment with Other Organizations

Preferred Design

All Design Features
"preferred"

Any Design Features
"detrimental"
None "not recyclable"

A package is a compilation of design features

Inks
Layers
Size
Attachments
ADHESIVE
LABEL
Color
Polymer
Shape
Additives

NO



Non-Recyclable

Any Design Features "render the entire package not recyclable"

Test Protocols

Simulate the industrial process at a lab/pilot scale



Sorting

- Size
- NIR
- Metal
- 2d/3d

Cleaning

- Screening
- Benchmark
- Critical guidance



Recognition Programs

Positive test results + Review

Get Recognized











Meets Critical Guidance

	RECYCLABILITY CATEGORIES			
DESIGN FEATURES	PREFERRED	DETRIMENTAL TO RECYCLING	RENDERS THE PACKAGE NON RECYCLABLE	REQUIRES TESTING
			REND	
Inks				
Layers				
Size				
Attachments				
Adhesive				
Label				
Color				
Polymer				
Shape				
Additives				
etc.				
Recyclable?	Yes	Yes	No	Unknown







	RECYCLABILITY CATEGORIES			
DESIGN FEATURES	PREFERRED	DETRIMENTAL TO RECYCLING	RENDERS THE PACKAGE NON RECYCLABLE	REQUIRES TESTING
Inks				
Layers				
Size				
Attachments	+			
Adhesive				
Label				
Color				
Polymer				
Shape				
Additives				
etc.				
Recyclable?	Yes	Yes	No	Unknown



Available Recognitions

- All plastic pumps and sprayers
- NIR sortable dark colorants
- Labels + Inks + adhesives for PET
- Labels + Inks w/o adhesive for PET
- Inks for PET
- Labels for colored HDPE
- Caps and closures for PET
- Caps and closures for HDPE

Coming soon

HDPE and PET resins

Get Recognized





DESIGN GUIDE TRAINING PROGRAM COMPLETED





























































RESULTS FROM THE DESIGN GUIDE

WELL ESTABLISHED

- EPET
- CPET
- NIR sortable dark colorants
- Recycle friendly pressure sensitive adhesives

MORE RECENT

- Metalized PE films
- "Airplane" liquor bottles
- Recycle friendly nylon barrier
- Low yellowing oxygen scavengers
- UV blocking label which promotes sorting
- Blister pack for store drop off



What can we do to boost plastics recycling? Communication



Responding to Skepticism About the Effectiveness of Plastics Recycling

Kara Pochiro VP, Communications & Public Affairs

Plastics Recycling Conference March 6, 2023



The Real Truth About the U.S. Plastic Recycling Rate: 2021 U.S. Facts and Figures

May 4, 2022



2018: In 2018, the U.S. EPA reported that a "negligible amount" of plastic cups is recycled in the United States.1

The Last Beach Cleanup





CIRCULAR CLAIMS FALL FLAT AGAIN

2022 UPDATE

Plastic recycling a "failed concept," study says, with only 5% recycled in U.S. last year as production rises OCTOBER 24, 2022 / 6:20 AM / AFP f F F



You sort your recycling, leave it to be collected - and then what? From councils burning the lot to foreign landfill sites overflowing with British rubbish, Oliver Franklin-Wallis reports on a global waste crisis

by Oliver Franklin-Wallis

Sat 17 Aug 2019 07.00 EDT

n alarm sounds, the blockage is cleared, and the line at Green Recycling in Maldon, Essex, rumbles back into life. A momentous river of garbage rolls down the conveyor: cardboard boxes, splintered skirting board, plastic bottles, crisp packets, DVD cases, printer cartridges, countless newspapers, including this one. Odd bits of junk catch the eye, conjuring little vignettes: a single discarded glove. A crushed Tupperware container, the meal inside uneaten. A photograph of a smiling child on an adult's shoulders. But they are gone in a moment. The line at Green Recycling handles up to 12 tonnes of waste an hour.

"We produce 200 to 300 tonnes a day," says Jamie Smith, Green Recycling's general manager, above the din. We are standing three storeys up on the green health-and-safety gangway, looking down the line. On the tipping floor, an excavator is grabbing clawfuls of trash from heaps and piling it into a spinning drum, which spreads it evenly across the conveyor. Along the belt, human workers pick and channel what is valuable (bottles, cardboard, aluminium cans) into sorting chutes.



Get the facts straight



Manage media outreach



Deploy digital content



Empower other voices





✓ It's hard to beat a simple lie with the complex truth.

✓ Counteract misinformation with clear, straightforward data.







Recommit, Reimagine, Rework Recycling

How public policy and investment in post-consumer plastic collection and processing can help to meet sustainability ambitions

Recycling is an essential part of building a more sustainable world. When recycling works, it creates a circular economy, one where products and packaging come back to be made into new products.

Recycling in the U.S. is a \$236 billion industry. Our country has over 9,000 community recycling programs. Material – including plastic – is collected through these programs and sorted and processed by more than 100 post-consumer recyclers in the US and Canada. Plastic recycling alone is responsible for over 200,000 U.S. jobs. 3







2020 U.S. Post-consumer Plastic Recycling Data Report

4.8
Billion lbs.

Bottles, Non-bottle Rigid Plastics, Film and Other Plastics (excluding foam) **PET Bottles**

1,767.7

Millions of pounds

Non-bottle Rigids

1,057.4

Millions of pounds

HDPE Bottles

943.2

Millions of pounds

Film

985.6

Millions of pounds

PP & Other Bottles

33.4

Millions of pounds

Other Plastics (excluding foam)

16.5

Millions of pounds







LIFE CYCLE IMPACTS FOR POSTCONSUMER RECYCLED RESINS: PET, HDPE, AND PP

SUBMITTED TO:



SUBMITTED BY:

Franklin Associates, A Division of Eastern Research Group (ERG)

December 2018

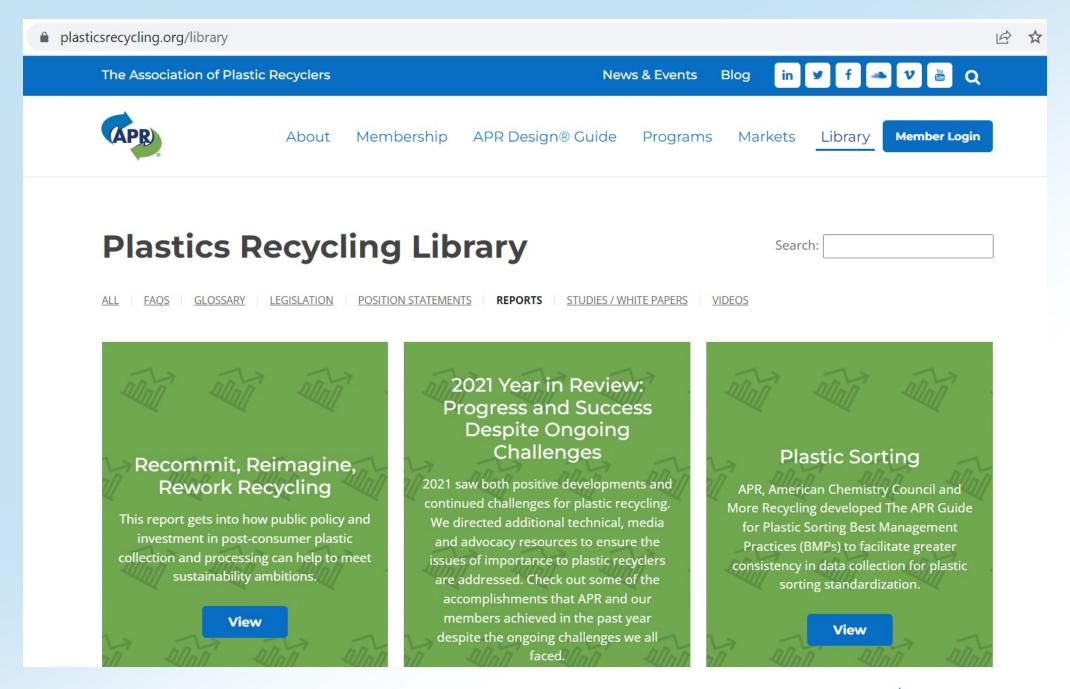
















✓ Become a trustworthy source.

✓ Share consistent on-message content.

✓ Educational meetings.





Industry Publications

Plastics Recycling Update

Resource Recycling

Plastics News

Recycling Today

Waste Dive

Packaging Dive

Beverage Daily









Mainstream Media

Wall Street Journal

Vice

Financial Times

The Guardian

The Hill

Market Watch

Eco Watch

ABC News

Morning Brew

CBS News

Salon

Time









FINANCIAL TIMES

icals and Manufacturing

Waste management & recycling (+ Add to myFT

Plastic recycling: green necessity or waste of effort?

As interest grows in new technologies for reusing waste, critics warn about greenwashing





What we can't solve on our own without government intervention is the supply issue. We need more material. It's as simple as that

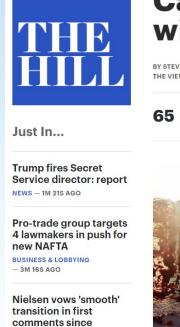
Steve Alexander, chair of The Association of Plastic Recyclers,



Steve Alexander, chair of North American industry body The Association of Plastic Recyclers, says the industry could solve all its other challenges if it had a stable supply of waste. "Recyclers have ample capacity to recycle as much material as necessary," he says. "We can solve the design issue, the sortation issue, the processing issue, the end-market issue. What we can't solve on our own without government intervention is the supply issue. We need more material. It's as simple as that.







resignation

ADMINISTRATION - 3M 43S AGO







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LETTERS TO THE EDITOR COMMENTARY

U.S. recycling of plastics will continue strong — no matter what China does

News ▼ Sports ▼ Politics ▼ Commentary ▼ Life & Culture ▼ Obituaries ▼ Classifieds ▼ E-Paper More ▼ **貸 f**

There are three way we can all help recycling in the U.S. work even better.

By Letters to the Editor | Jul 17, 2019, 12:48pm EST









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That's a Wrap!



This week in plastics recycling, sorted for you.

Week of October 28, 2022

APR in the News

October 27, Waste Dive

Plastic recycling rates are low. Could better data collection help?

Organizations are puzzling out recycling rates using multiple sources. The Association of Plastic Recyclers' annual report on plastic recycling is a reliable source that covers recent reports on 2020 data.

October 26, Label & Narrow Web

APR expands Meets Preferred Guidance Program

APR has announced that Near Infrared (NIR) sortable dark color concentrates will be included in the Meets Preferred Guidance (MPG) Program.

October 26, Label & Narrow Web

UPM Raflatac gets APR recognition for PSL with acrylic adhesive for PP bottle recycling

UPM Raflatac recently received recognition by the Association of Plastic Recyclers (APR) for their undecorated white PP and clear PP pressure sensitive label (PSL) materials with acrylic adhesive for PP bottle recycling.

October 25, Greenfield Recorder

My Turn: Recycling practices explained

Small items like loose bottle caps are not accepted in local recycling programs. The APR "caps on" campaign is helping to ensure these items don't go to waste.

October 25, Plastics Recycling Update

Industry responds to Greenpeace attack

A new report from Greenpeace USA asserts no plastics in the U.S. meet the definition of recyclable. Several plastics industry groups, including the Association of Plastic Recyclers (APR), pushed back against the claims in the report.

October 25, Plastics Recycling Update

Reclaimer touts only certified PCR stretch film

Plastics reclaimer and film manufacturer Revolution has released a stretch film made with 10% post-consumer resin. Revolution has multiple recycled plastics that are recognized by the



Deploy digital content

✓ Meet target audiences – media, policymakers, brand companies.

✓ Consistent, relevant, current website content.

✓ Social Media, digital advertising.





Deploy digital content



Manufacturing products with recycled plastics means **BIG energy savings.**



Making products from recycled PET, HDPE and PP saves more electricity than is consumed annually in all of Los Angeles.



Making products from recycled PET, HDPE and PP reduces GHG emissions the same amount as taking **nearly half a million cars off the road.**



To learn more about the environmental benefits of the Cycle of Recycling, visit plasticsrecycling.org.

USING RECYCLED PLASTIC SAVES ENERGY AND LOWERS EMISSIONS



Reduce energy consumption by at least 79%.

Reduce GHG emissions by at least 67%.



Recycling and using recycled materials is good for manufacturers, consumers, and the planet.





Attacks on recycling are really attacks on plastic. Organizations like the Last Beach Cleanup and Greenpeace have lumped the two issues together because they do not want recycling to work. That's because their real goal – openly stated – is to drastically reduce or ban plastic. They do not want a strong recycling system because they do not want a solution to the plastic waste problem. Without a solution, the path is easier to their pursuit of a plastic ban.



- APR President Steve Alexander











Plastics recycling doesn't work and will never work.



Plastics recycling WORKS. In 2020 alone American recyclers processed 4.8 billion pounds of post-consumer plastic material.

Know before you buy. #PlasticsRecyclingWorks













Plastic is virtually impossible to sort for recycling.



PET, HDPE, and PP rigid plastic packaging is rapidly and accurately sorted by NIR Optical Sorters at MRFs everyday. Sorting plastics is standard practice in the recycling process.

Now you know. #PlasticsRecyclingWorks













Post-consumer Polypropylene (PP, #5) packaging and products have never been recyclable or recycled.



In 2020 398 million pounds of PP was recycled including cups, tubs, and bottles.

Know before you buy. #PlasticsRecyclingWorks











Plastics cause fires at Material Recovery Facilities (MRFs).





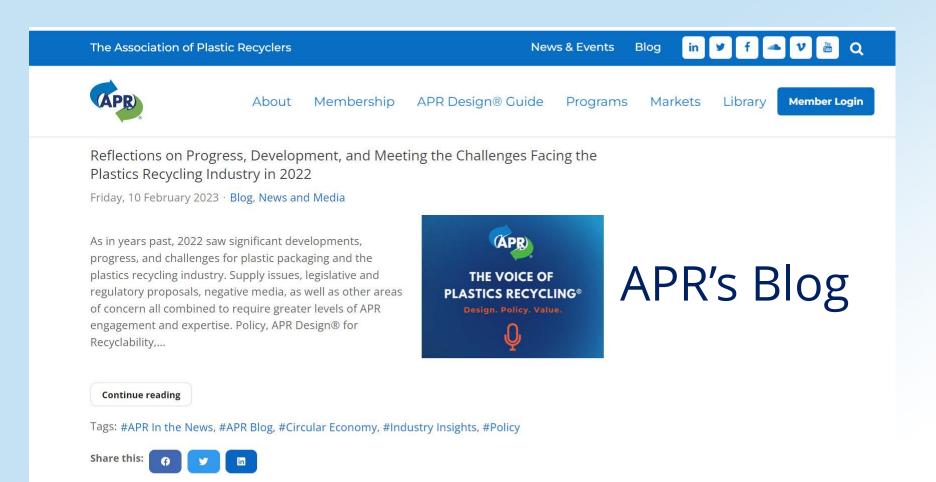
Lithium-ion batteries that are inappropriately included in recycling bins cause fires at MRFs. Plastics do not cause fires.

Now you know.
#PlasticsRecyclingWorks







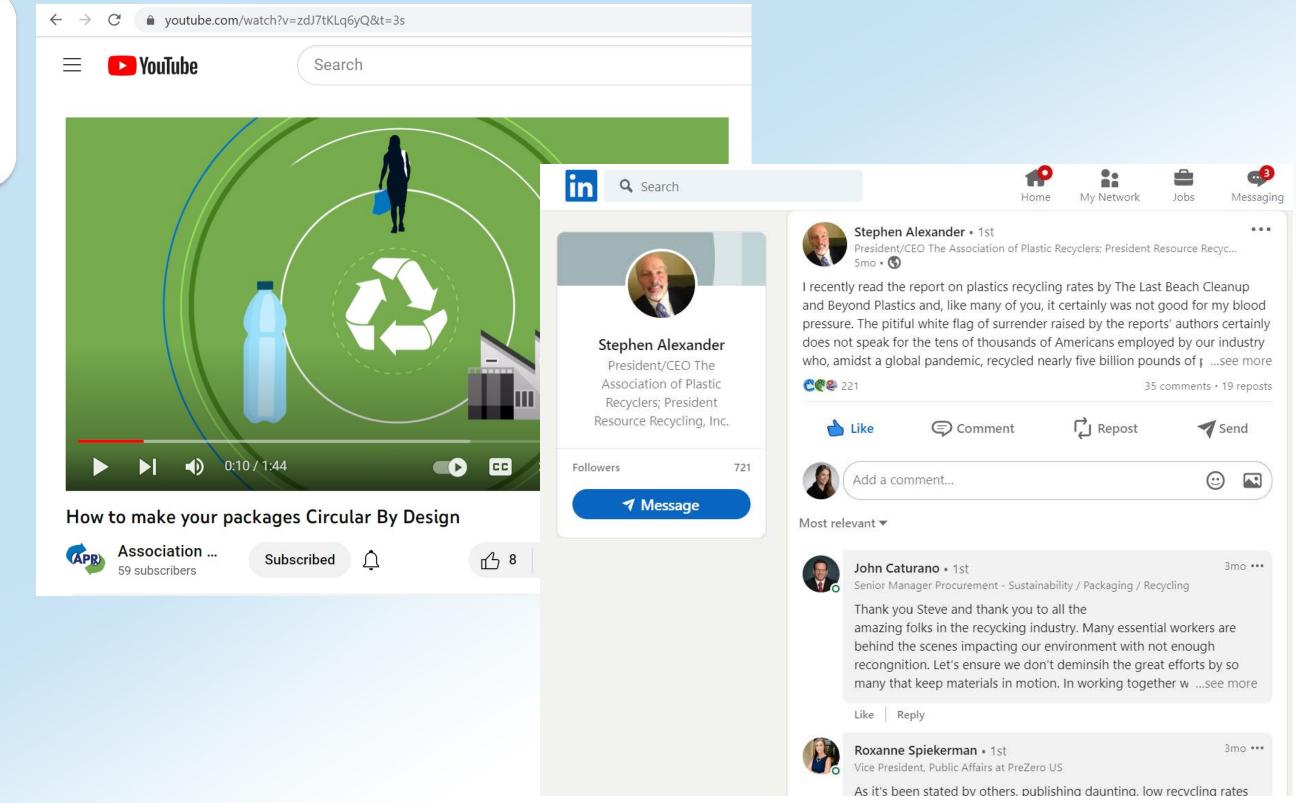








Deploy digital content





✓ Share tools and resources.

✓ Leverage third-party allies.



























The Association of Plastic Recyclers

www.plasticsrecycling.org





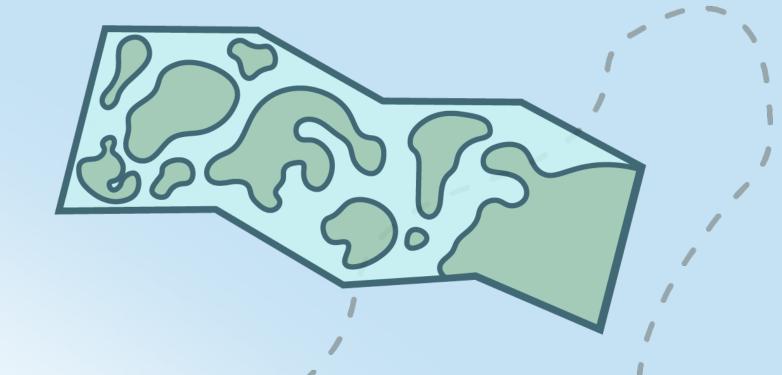


Kara PochiroVP of Communications
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What can we do to boost plastics recycling? Policy







NAVIGATING PUBLIC POLICY ON PLASTICS RECYCLING

Kate Bailey, Chief Policy Officer Plastics Recycling Conference March 6, 2023

WHAT WE'LL COVER TODAY

Role of policy

How to engage









POLITICS OF PLASTICS



THE ROLE OF PLASTICS RECYCLING

We are a necessary part of the solution.

Plastics recycling works every day.

We have the capacity to recycle more today.

We can recycle more so we can all use less.



GOALS OF PLASTICS RECYCLING POLICIES







STRONGER, CONSISTENT DEMAND



IMPROVE QUALITY







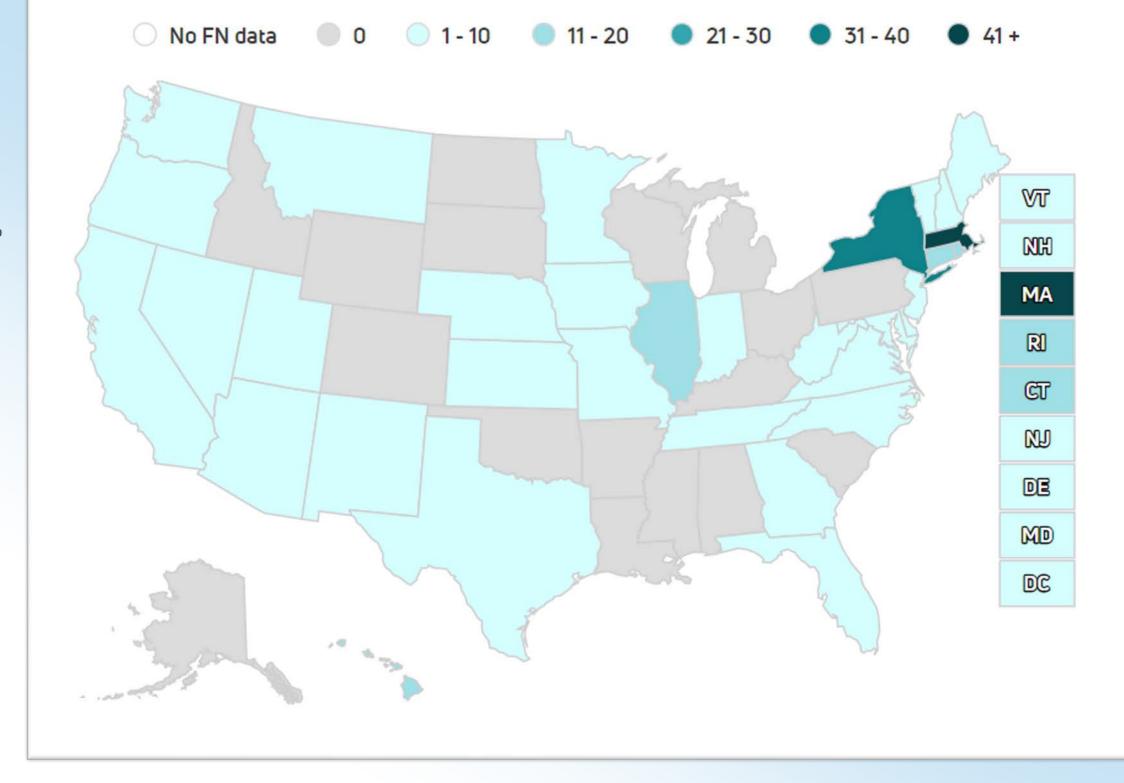
LOCAL POLICIES

- ~9000 community recycling programs
- Most managed by municipal fleets or contract agreements
- Local decisions affect our everyday operations
- Access to services, participation, materials collected, contamination rates, end markets
- Climate action plans



STATE LEVEL

200+ recycling bills to date in 2023





STATE POLICY TRENDS



Three major policies

EPR for packaging

DRS: deposit return system

PCR: recycled content requirements



More hot topics

Truth in labeling

Reducing toxins in packaging

Bans on single-use products

Chemical recycling regulations

Reuse/refill goals



STATE RULEMAKING & IMPLEMENTATION

EPR for packaging:

• CA, CO, OR, ME

Recycled content:

• CA, WA, NJ

Labeling:

• CA SB343



FEDERAL LEVEL



More proposed bills in past year than in past 20 years combined

Significant capital and education investments

EPA National Recycling Strategy

FTC Green Guides

EO to phase out single-use plastics



ANTICIPATED FEDERAL BILLS

- Recycling Infrastructure and Accessibility Act
- Recycling & Composting Accountability Act
- Break Free From Plastic Pollution Act
- ACC proposal to counter Break Free
- National bottle bill (REDEEM Act)
- National labeling standard



GLOBAL POLICY TRENDS

United Nations

Global plastics treaty

Climate accords

Canada

Single-use plastics prohibition

Zero Plastic Waste Action Plan

European Union

- Single-use Plastics Directive
- Revised packaging directive





HOW TO ENGAGE



RULE #1:

YOU DON'T HAVE
TO BE A
LOBBYIST





3 STEPS IN POLICY PROCESS

Educate elected officials & public staff



Develop and pass smart, effective legislation



Support rulemaking & implementation



WAYS YOU CAN ENGAGE

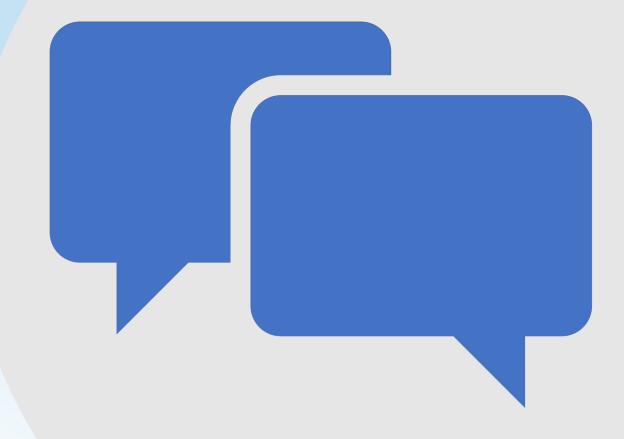
- Talk about the benefits of what you do: jobs, GHG, diversion
- Talk about how plastics recycling works: be a resource
- Meet with public staff & elected officials
- Host public tours and events
- Join state recycling organizations
- Engage in rulemaking and stakeholder process
- Testify, submit comments, and lobby



RESOURCES

- APR position statements
- America's Bottle Bill
- OneSource Coalition
- Guide to EPR policies

Kate Bailey, Chief Policy Officer katebailey@plasticsrecycling.org







Your voice is needed!

Now is the time!

Be engaged at any level!





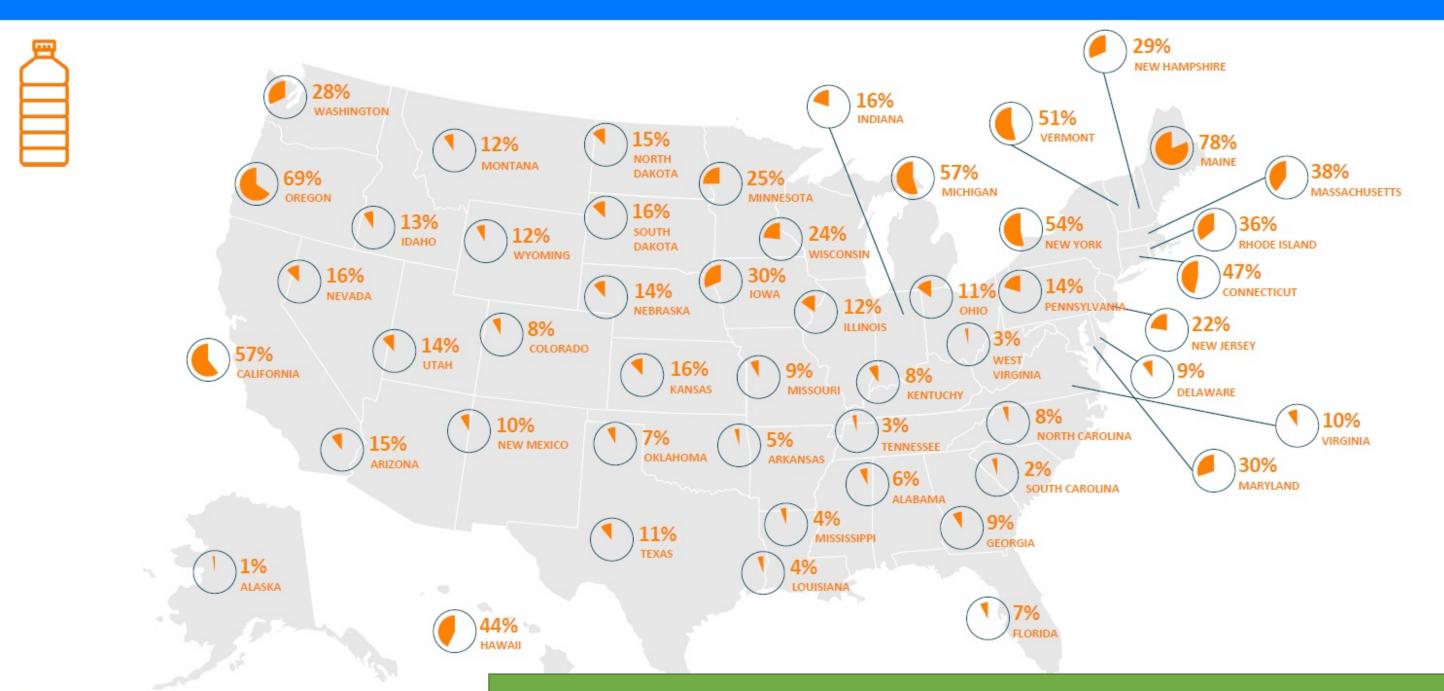
Broad vs Nuanced Misconceptions







PET BOTTLE RECYCLING RATES PER STATE



WHICH 3 STATES WOULD YOU TARGET IN 2024-2025?



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