



THE RECYCLING
PARTNERSHIP

Lessons & Opportunities for Recycling Success

Scott Mouw, Recycling Partnership
MORA Conference, August 2017

THE RECYCLING PARTNERSHIP



We work across the system... across the country...



STATE and LOCAL



HAULERS



MRF



BRANDS



RESIDENTS



424 communities
impacted by
Partnership work
(17 million HH)

...growing access to
resources and data



~400,000 carts
More than \$27MM
of new infrastructure

Helping Funders Meet Their Goals

Target Releases New Goals



GOALS

TARGET'S SUSTAINABLE PACKAGING GOALS:

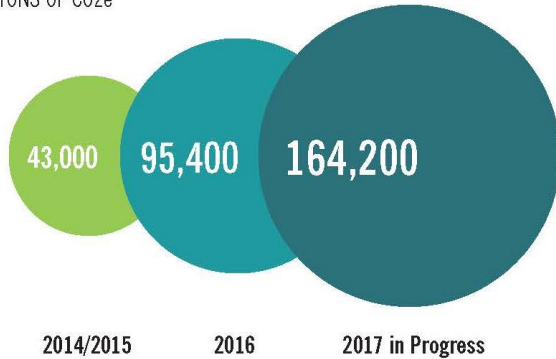
- Source all owned brand paper-based packaging from sustainably managed forests by 2022
- Work to eliminate expanded polystyrene from our owned brand packaging by 2022
- Add the How2Recycle label to all owned brand packaging by 2020 (where space allows)
- Support The Recycling Partnership's mission to improve how more than 25% of the U.S. population recycles by 2020
- Create more demand for recycled packaging by creating three new end markets for recycled materials by 2020

Year Over Year Growth

2016 Annual Report Figures

GREENHOUSE GAS AVOIDED

METRIC TONS OF CO₂e



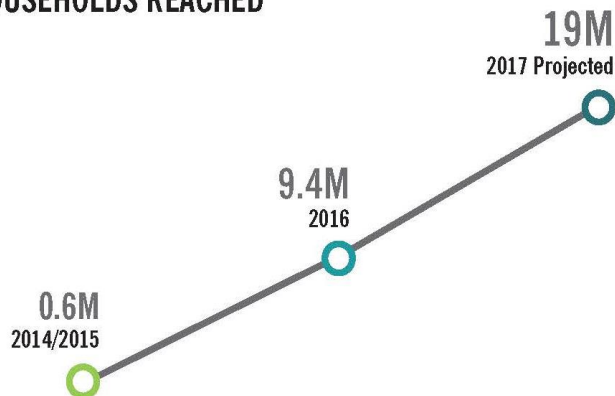
CARTS PLACED

117,800 224,900 395,100

NEW TONNAGE DIVERTED



HOUSEHOLDS REACHED



INVESTMENT CATALYZED



Supporting Advances in Local Recycling Systems



COLUMBIA, SC



FLORENCE, AL



CUYAHOGA CO,
OH



GREENVILLE, SC



EMMET CO. MI



RICHMOND, VA



SANTA FE, NM



ATHENS, OH



ST PAUL, MN



OUTAGAMIE CO.
WI



PORTLAND, ME



MEMPHIS, TN

The Partnership Approach:

- Integrated Infrastructure and Outreach Assistance
- Solid Data and Metrics
- Engagement with Entire Material Value Chain
- Testing and Innovation of Best Practices

NAVIGATING THE RECYCLING SYSTEM

For packaging to be recycled successfully, we must consider how it flows through each of the five elements of the recycling system: manufacturing, reprocessing, sorting, collecting and engaging consumers. To start thinking about the criteria that can help assess the recyclability of a product and its ability to create reliable and valuable manufacturing feedstock, use the table below. Think of this as a starting point for a conversation about the recyclability of a product. Start by considering the ultimate goal: that a recycled product finds an end market.



END MARKETS (Feedstock for Manufacturing)

Supply/Demand	Design	Specifications	Contamination	Infrastructure	Education	Profitability
Is there demand to use the recycled material in products?	Are brand companies creating a "Demand Pull" by using recycled materials?	Do the product specifications allow for the use of recycled content in it?	Are there contaminants in the material that hinder the end application?			Does it have a positive profitability analysis?



REPROCESSING (Paper Mills, Plastic Reclaimers, etc.)

Supply/Demand	Design	Specifications	Contamination	Infrastructure	Education	Profitability
Is there demand for the reprocessed material?	Are there design flaws that prevent reprocessing and recoverability?	Can material be combined or is it compatible with other currently recycled material?	Does the material cause harm or contamination to other materials?	Is a new investment required to reprocess the material? Are there markets in different geographic areas?		Does it have a positive profitability analysis?



SORTATION (MRF – Materials Recovery Facility)

Supply/Demand	Design	Specifications	Contamination	Infrastructure	Education	Profitability
Do reprocessors want to buy the material? Are there markets? Are they positive?	Are there design flaws that impact sortation? Does its form enable it to be properly and consistently sorted (size, flatness, 3D, labeling, etc.)?	Do new bale specifications need to be developed? Do bale specs allow for inclusion of the material?	Can the product damage the recovery of other materials? Are there contaminants (moisture, food, etc.) that impact sortation?	Is a new investment required to sort the material? Are there MRFs available that can sort and market the material?	Do MRFs know that it is possible to sort the material? Are pick line workers trained to identify the material?	Is there adequate volume to justify recovery, particularly if it must be marketed independently? Does it have a positive profitability analysis?



COLLECTION (Curbside and Drop-Off)

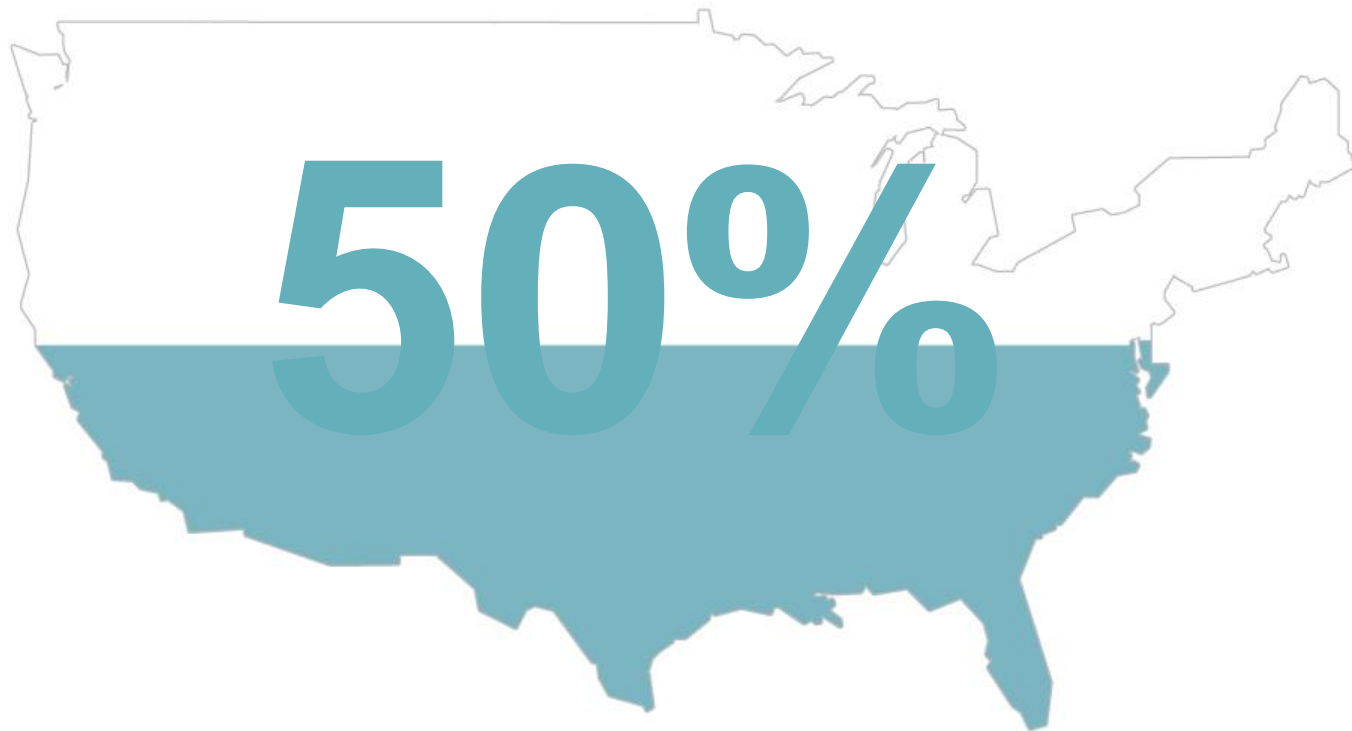
Supply/Demand	Design	Specifications	Contamination	Infrastructure	Education	Profitability
	Is there a defined common suite of outreach materials for the region?		Does this material hurt the recyclability of other materials?	Is an investment required to collect the material? Are there collection carts or bins? Drop-off locations?	Do local governments know all the materials that their MRF will accept?	Is there adequate volume being collected to support recycling?



CONSUMER ENGAGEMENT (Access and Participation)

Supply/Demand	Design	Specifications	Contamination	Infrastructure	Education	Profitability
	Does it have a How2Recycle® label to describe recyclability and any actions consumers need to take to recycle it, such as removing components or returning to a store drop-off location?	Is access to recycling collection automatic or must residents ask for/pay for the service?	Do consumers know how to prepare their materials for recycling (no food residue)?		Do consumers know the material is accepted? Do they know how to recycle it (via curbside, or community or store drop-off)?	







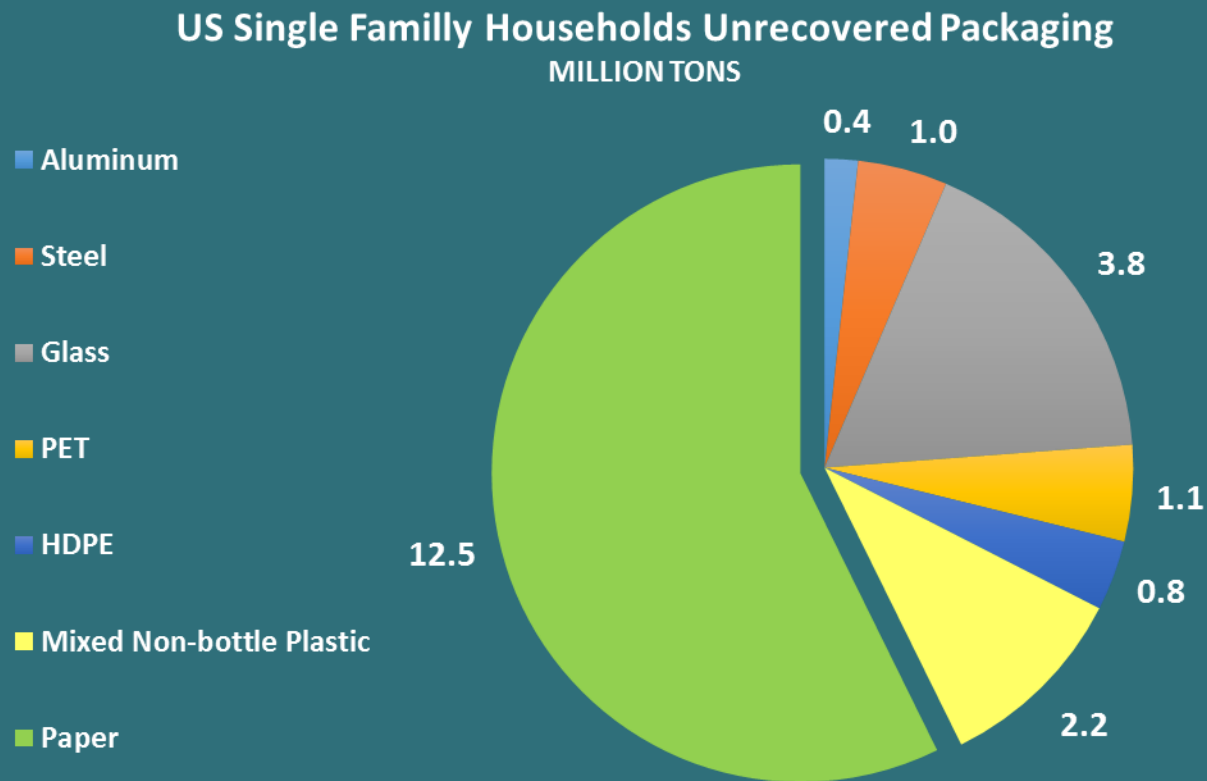
800LBS



22M tons

A map of the United States is shown in the background. The southern half of the country, including states from Texas to Florida, is shaded in a solid teal color. The northern half is white, matching the background.

How Much Recyclable Material Is Left in Single Family Homes?



Total of 22 Million Tons



THE OPPORTUNITY

800
pounds
of
recyclables
available in
HH

Gaps

NO CURBSIDE or DROP-OFF AVAILABLE

All 800 pounds lost to trash

CURBSIDE OPT-IN

All 800 pounds in most homes lost to trash

CURBSIDE IN BINS; INCONVENIENT DROP-OFF

600 pounds lost to trash

CURBSIDE IN CARTS, DROP-OFF ESTABLISHED NO EDUCATION

400 pounds lost to trash

CURBSIDE IN CARTS, STRONG DROP-OFF GOOD EDUCATION

200 pounds lost to trash

Solutions

- ESTABLISHING SERVICES
- ENCOURAGING PARTICIPATION

- CREATING UNIVERSAL
AUTOMATIC ACCESS

- CONVERSION TO CARTS
- INCREASING ACCESS TO DROP-OFF

- INVESTING IN EDUCATION
- USE OF MULTIPLE OUTREACH TOOLS

- ANALYSIS OF OPPORTUNITIES
- TARGETED OUTREACH

THE GOALS



Better
Customer
Service



Improve Material
Quality (minimize
Illegal Dumping)

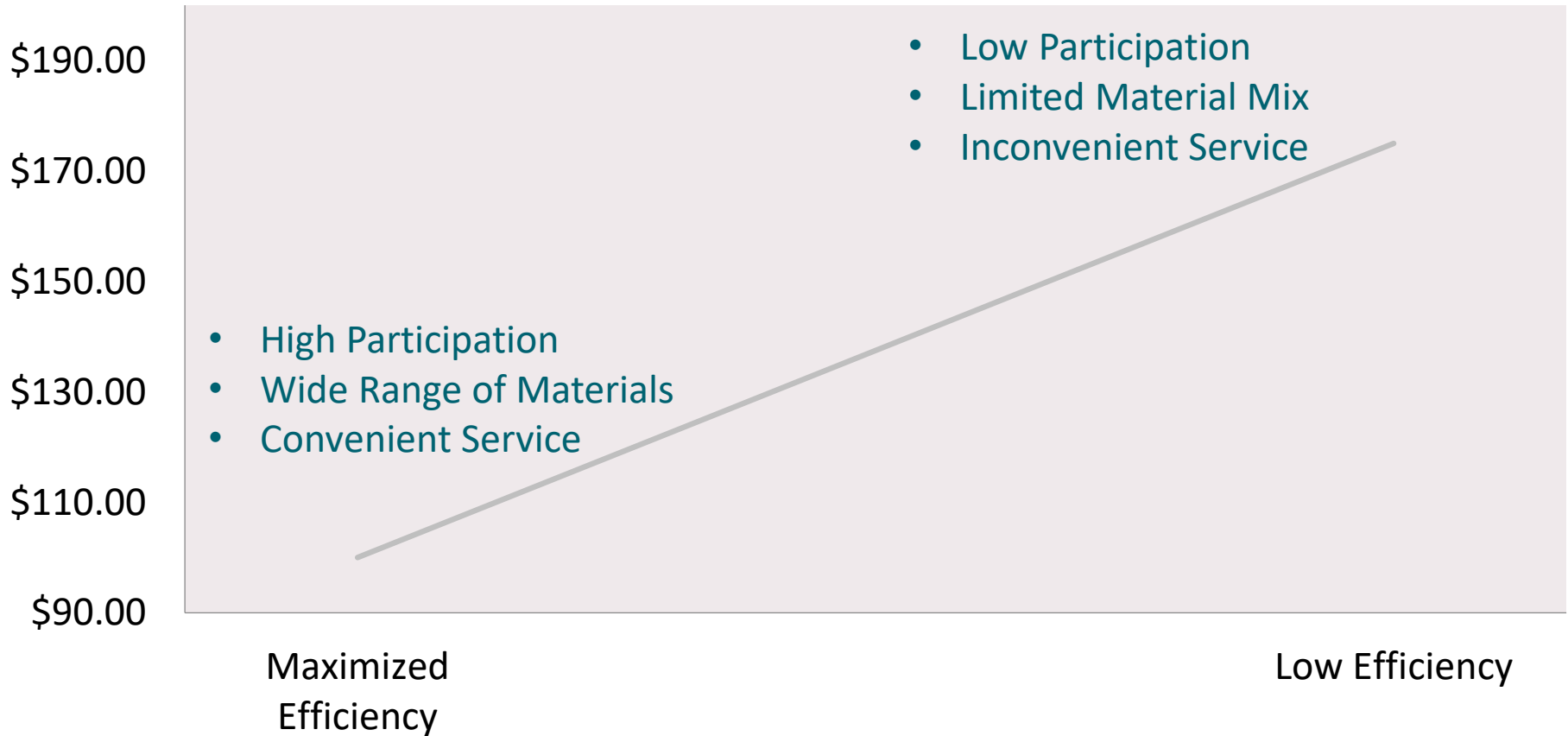


Increase
Recycling
Tonnage



Lower
Operational
Costs

RECYCLING COLLECTION – COST PER TON



2016 STATE OF CURBSIDE REPORT

THE 2016 STATE OF CURBSIDE REPORT

PREPARED BY THE RECYCLING PARTNERSHIP ©2016



THE 2016 STATE OF CURBSIDE REPORT | THE RECYCLING PARTNERSHIP

A sample of curbside recycling programs and the attributes that influence program performance. It is important to remember that all recycling programs are managed at the local level. There are 3,000 incorporated communities⁴ in the U.S., each with their own governing bodies, and waste and recycling decisions. The 465 curbside recycling programs in this report are a representative sample of all the curbside programs in the U.S. Because there are numerous variations among cities and curbside recycling management systems this study provides a general overview of curbside recycling programs in the country and how they perform.

To ensure the accuracy of the information, the curbside attributes for each program were evaluated via each community's website. Each community was then contacted to provide information and to dig deeper into programmatic specifics. Roughly 80% of the data in this report was obtained through phone conversations. Four communities asked to be removed from the report had no response. Finally, the data was reviewed by each state's recycling or solid waste management agency.

U.S. MAP



⁴ National League of Cities, "Number of Municipal Governments & Population Distribution" using U.S. Census Bureau data, 2007.



Key Attributes:

- Container Type & Size
- Frequency of Collection
- Material Mix
- Public vs. Private Collection
- Automatic vs. Opt-in
- Accepted Material (as communicated via web)
- MRF
- MSW Tip Fee
- Curbside Tonnage

What Do Top Recovering Communities Have in Common?



96%

single stream



83%

have carts



93%

provide automatic
service

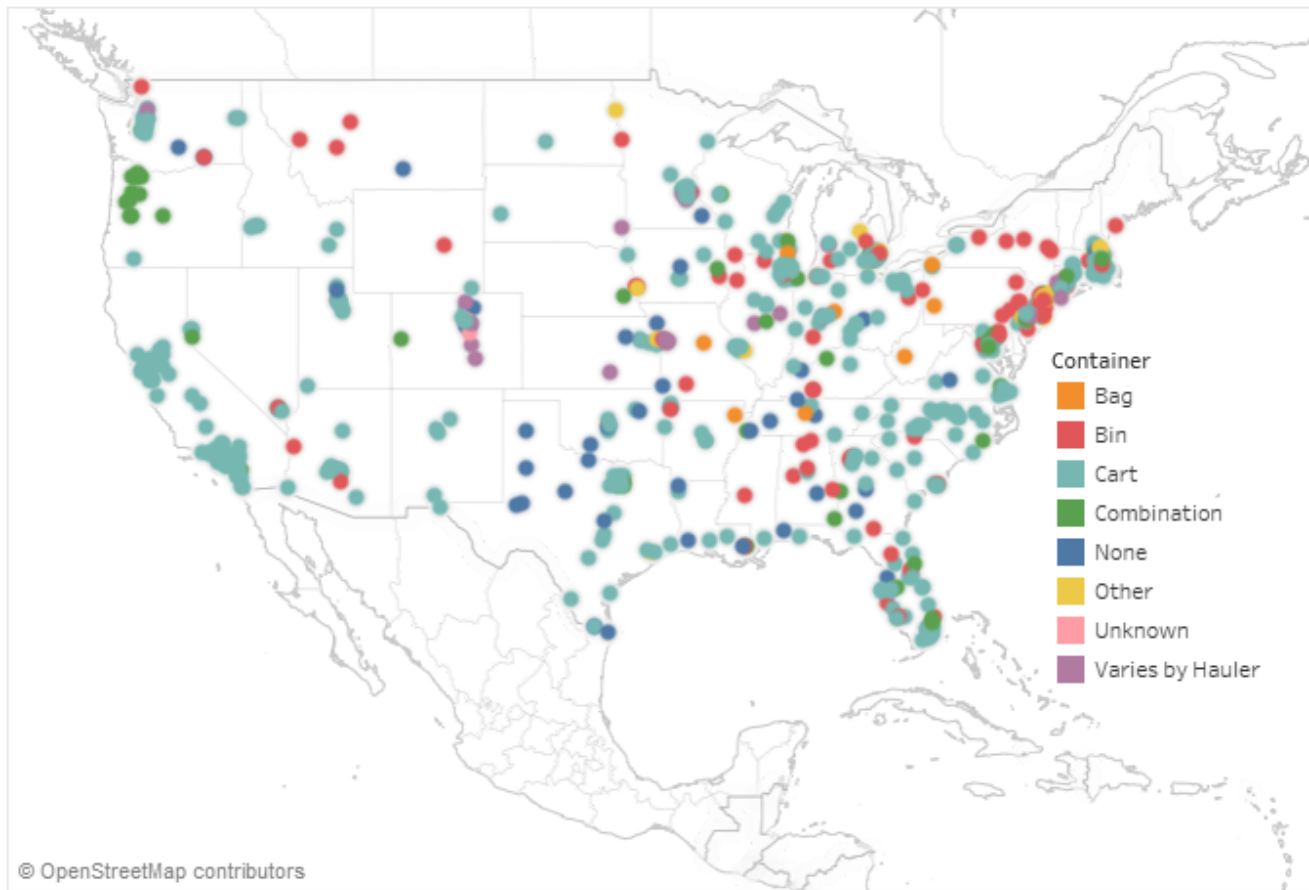


100%

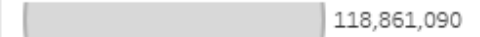
have local action for
recycling (ordinance,
oversee collection, etc.)

Quick Glimpse at State of Curbside Programs

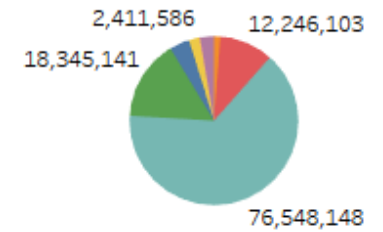
50,000+ Population Centers



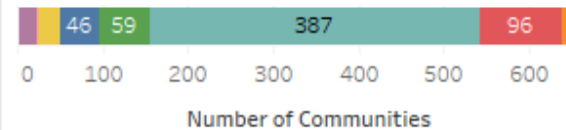
Population Totals



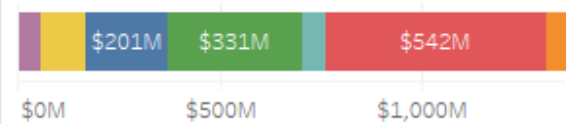
Population



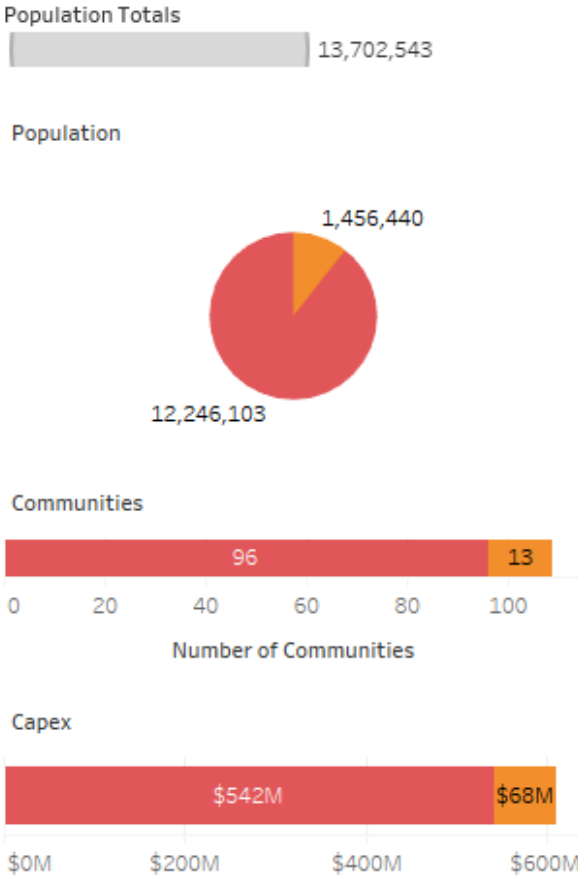
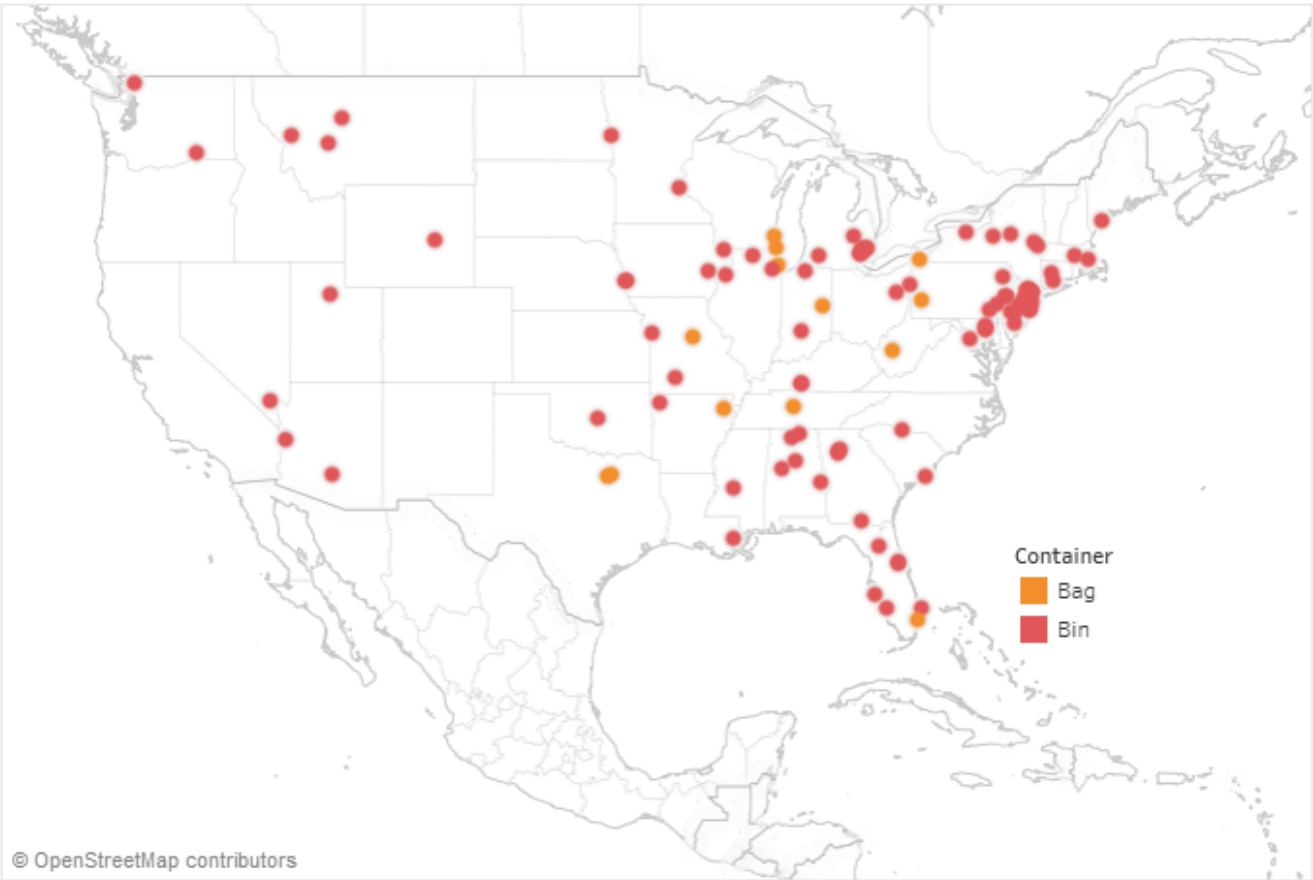
Communities



Capex



Opportunity: Transition from Bins to Carts



PUTTING RECYCLING ON PAR WITH GARBAGE

EVERY HOME
SHOULD HAVE
THE SAME LEVEL
OF **RECYCLING**
AS **GARBAGE**

If you have **this...**

...ideally, you
have
this.

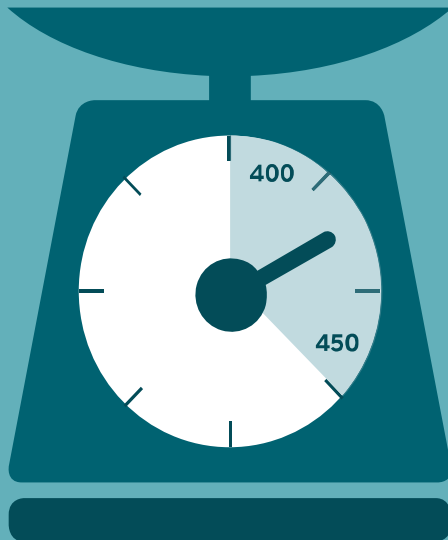
TRASH ONLY



INCREASED RECOVERY

Programs using carts, common suite of materials, strong outreach and other BMPs can recover 400-450 lbs/hh/yr.

**400-450
LBS. PER
HOUSEHOLD**



MORE CONVENIENCE

Residents can more easily fit all of their recyclables into one container, then simply roll those items to the curb.



ADDITIONAL BENEFITS OF CARTS



Decreased
disposal
costs



Smaller
collection
staff



Automation
and compaction
mean more
efficient routes



Flexibility
to collect
every other week

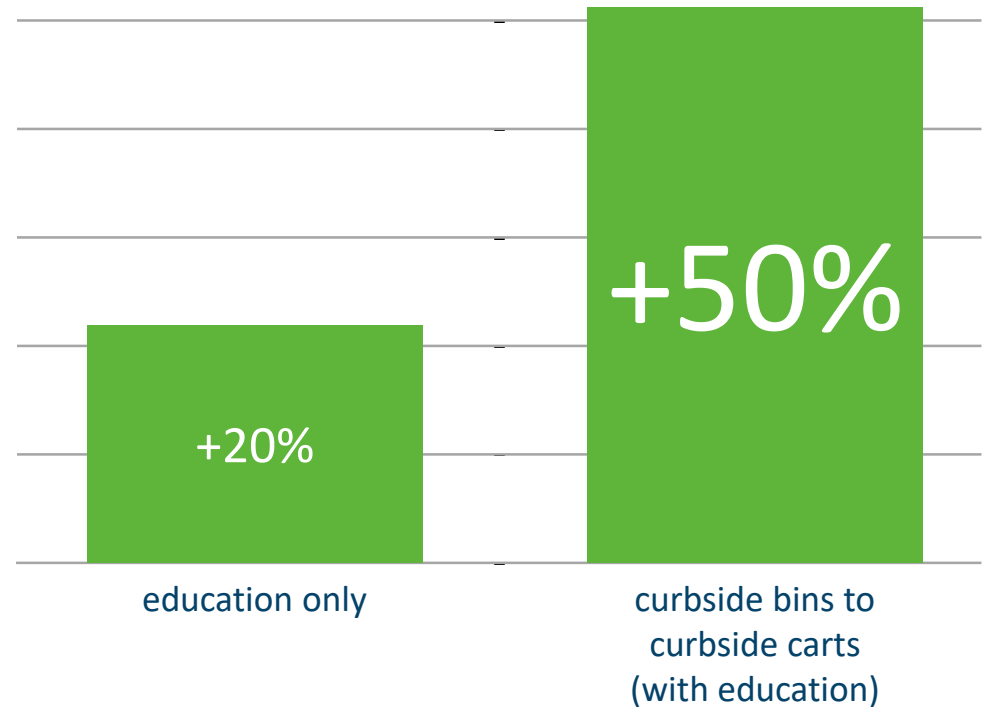


Decreased
workers'
compensation
claims

WHAT DO WE KNOW?

EDUCATION + OPERATIONS = BEST RESULTS

Complementary Approaches

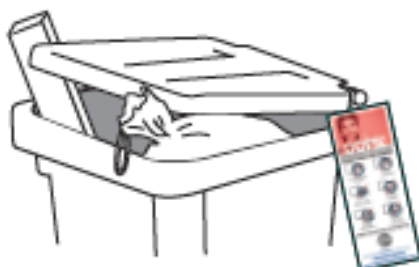


CURBSIDE: Tools

Prioritized. Clear. Simple.



Annual info card mailer



Curbside feedback

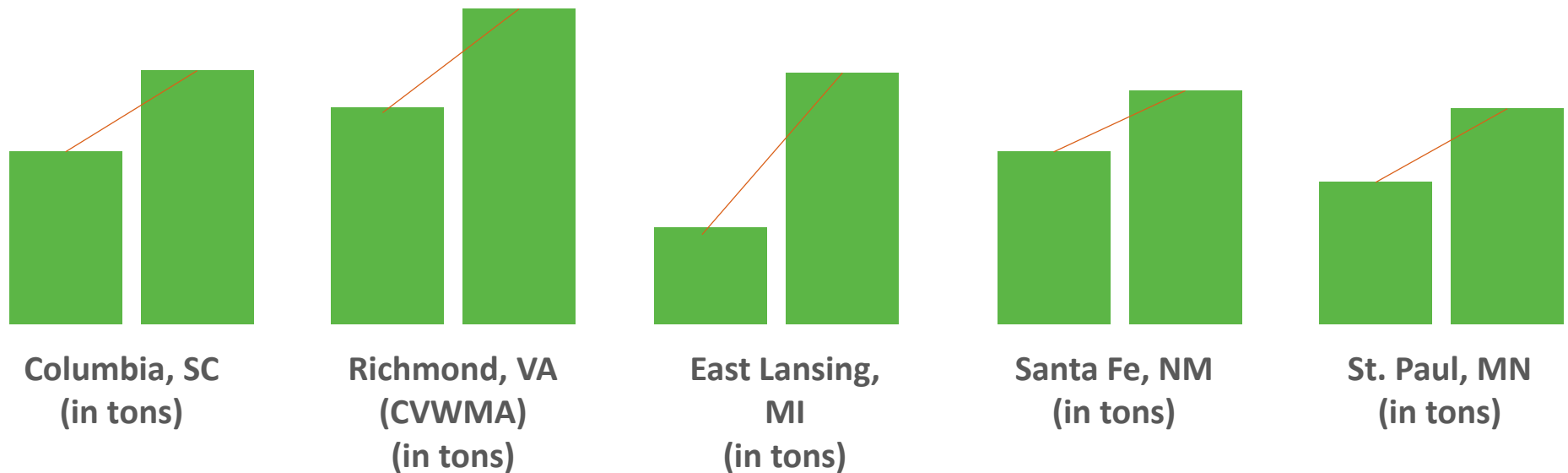


Top issue mailer



Top issue signage

Changes to Operations & Communications Together Increases Tons



DROP-OFF SITES

STAFFED VS UNSTAFFED



Higher
More Feasible
More Feasible
More Feasible

Cost to Equip/Operate
Use of Compaction
Control of Quality
Additional Services

Lower
Less Feasible
Less Feasible
Less Feasible

TYPES OF CONTAINERS



Compacted Roll-off



Non-Compacting Roll-off



Trailer



Carts



Front-Loading Container

KEY STRATEGIES

Commingle
+
Compaction

KEY STRATEGY: COMMINGLE

Transition from Source Separation to Single Stream in North Carolina

County	FY 11 – 12 Before	FY 14 – 15 After	Change
Franklin County	996	1,560	56%
Moore County	1,035	1,536	31%
Rutherford County	764	1,192	56%

KEY STRATEGY: COMPACTION

PRO

- Space savings on site
- As much as 3:1 reduction in collection costs
- Increased payload

CON

- More upfront costs
- Need power
- Need staff to oversee for safety and to operate

Rutherford County, NC Example:

Danieltown Convenience Center

Went from 12 trips per month to 3

Annual savings = \$7,000

ENCOURAGING DROP-OFF PARTICIPATION

INFORM – BASIC DO'S AND DON'TS



CLEAR SIGNAGE
(Ideally reinforced by sturdy mailers, which can also promote site)

PERSONALIZED FEEDBACK



ONSITE STAFF

ISSUE SPECIFIC COMMUNICATIONS



MAILERS + MEDIA

NO NAKED CONTAINERS



PRINCIPLES OF EFFECTIVE OUTREACH AND EDUCATION



3 THREE KEY ELEMENTS TO CHANGING BEHAVIOR

INFORM – BASIC DO'S AND DON'TS



POSTCARD/MAGNET

PERSONALIZED FEEDBACK



CART TAGS

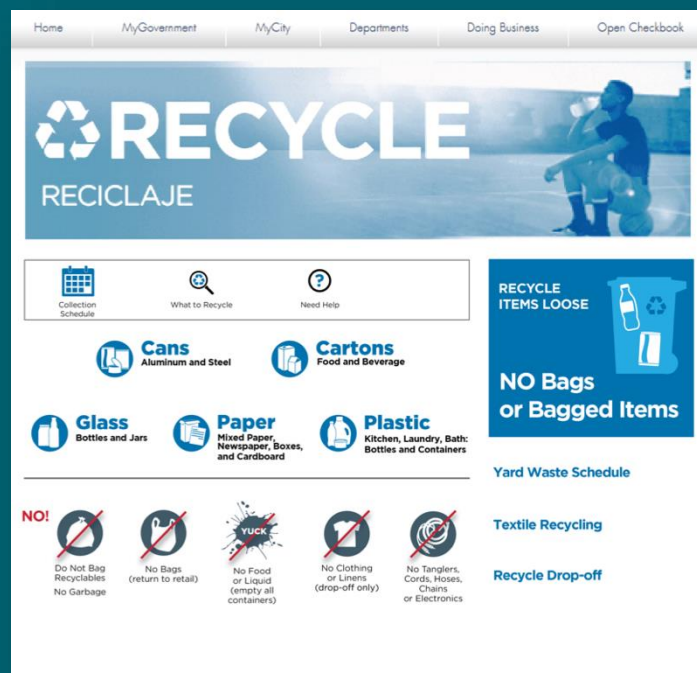
ISSUE SPECIFIC COMMUNICATIONS



MAILERS + MEDIA

1 GIVE RESIDENTS GREAT CUSTOMER SERVICE

STANDING RESOURCE



1 BUILD A CULTURE OF RECYCLING

GENERAL ADVERTISING



Appeal to the Emotive Instinct: “Recycling is a part of life.”



Keep It Simple

Consistent, simple messaging works best.

ALUMINUM

- Aerosol
- Can
- Foil or Foil-like Container
- Other Aluminum Containers

CARTONS

PAPER

- Cold Cups
- Hard Cover Books
- Hot Cups
- Ice Cream Container
- Junk Mail
- Kraft Bags
- Magazines
- Newspaper
- OCC
- Office Paper
- Paperback Books
- Paperboard Boxes
- Pizza Boxes
- Shredded Paper

GLASS

- Bottles and Jars
- Drinking Glass
- Mugs
- Window

PLASTIC

- Buckets
- Bulky Plastic
- EPS Foam
- Flower Pots
- HDPE Bottles & Jars
- Non-bottle HDPE Containers & Lids
- Non-bottle PET Containers & Lids
- Other Containers & Packaging
- Other Drink Bottles
- Other Food Bottles & Jars
- Other Household Bottles & Jars
- Other Tubs & Lids
- PET Bottles & Jars
- PET Thermoform
- PP Bottles
- PP Containers & Lids
- Produce, Deli & Bakery Containers, Cups, Trays

STEEL

- Aerosol
- Can
- Pots and Pans
- Scrap Metal



Cans



Aluminum and Steel Cans

empty and rinse



Cartons



Food and Beverage Cartons

empty and replace cap



Glass



Bottles and Jars

empty and rinse



Paper



Mixed Paper, Newspaper, Magazines, and Flattened Cardboard



Plastic



Kitchen, Laundry, Bath: Bottles and Containers

empty and replace cap

**HOW LONG IS
THE AVERAGE
ATTENTION
SPAN TODAY?**

8

seconds

TELLING YOUR RESIDENTS TO REMEMBER 12 THINGS? TRY IT!

Elephant

Jackal

Monkey

Beaver

Sloth

Crane

Kangaroo

Shark

Peacock

Buffalo

Squirrel

Gecko

NAME THE 12

HOW ABOUT SOMETHING SIMPLER? TRY IT!

Dog
Cat
Bird
Horse
Fish

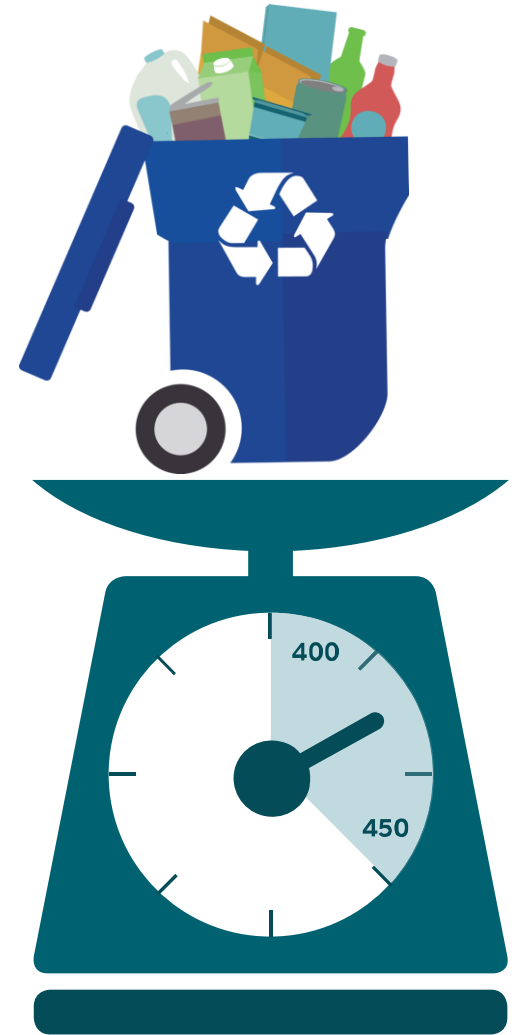
NAME THE 5

THE IMPORTANCE OF METRICS

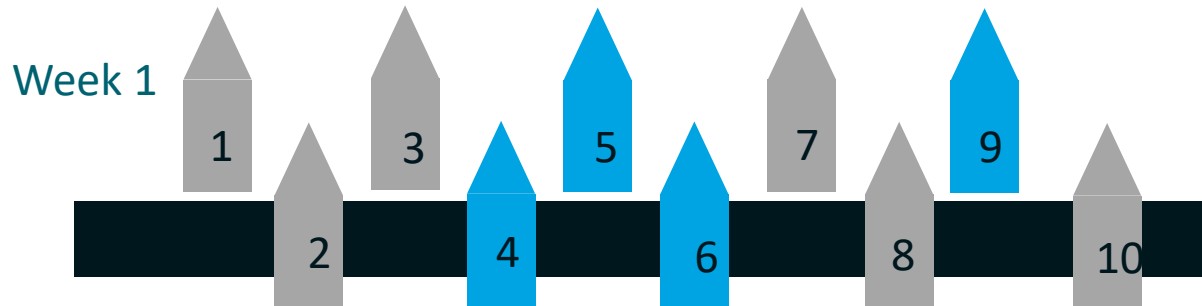
MEASURE & SHARE

Some key things to measure

- Recycling tonnage (by program)
- Garbage tonnage
- Set-out
- Participation
- Households served
- Tons per container
- # of drop-off pulls/month
- Contamination

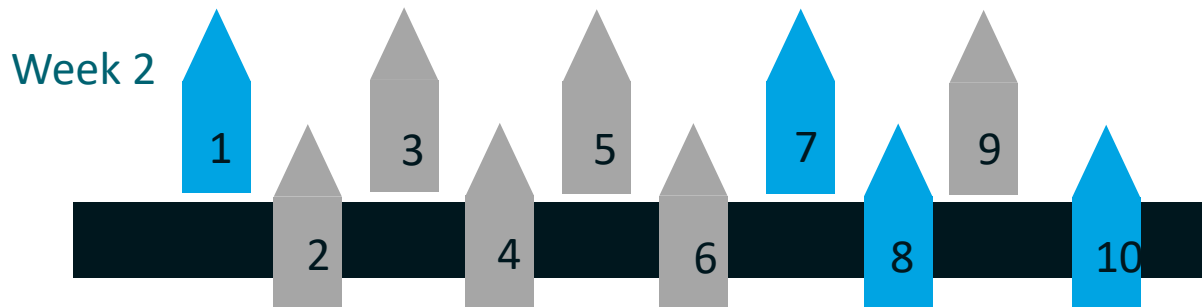


PARTICIPATION RATE vs SET OUT RATE



Set-out Rate
40%

*4 out of 10 homes
set out carts*



Set-out Rate
40%

*4 out of 10 homes
set out carts*

Participation Rate = 80%

*8 out of 10 homes
set out over two collection cycles*

CAPTURE RATE: Are All Recyclables Really Going Where They Should?



AND
80lbs
RECYCLABLES
GO INTO RECYCLING



THUS, THE OTHER
20lbs
RECYCLABLES
THEN GO INTO TRASH

THAT WOULD BE
80%
CAPTURE
RATE

Example of Capture Rates for PARTICIPATING Households

Commodity	Percent <u>Captured</u> in Recycling Cart	Percent in Garbage Cart
Recyclable Paper	75%	25%
Cardboard	87%	13%
Mixed Paper	72%	28%
Aseptic & Gabletop	55%	45%
Recyclable Metal	45%	55%
Aluminum	44%	56%
Steel Cans	47%	53%
Recyclable Glass	76%	24%
Glass Containers	76%	24%
Recyclable Plastic	59%	41%
Clear PET Containers	67%	33%
HDPE Natural Bottles & Jars	75%	25%
HDPE Colored Bottles & Jars	70%	30%

Material Quality and Contamination

- Extremely Important for Overall Health of Recycling System
- Important Reason For Communities and MRFs to Communicate Early and Often
- Heavy Thing Don't Always Cause the Most Problems
- Can Be Effectively Addressed Through Consistent Education and Direct Engagement with Citizens



Contamination costs the system **money & time**, and **safety hazards** for workers.



Overall Contamination Trended Downward

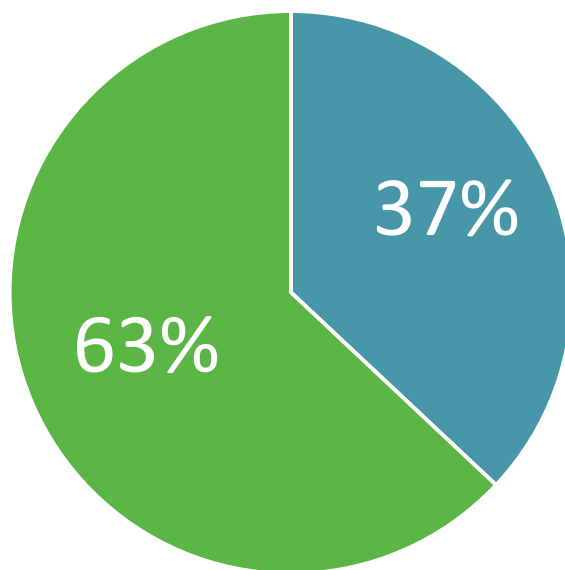
Total contamination dropped from 37 to 26 percent (by weight).

LOWELL and W. SPRINGFIELD

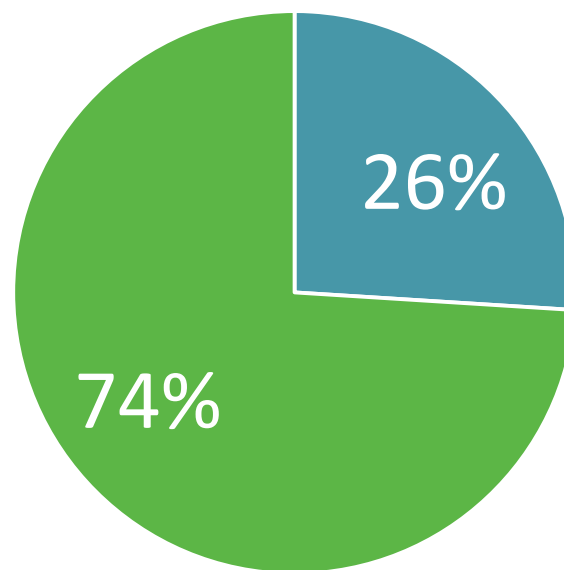
Curbside
Entire toolkit was used

- Each of the four pilot routes behaved slightly different.
- Single family routes seemed to have less contamination and better recovery rates than the multi-family routes.

● Contamination
● Recyclables



BEFORE

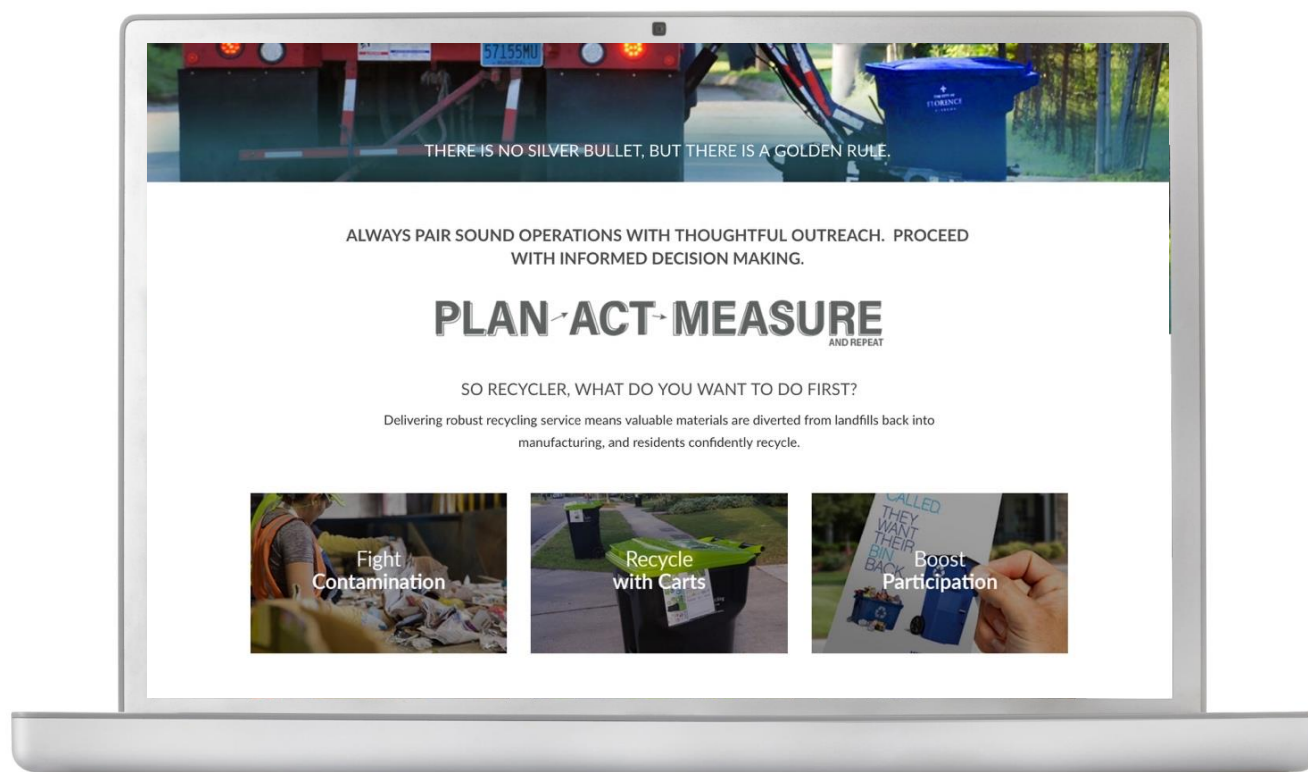


AFTER

Open Source Tools Online

Tools Ready For You To Use!

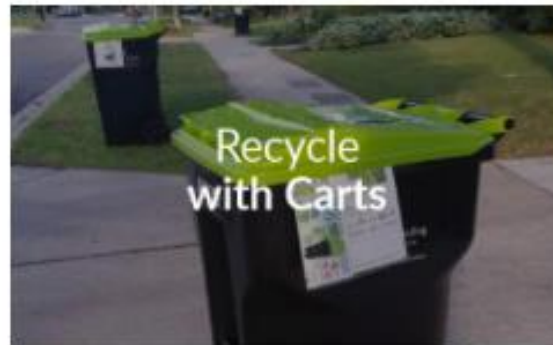
Find them on our website:
www.RecyclingPartnership.org



Open Source Tools Online

Three categories

Click on the category you want to download a tool from:



Downloading a Tool

Participation Graphics - Tools.RecyclingPartnership

tools.recyclingpartnership.org/shine-on/

Apple Yahoo! Google Maps YouTube Wikipedia

Boingo Hotspot | Welcome Participation Graphics - Tools.Recyclin... Mail - slewis@recyclingpartnership.org Recycling Partnership |

TOOLS FIGHT CONTAMINATION RECYCLE WITH CARTS BOOST PARTICIPATION MAIN

PARTICIPATION GRAPHICS

SHINE ON. RECYCLE.

IT'S ALL YOU. RECYCLE.

GET THE MOST OUT OF THESE FILES

Banner Bus Ad Facebook Info. Card Magnet

Print this on heavy cardstock and send it to every household you service to give them an easy reference guide to your basic YES and NO lists. (Extra credit: order it as a magnet so it's always front and center in the kitchen - the place most household recycling happens.)

DESIGNER FILES FILLABLE PDF JPGS

OTHER LINKS

CONTAMINATION GRAPHICS

NEW! RECYCLING ICONS

Downloading a Tool

Back of the info card PDF file

Click in the light blue fields to place your cursor in the field

Then type in your website URL (top right) and telephone number

Info.Card.pdf



2 / 2 93.3%

Sign Comment Find




Please fill out the following form. You can save data typed into this form. Highlight Fields

RECYCLE
THANK YOU FOR RECYCLING THESE:

SampleUrl.org

Cans	Cartons	Glass	Paper	Plastic
				
Aluminum and Steel Cans empty and rinse	Food and Beverage Cartons empty and replace cap	Bottles and Jars empty and rinse	Mixed Paper, Newspaper, Magazines, and Flattened Cardboard	Kitchen, Laundry, Bath: Bottles and Containers empty and replace cap

NO!

				
Do Not Bag Recyclables No Garbage	No Plastic Bags (return to retail)	YUCK No Food or Liquid (empty all containers)	No Clothing or Linens (use donation programs)	No Tangles (no hoses, wires, chains, or electronics)

123-456-7890

City Department Name

Graphics provided by The Recycling Partnership

Downloading a Tool

Mailing side of the info card PDF file

Click in the light blue fields to place your cursor in the field. Then type in the *return* mailing address.

The screenshot shows a PDF viewer window titled "Info.Card.pdf". The PDF content is a recycling information card. On the left side of the card is a photograph of a young child with curly hair, wearing a pink shirt, holding a crushed aluminum can. Below the photo is a green rectangular area with a white recycling symbol (a triangle inside a circle) and the text "SHINE ON. Recycle." in white. On the right side of the card, there are three light blue rectangular fields for a mailing address. The first field is labeled "Your Organization", the second is labeled "123 Street", and the third is labeled "City, ST 12345". Above these fields, there is a purple banner with the text "Please fill out the following form. You can save data typed into this form." and a "Highlight Fields" button. The PDF viewer interface includes a toolbar at the top with various icons, a page number "1 / 2", a zoom level "93.3%", and buttons for "Sign" and "Comment".

PEOPLE ARE THE SECRET.

100%

of America's top performing
recycling programs have
engaged local governments
triggering action.



2016 State of Curbside Report

Thank You!



Scott Mouw
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