

QUALITY MATTERS!

Resources for Plastics Recycling

January 25, 2018







AGENDA

Background: Recycling System and National Sword

Why Quality Matters: Sorting Recyclables for Value

What is Industry Doing to Help Communities Improve Quality?

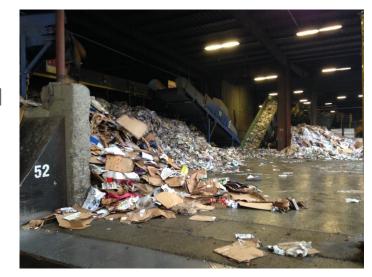
Introduction to the American Chemistry Council

Plastics Recycling Tools and Programs

HOW PLASTICS MOVE FROM HOUSEHOLDS TO NEW PRODUCTS



2. Sorted



3. Baled



*Recycling is a circle, so consider the ways that you can buy more recycled content in your office or at home.



5. Recycled*



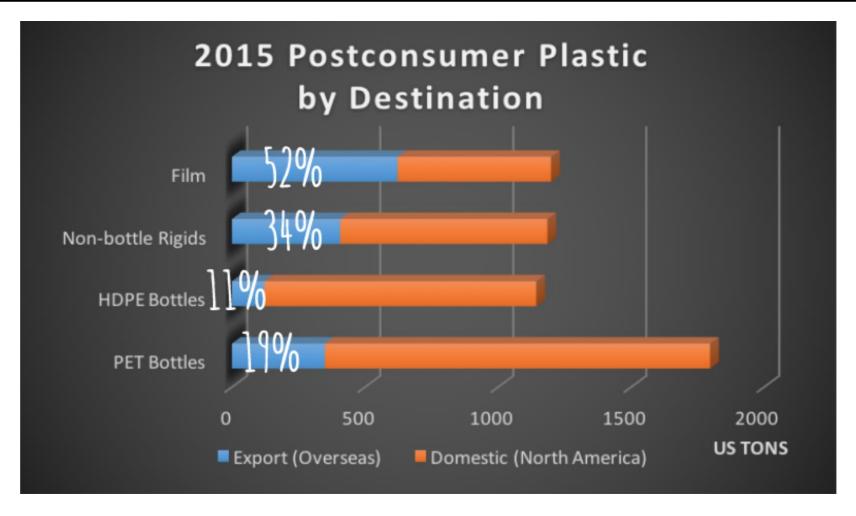
4. Reclaimed

RECYCLING IS A GLOBAL INDUSTRY

- February 2017 China National Sword
- July 2017 WTO Notice import ban
 - Post-consumer plastics
 Mixed paper
- January 1, 2018: Other materials have to meet stringent contamination levels to be imported (effectively banning some baled material).

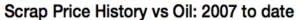


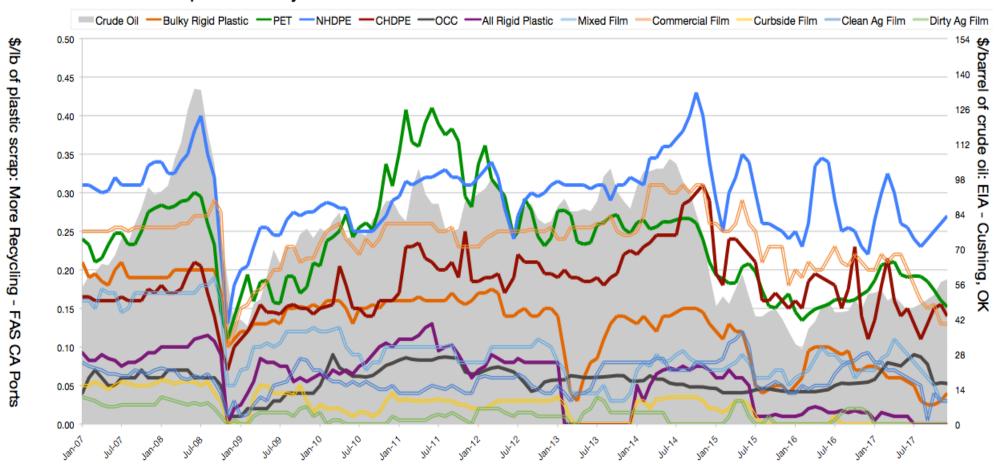
PLASTIC TYPES: EXPORTED VS. DOMESTIC USE



28% of all plastics exported in 2015

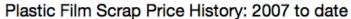
ALL PLASTICS HISTORICAL SCRAP PRICE

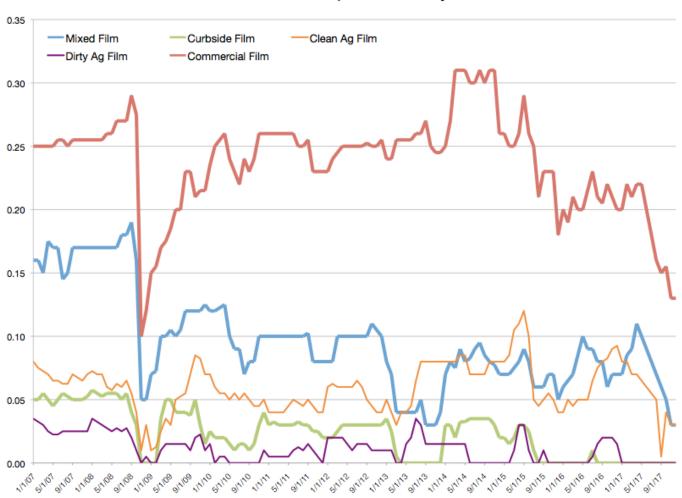




Source: More Recycling

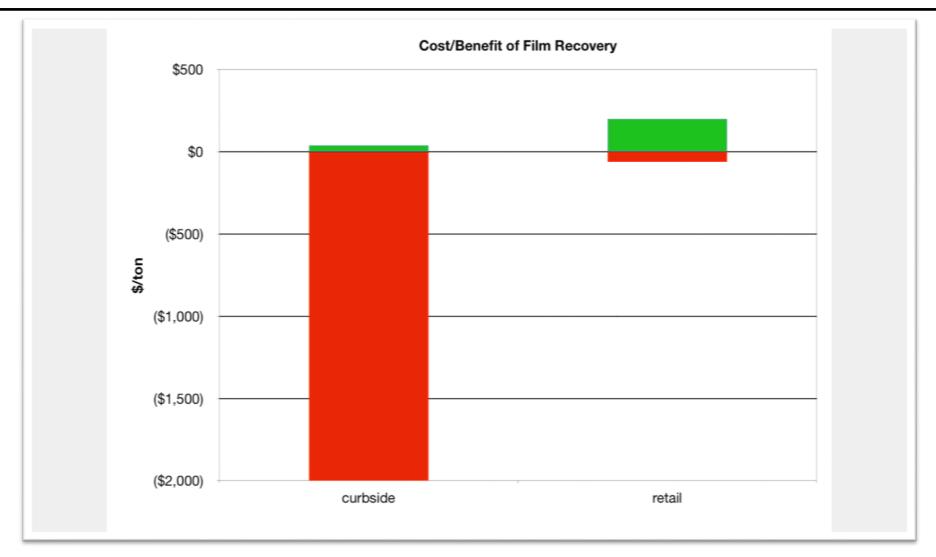
FILM GRADES HISTORICAL PRICES





Source: More Recycling

FILM CURBSIDE VERSUS RETAIL COSTS



Source: More Recycling

HOW OUTREACH LEADS TO QUALITY

Remember to:

- 1. Keep Messages Simple
- 2. Make Information Easy to Find
- 3. Use Graphics/Images to Amplify Your Message



Because you are the source of information for your residents!

PLASTIC FILM RECYCLING WEBSITE



Events News & Media Contact Us Resources About Us

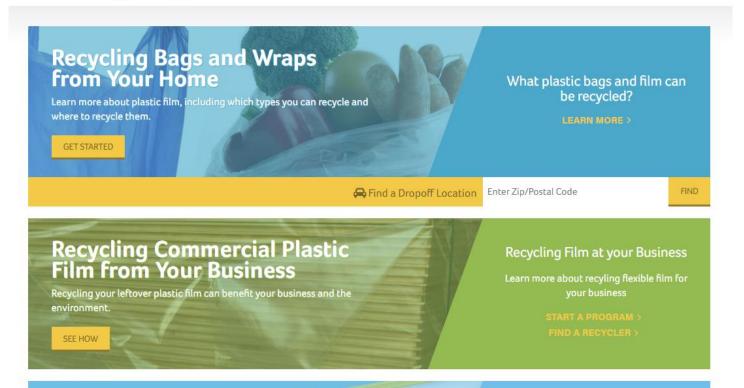








Recycling Bags and Wraps * Recycling Commercial Film * Recycling in Your Community *



PlasticFilmRecycling.org



Recycling in your Community

LEARN HOW

Find out what ways you can best communicate to your

RECYCLE YOUR PLASTICS WEBSITE

Terms & Tools



What are the Terms & Tools?

This site helps community recycling programs more effectively educate their residents about which plastics to recycle. Our Outreach Builder tool lets you choose common plastics recycling terms that best fit your program, then download free images for your outreach materials or build a custom flyer that shows what can and can't be recycled in your community. Use these terms and watch your plastics recycling quantity and quality grow.

Start the Outreach Builder



RecycleYourPlastics.org



Clear terminology. Better education. More recycling.

Why Use Common Terms to Talk About Plastics Recycling?

Every region has different plastics recycling rules. Using the common terms provided here in your community will help reduce confusion and contamination.

ADDITIONAL ONLINE TOOLS



PlasticsRecycling.org

RECYCLING RESOURCES

- SteelSustainability.org
- RecycleCartons.com
- GlassRecycles.org
- GPI.org (glass)
- PaperRecycles.org

- RecyclingPartnership.org
- PlasticFilmRecycling.org
- RecycleYourPlastics.org
- PlasticsRecycling.org



THANK YOU

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UPDATED TOOLS AND RESOURCES

Increase Quantity and Improve Quality of Recycled Plastics



THE PLASTICS RECYCLING TERMS AND TOOLS

A resource to increase the quantity and quality of plastics collected

- In 2014, stakeholders came together to come up with a common set of terms for plastics recycling
 - Recyclers
 - Reclaimers
 - Exporters
 - Recycling coordinators
 - Plastics makers
 - Recycling/trade associations
- Created the Plastics Recycling Terms and Tools
 - Outreach Terms: Common terminology and simple tools for community recycling programs in the US and Canada to help these programs communicate more effectively to residents about plastic recycling.
 - Commodity Terms: Streamline communications about buying and selling plastics that have been collected in the plastics value chain.



WHY PLASTICS RECYCLING TERMS?

A new way of talking about plastics recycling

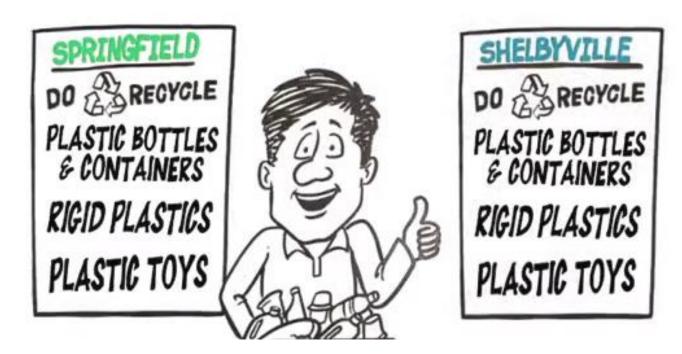
- Plastics recycling can be confusing
 - The types of plastics collected for recycling varies from one community to the other
 - The language we use to talk about plastics recycling varies



WHY PLASTICS RECYCLING TERMS?

A new way of talking about plastics recycling

- Plastics recycling can be confusing
 - Clear, descriptive recycling instructions are more effective than numbers
 - Images reinforce written instructions



TERMS AND TOOLS RESOURCES

Terms & Tools



What are the Terms & Tools?

This site helps community recycling programs more effectively educate their residents about which plastics to recycle. Our Outreach Builder tool lets you choose common plastics recycling terms that best fit your program, then download free images for your outreach materials or build a custom flyer that shows what can and can't be recycled in your community. Use these terms and watch your plastics recycling quantity and quality grow.

Start the Outreach Builder



Why Use Common Terms to Talk About Plastics Recycling?

Every region has different plastics recycling rules. Using the common terms provided here in your community will help reduce confusion and contamination.

STEP 1: SELECT YOUR MAIN PROGRAM



The Terms & Tools were designed with input from recycling professionals to be simple, intuitive and comprehensive. Simply match the plastics collected in your recycling program with the new terms. Hover over the terms to see more detailed definitions.

1 Select one category that best describes the plastics you accept.

Tip: You'll be able to add qualifiers in the following steps, so don't worry if the category you choose isn't a perfect match.

Common Outreach Terms

Enter your Community/County/Org City

rg City

- Specific Plastic Bottles & Jars
 - · Plastic PET (1) Bottles & Jars
 - · Plastic HDPE (2) Bottles & Jars
- Specific Plastic Bottles & Containers
 - · Plastic PET (1) Bottles & Jars
 - · Plastic HDPE (2) Bottles & Jars
 - · Plastic PET (1) Containers & Lids

Change Account



Specific Plastic Bottles & Jars

- Plastic PET (1) Bottles & Jars
- · Plastic HDPE (2) Bottles & Jars

Specific Plastic Bottles & Containers

- · Plastic PET (1) Bottles & Jars
- Plastic HDPE (2) Bottles & Jars
- · Plastic PET (1) Containers & Lids
- · Plastic HDPE (2) Containers & Lids

Plastic Beverage Bottles

· Plastic Soda. Water & Other Drink Bottles

Plastic Bottles & Jars

- · Plastic Soda. Water & Other Drink Bottles
- Plastic Food & Household Bottles/Jars

Plastic Bottles & Containers

- · Plastic Soda, Water & Other Drink Bottles
- Plastic Food & Household Bottles/Jars
- Plastic Tubs & Lids
- · Plastic Produce, Deli & Bakery Containers, Cups, Trays
- · Plastic Non-food Containers & Packaging

Rigid Plastic

- · Plastic Soda, Water & Other Drink Bottles
- · Plastic Food & Household Bottles/Jars
- · Plastic Tubs & Lids
- · Plastic Produce, Deli & Bakery Containers, Cups, Trays
- · Plastic Non-food Containers & Packaging
- · Plastic Bulky Items

Plasti

- · Plastic Soda, Water & Other Drink Bottles
- · Plastic Food & Household Bottles/Jars
- Plastic Tubs & Lids
- · Plastic Produce, Deli & Bakery Containers, Cups, Trays
- · Plastic Non-food Containers & Packaging
- Plastic Bulky Items
- · Plastic Bags, Wraps & Film (bag in bag)

STEP 2: SELECT ADDITIONAL ITEMS

2	2 Add any additional items you accept that weren't captured in the category you chose in Step 1.									
		Plastic PET (1) Bottles & Jars		Plastic HDPE (2) Bottles & Jars						
		Plastic PET (1) Containers & Lids		Plastic HDPE (2) Containers & Lids	otured in the c	ategory you chose in Step 1.				
		Plastic PP (5) Bottles		Plastic PP (5) Containers & Packaging		Plastic HDPE (2) Bottles & Jars				
		Plastic Tubs & Lids		Plastic Tubs		Plastic HDPE (2) Containers & Lids				
		Plastic Non-food Containers & Packaging		Plastic Bulky Items		Plastic PP (5) Containers & Packaging				
		Plastic Buckets		Plastic Toys		Plastic Tubs				
		Plastic Flower Pots		Plastic Bags, Wraps & Film (bag in bag)		Plastic Bulky Items				
		Plastic Bags		Foam Blocks & Shapes						
		Foam Food Service & Other Containers		None of these items		Items as large as or larger than a 5 gallon bucket, such as: drums, large water bottles,				
ı						crates, large storage bins, baskets, totes and lawn furniture; Some may be marked: PET (1), HDPE (2), LDPE (4), PP (5), Other (7)				
Next Calact Evaluaisms										
Next: Select Exclusions										

Next: Select Exclusions

Hover over the terms to see how they are defined in the Plastics Recycling Terms and Tools

STEPS 3 & 4: SELECT EXCLUSIONS AND OPTIONAL NOTES

3 Select the plastic materials you would like to exclude.

Tip: Only include the most important exclusions. (We recommend	d no more than 4). People are less likely to re	ead long lists.				
■ No Containers that held Hazardous Products	No Foam Blocks/Shapes					
No Toys	No Motor Oil Bottles/Containers					
No Foam Peanuts	No Toys with Metal or Electronic Compon	nents				
No Products that are Compostable (e.g. PLA)	No Thin Foamed Sheets/Wrap (used arou	und products like elec	ts like electronics)			
No Blister Pack (clear formed plastic packaging around products like	No Products that Contain Bio- or Ox					
toys, hardware and electronics) No Flower Pots	No Microwavable Containers	4 Add option	onal notes/instructions.			
No Black Plastic	No Buckets	 	Empty, flatten and put caps back on bottles/jars			
No Plastic marked PVC (3)	No Bags, Wrap or Film Plastic					
No Clamshells or Trays from Produce, Deli, Bakery, Take-out	No Plastic marked PS (6)		Rinse or wipe clean all food or other residue from bottles & containers			
No Frozen Food Bags	No Cups		nclude lids with containers			
No Plastic marked Other (7)	No Other Film		Remove caps/lids and put in trash			
No Straws	No Electronics/Appliances		Remove tape and labels from foam blocks and shapes/protective packaging			
No Foam	■ No Caps					
No Food Contaminated Containers	No Foam Food Service: cups, plates		Place all clean, dry bags and film inside another bag and tie off			
■ No Lids	No Pouches (stand up bags or sque coffee, juice, dried fruit, yogurt, laun		Separate non plastic (e.g. paper or metal) attachments from plastic products			
None of these items		'				

Next: Review

SELECT ROYALTY-FREE IMAGES FROM THE GALLERY

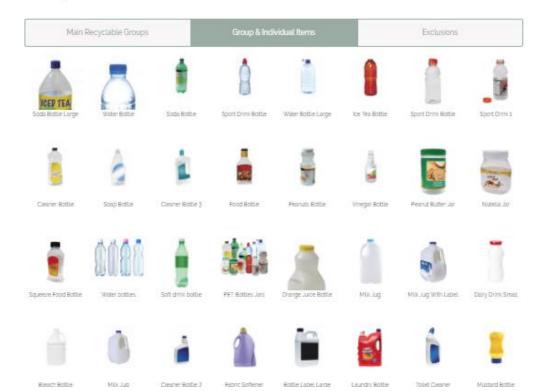






Image Gallery

Choose a category: click on an image below to download.









Download for your communications material or use in the flyer builder

BUILD YOUR FLYER

- Tools pulls in your customized program, including exclusions and instructions
- Uses images selected in the gallery
- Pulls in relevant contact information for your program

Recycle More Plastic

PLEASE RECYCLE:

Plastic Bottles & Containers

- Plastic Soda, Water & Other Drink Bottles
- Plastic Food & Household Bottles/Jars
- Plastic Tubs & Lids
- Plastic Produce, Deli & Bakery Containers, Cups, Travs
- Plastic Non-food Containers & Packaging

Plastic Buckets

OH AND BY THE WAY...

- * Empty, flatten and put caps back on bottles/jars
- * Rinse or wipe clean all food or other residue from bottles & containers

EXLUSIONS:

No Containers that held Hazardous Products No Bags, Wrap or Film Plastic











More Recycling PO Box 358 Sonoma, CA 95476

For more information contact: Tonya Randell, tonya@morerecycling.com 919 360 4045

THE PLASTICS RECYCLING TERMS AND TOOLS

 The Outreach and Commodity Terms are available to download as PDFs



TESTIMONIALS

POPULATION 133,358 (2013)

recycling messaging.

A recycling app developed for the city website furthers

their recycling message.

KEY POINTS

COLUMBIA, SC

New Cart Program Needs New, Descriptive Plastic Education Materials

Plastics Messaging Decreases Confusion and Contamination

in March 2016, Columbia, South Carolina, had a 13% contamination rate. This was despite recent upgrades to its curbside recycling program, in which Columbia switched from 18-gallon bins to 96-gallon carts for collection. The material recovery facility (MRF) serving the city also upgraded its facility with new technology, including optical sorters, to improve sorting efficiency. The new carts expanded the amount of recyclables residents could recycle each week and the upgraded MRF enabled it to profitably sort additional types and volumes

The city conducted a survey because of concern over its high contamination rate. They learned that the change in the types of plastics collected, coupled with the switch from bins to carts, confused many residents about what could and could not be recycled in Columbia. Due to the confusion, residents attempted to recycle materials that the city's recycling program did not officially accept. This increased the contamination rate.

City staff met with resident groups to develop more effective recycling messaging. The city learned that simple terms and photos were easiest for residents to sumple terms also profes were easiest for residents to understand. Residents also preferred to see only the items accepted in the program, not the items that were not accepted. Providing both "yes" and "no" in the same message was confusing to the community.

Recycling program began in ion program that used descriptive terms and images from the 1991 with a bin system and urce found at RecycleYourPlastics.org. Their old system use recently moved to carts. -7). The new flyer arranged plastics into two groups, "Plastic rs, and Jugs," with images that clearly illustrated accepted images, and clear recycling instructions like "Empty, Rins" Solutions

Through their outreach, city staff learned that clear, a recycling app, which enabled residents to search mater n image of the item in question and answers whether th simple terms and images ted at the local drop-off center. Additional information made the most effective

unications materials to educate its residents. These tags on carts that identify contaminants, and mol cepted in the city's recycling program. All of thes 'astics terms and images. This amplifies and rein' Curbside in Columbia.

uction in contamination and an increase quan

essages

bia's new recycling flyer using two escriptive terms for plastics.

ets using clear recycling ke "Empty, Rinse & Replace Cap."

"Simplicity is key with recycling. We were using numbers, but when I we switched to roll carts we saw an increase in contamination. When I give presentations to groups, I am more likely to use descriptive terms when explaining what can be recycled." - Samantha Yager, Solid Waste Assistant Superintendent, Columbia SC

by making the later

"From the feedback from the MRF, it seems quality is steady. Quantity is steadily increasing. Overall, our residents are extremely happy with our education program. They say they understand better what recycling is and isn't. Pictures paired with terms are the most helpful." Samantha Yager, Solid Waste Assistant Superintendent

To find the descriptive terms that best describe your plastic recycling program, use the Plastic Recycling Terms and Tools resource. You can also download free images to further improve your outreach materials.



OUTAGAMIE COUNTY, WI Expanded Recycling Access Better Supported by Plastics Terminology

Descriptive Plastic Terms **Enable MRF** to Expand Collection and Access



The state-of-the-art MRF

expanded the list of plastic

items available for recycling

to include all plastic bottles

Outagamie County changed

messaging from using resin numbers to descriptive term

A grant allowed the county

to offer recycling carts to 13 rural communities.

KEY POINTS

and containers.

groups and images.

The Challenge

in Outagamie County, Wisconsin, the majority of residents in Outagamie Lounty, wiscomsin, the mapurity or resonants were confused about what types of plastics the Tri-County were contused about what types or plastics the 111-county materials recovery facility (MRF) accepted for recycling. meterapy recovery tactility (MMF) accepted for recycling.

Outagamic County, along with neighboring Brown and Juragannic Louncy, stong with necknowing property and Winnebago counties, used recycling flyers that used resin dentification codes to educate which plastics were destination comes to enucate within plastics were accepted in their program. However, comments and input

acceptes in their program, riowever, comments ano input given to the county indicated residents were confused given to the county intricated residents were consumed when numbers were relied upon as the primary plastic water numbers were retied upon as the primary plastic recycling message. As a result, the MRF often received recycling message. As a lesult, the MMr often received incorrect plastics materials, creating contamination in the

The program decided to change their plastics' recycling the program section to enable their pressure recycles messaging from numbers to descriptive terms and necessing revisi numbers to executive terms one images of the Plastics Recycling Terms and Tools found at RecycleYourPlastics.org. The MRF and ants from More Recycling provided guidance on the new messaging.

in 2016 Outagamie County received a grant from The in 2010 Outagamie Lounty received a grant from the Recycling Partnership. The grant enabled Outagamie to necyting enrintership, she grans enables Umagamie to offer low-cost recycling carts to their tural communities (the larger municipalities already had carts). Thirteen

POPULATION 180,345 (2013)

/E):

ge of

7" was

rsidents

What to

s identify contamination at the source: the curbaide bins. Recycling 311 system to report an address where they see major contamination ity sends the residence a letter and an inspector visits the residence t.

ance Greensboro successfully implemented its improved recycling outreact any positive comments from residents indicating they appreciate the new ages. Most importantly, this new messaging is helping to reduce the he city's recycling stream. After peaking around 20%, the city's

dropped to approximately 17% and the city's recycling staff is confident that

of Greensboro's Plastics Messages



AFTER/NOW (ABOVE): New outreach materials group plastics by clear, descriptive terms and images.

"We want our information to be understandable and descriptive for anyone, not a jargon-laden manual. Bright colors and simple categories mean that you don't have to spend more than 10-15 seconds looking at our guide to decide if most items are recyclable or not." - Tori Carle, Recycling Education Specialist

To find the descriptive terms that best describe your plastic recycling program, use the Plastic Recycling Terms and Tools resource. You can also download free images to further improve your outreach materials.



Descriptive Plastic Terms and Images Improve "Closed Lid" Recycling Program

In 2014, the City of Greensboro, North Carolina, had a IN ANY THE LITY OF LIFERINGTO, THOSE MAINTINGS, 1860 H 20% Contamination rate in its recycling arream. The city AUN CONTAMINATION PARE IN HIS TRECYCLING STREAM. The SUTREMENT of Understand what residents antivesion to comments of numerous and acoccine broken: They also sought to understand if confusion about what conto and conjust pe seckcled was quiving this higher-they also songut to most stand it contraviou about may

results indicated that the city's recycling messaging The results indicated that the city's recycling measuring needed simplification. This was especially true with plantics. Greenshoto's ecycling flyer grouped terms to be pressure. Urevensooro's recycling typer grouped teems to a recycled into ten categories, including two for plastics: recycled into ten caregories, including two for presence:

"All Plastics #1.7" and "Rigid Plastics." These caregories All Plastics #1-7" and "Right Plastics." These caves were not descriptive and used numbers to identify we're and understyre and under numbers to mentry recyclable playic (tems, which confused their residents. ecyclable plautic trems, which contrased their residents.
The result was residents pur plautics in the curbaide bins that the city old not collect for recyclan-

Following the survey, the city launched a new recycling compaign "Recycle First. It Matters." Greensboro's campaign recycle rirst, it mainers, circumsonors marketing firm developed a new flyer that grouped marketing term developed a new tiyer that grouped recyclables into four simple categories with images and recyclaoses into four simple categories with integer an descriptive, straightforward plastics terms, similar to descriptive, straightforward pisatics terms, similar those in the Plastic Recycling Terms and Tools resource found at RecycleYourPlastics.org

These new plastic terms and images clearly explained these new mastic techns and images creatly expo-

POPULATION 279,639 (2013)

KEY POINTS Is the oldest "closed lid" single stream program on the East Coast.

Conducted resident survey to get to the cause of rising contamination rates. Survey results showed that most households were confused about what to put in the recycling bins, particularly

Changed from "Plastics 1-7" message to descriptive term groups and images.

Uses 311 mobile program to allow drivers to report nination in carts.

"Recycling needs to be simple, clear, and engaging."

TESTIMONIAL: OUTAGAMIE COUNTY, WI





BEFORE: Original message relied on numbers and was confusing to residents.



AFTER: New materials using descriptive terms are clear and easy to understand.

TESTIMONIAL: GREENSBORO, NC







BEFORE: Original message of "All Plastics 1-7" was confusing to residents and many didn't know exactly what to put in carts.

AFTER: New outreach materials were bright and grouped plastics by clear, descriptive terms and images.



GROWING ADOPTION OF THE TERMS AND TOOLS



Working at the:

- Local Level:
 - Individual communities and cities
- State Level:
 - State recycling associations
 - State environmental agencies

Are you next?

Don't Take Our Word for It



"From the feedback from the MRF, it seems quality is steady. Quantity is steadily increasing. Overall, our residents are extremely happy with our education program. They say they understand better what recycling is and isn't. Pictures paired with terms are the most helpful."—Samantha Yager, Solid Waste Assistant Superintendent

THE WRAP RECYCLING ACTION PROGRAM (WRAP)

A Public Education and Outreach Initiative

- WRAP works to:
 - Provide resources and best practices for plastic film recycling
 - Refine best practices in collaboration with partners
 - Expand network of stakeholders















PLASTIC FILM RECYCLING CHALLENGES

Lack of awareness

- Many people don't know:
 - Plastic bags—and wraps and other flexible film packaging—can be recycled
 - Plastic film typically should not be recycled curbside
 - How or where to recycle plastic film



Principal Tactics and Strategies:

Common suite of materials

Educate on how & why

Measure impact, improve results

Share & expand best practices

HOW WRAP WORKS















Brands, SPC -How2Recycle Label State & Local Outreach



avangard nnovative

> Recyclers, **APR**





Retail Collection -18,000 drop-off locations



APR **DesignTM** Guide for **Plastics** Recyclability -PE Films







BROAD ADOPTION: COMMON MESSAGES



WRAP ONLINE RESOURCES



Events News & Media Contact Us Resources About Us

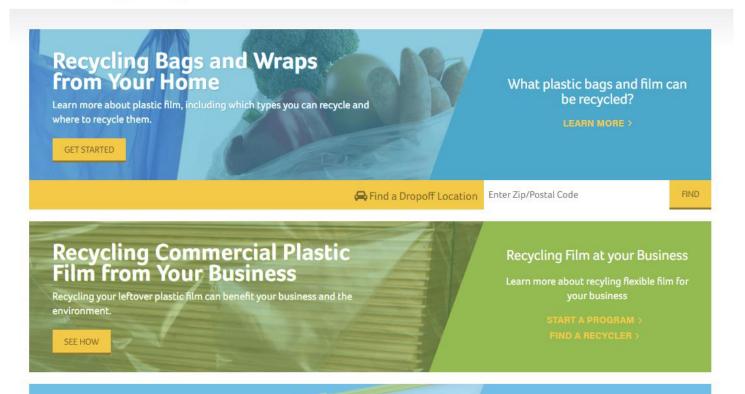






Recycling Bags and Wraps * Recycling Commercial Film *

Recycling in Your Community *



Recycling in your Community

LEARN HOW

Find out what ways you can best communicate to your

ROADMAP TO WRAP: PDF AND DIGITAL





WRAP COMMUNICATIONS COLLATERAL



DIRECT TO RESIDENTS: CART TAGS





DIRECT TO RESIDENTS: BILL INSERTS/MAILERS







INFORMATIONAL DIGITAL BADGE







WRAP COMMUNICATIONS TACTICS

- Social Media
- E-newsletters & Websites
- Other Community Outreach

Film Plastics

In an effort to recycle as much as possible, many people mistakenly put their plastic bags in their recycling carts. Unfortunately, plastic bags and other types of film plastics do more harm than good when disposed of in this way.

Plastic bags, shrink wrap, bubble wrap and other types of "stretchy" film plastic easily tangle in the machinery that is meant to sort recyclables into separate categories. This slows efficiency of the facility, as the machines have to be shut down to allow workmen to climb in and cut out the bags with box cutters. This material accounts for at least a 25% reduction in efficiency.

So what should I do with them?

First and foremost, try to eliminate plastic film from your life as much as possible by $\leftrightarrow \mathcal{C}$ www.diyofvancouverus/publicovorks/page/reducing-reusing-and-recycling-plastaking your own reusable bags to the grocery store, reusing bubble wrap, and trying t reduce the amount of plastic film you buy in general.

Reuse and Recycling: Plastic bags can be reused in your home (e.g. as waste basket liners or doggy poo scooper bags.) Any bags you don't reuse can be properly recycle placing them in the receptacles found near the front of most grocery stores. This ensu they will be recycled with other materials of the same kind and not have a chance to choke recycling sorting machinery.

For more information, go to wenorthwest.com



PLASTIC FILM RECYCLING RECYCL



THANK YOU

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