THE RECYCLING PARTNERSHIP™

CRANKING UP RECYCLING IN OHIO

New insights, proven resources, grant dollars

Special thanks to

Procter&Gamble

And the **Organization of Solid Waste Districts of Ohio** for their generous sponsorship of this workshop.

OUR FUNDING PARTNERS

Coca-Cola

American Chemistry Council

Can Manufacturers Institute

P&G Procter&Gamble

ALCOA FOUNDATION

amcor

APR

Ball

CARTON COUNCIL

FPI FOODSERVICE PACKAGING

HEINEKEN

KEURIG GREEN MOUNTAIN

Kimberly-Clark

Novelis

PEPSICO

TRI-ARROWS ALUMINUM INC.

American Forest & Paper Association

DOW

PLASTICS INDUSTRY ASSOCIATION

RWIP RECYCLING WORKS IN PUBLISHING

WM WASTE MANAGEMENT

Consumer Technology Association

DART

IBWA INTERNATIONAL BOTTLED WATER ASSOCIATION

WestRock

We work across the system… across the country…

STATE and LOCAL

HAULERS

MRF

BRANDS

RESIDENTS

250+ community partners

…growing access to resources and data

~400,000 carts
More than $20MM of new infrastructure

47% & 60%

of Americans don't automatically have curbside recycling.

2016 SPC Access Study

of packaging is not being recovered in the home.

Recycling Partnership

Half plus half equals

A WHOLE LOT OF OPPORTUNITY.

+20%

contamination rates
cost the system **money & time**,
and **safety hazards**
for workers.

Recycling Partnership

Manufacturer
DEMAND DRIVES
environmental gains.

The system needs
reliable quantity, quality, and cost in supply.

ASTRX

PEOPLE ARE THE SECRET.

100%

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

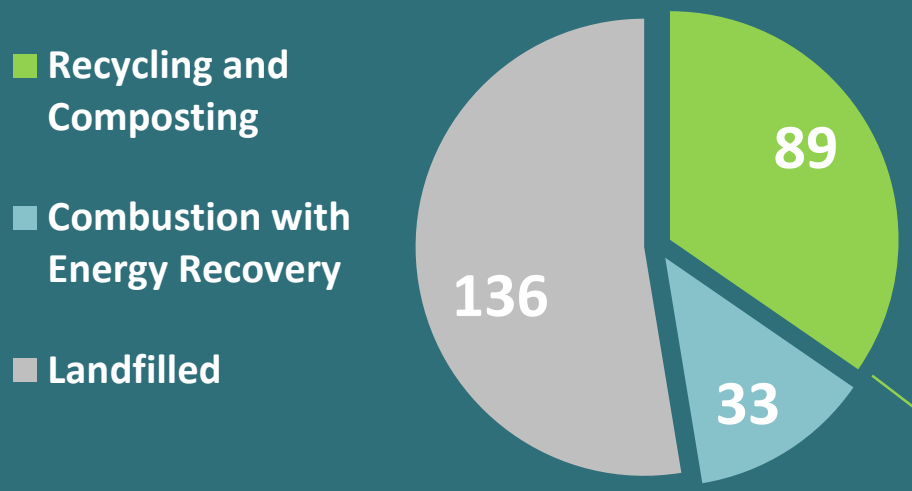
2016 State of Curbside Report

NATIONAL TRENDS

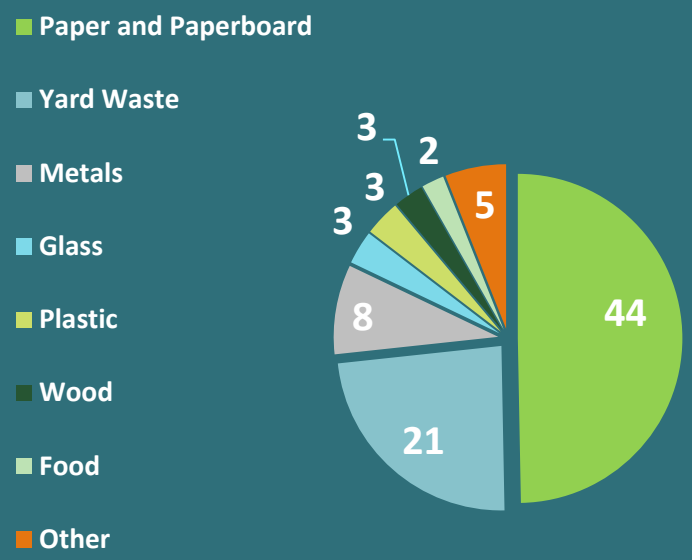
EPA Recycling Rate is Not the Same as Packaging Recycling Rate

Destination of Tonnage

IN MLLIONS OF TONS



What's in the 89 Million Tons

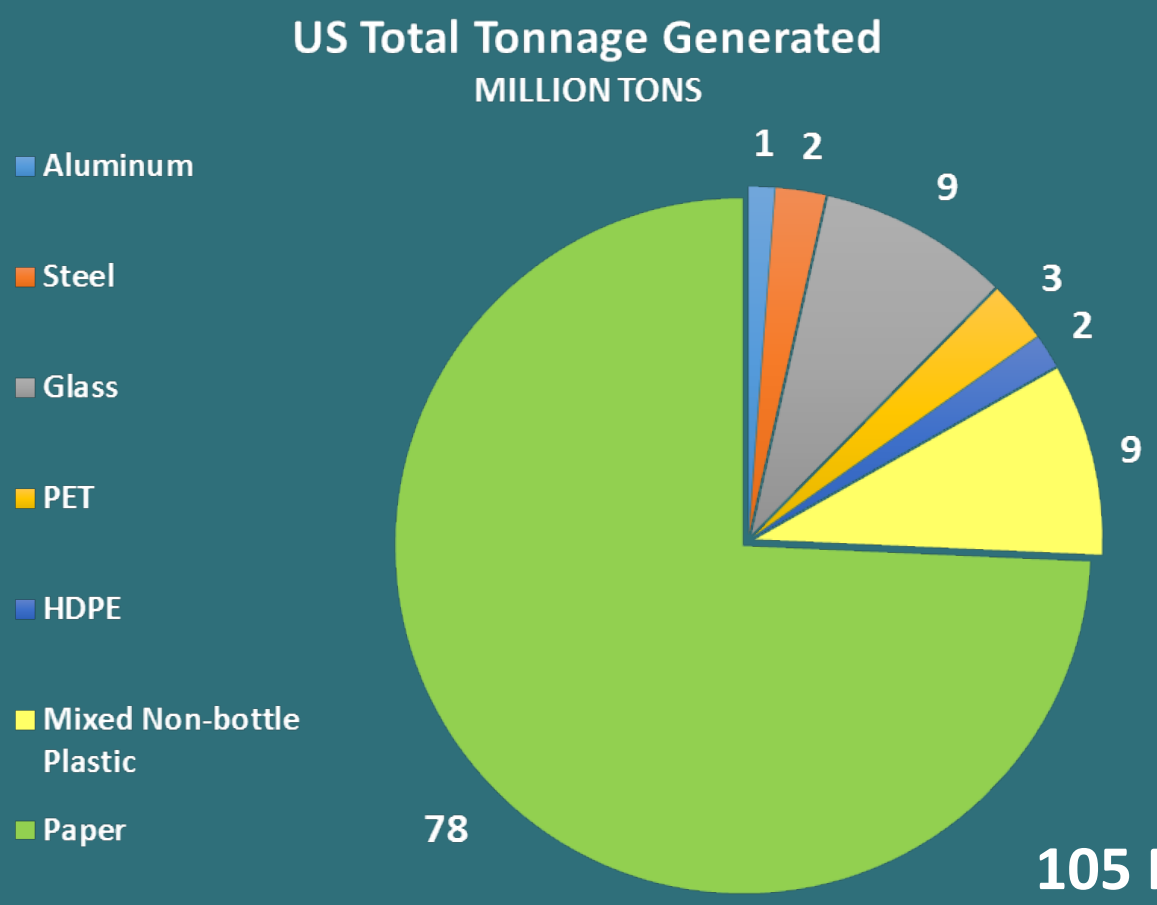


EPA Calculated National Recycling Rate = 34%
(89 Million Tons/258 Million Tons Generated)

The 34% Recycling Rate is calculated with a denominator which includes Recycling of Durable Goods, Furniture, Appliances, Lead Batteries, Food Waste, Yard Waste, and Packaging

Source: EPA Facts and Figures 2014

How Much Recyclable Packaging Is There to Recover?

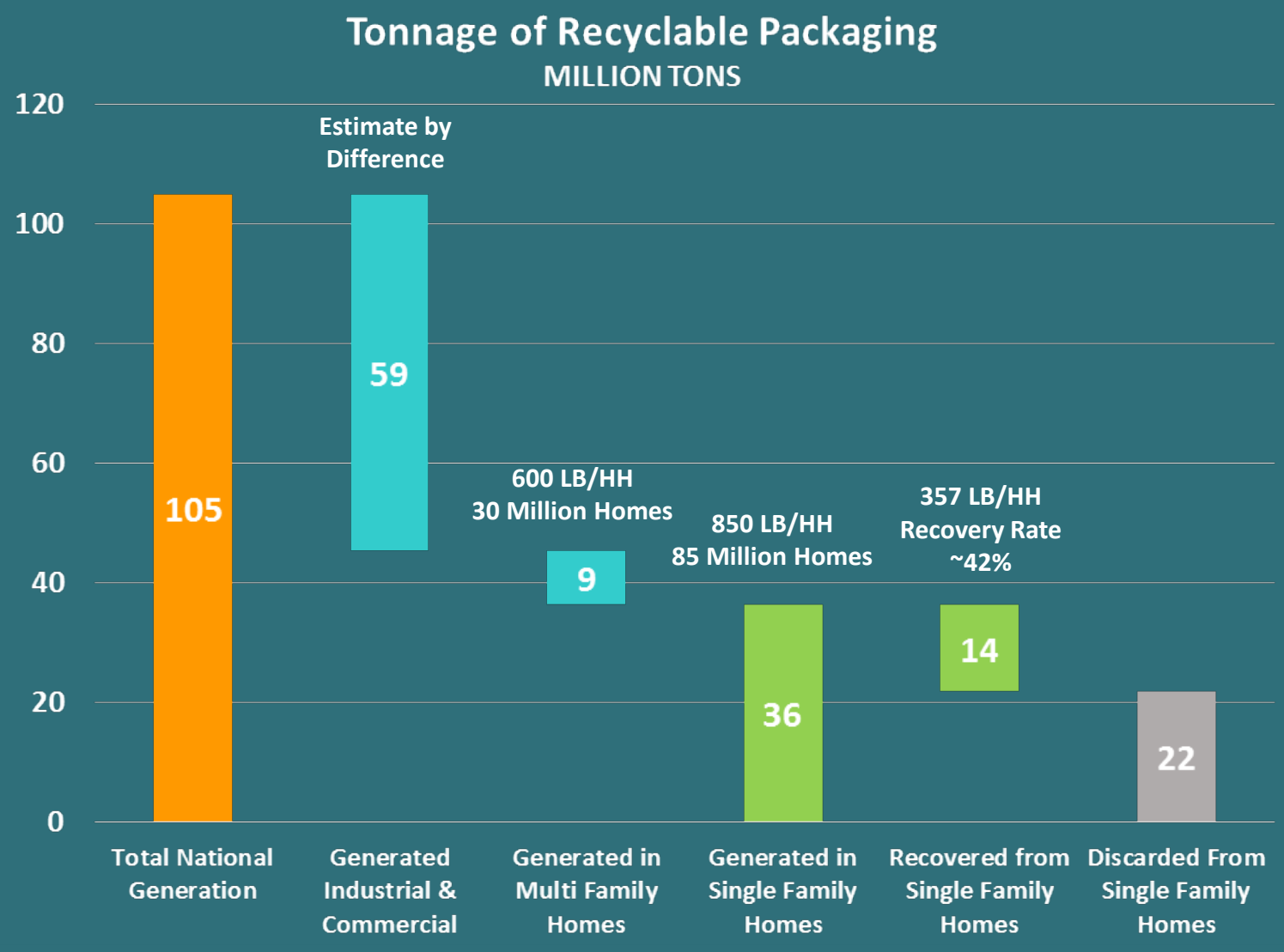


Total of 105 Million Tons

Source: Various Industry Trade Reports

Location of Recyclable Packaging Tonnage

(Estimate)



22 MILLION TONS IS A LOT OF MATERIAL

220 MRFs

100,000 TPY

100 Million Carts

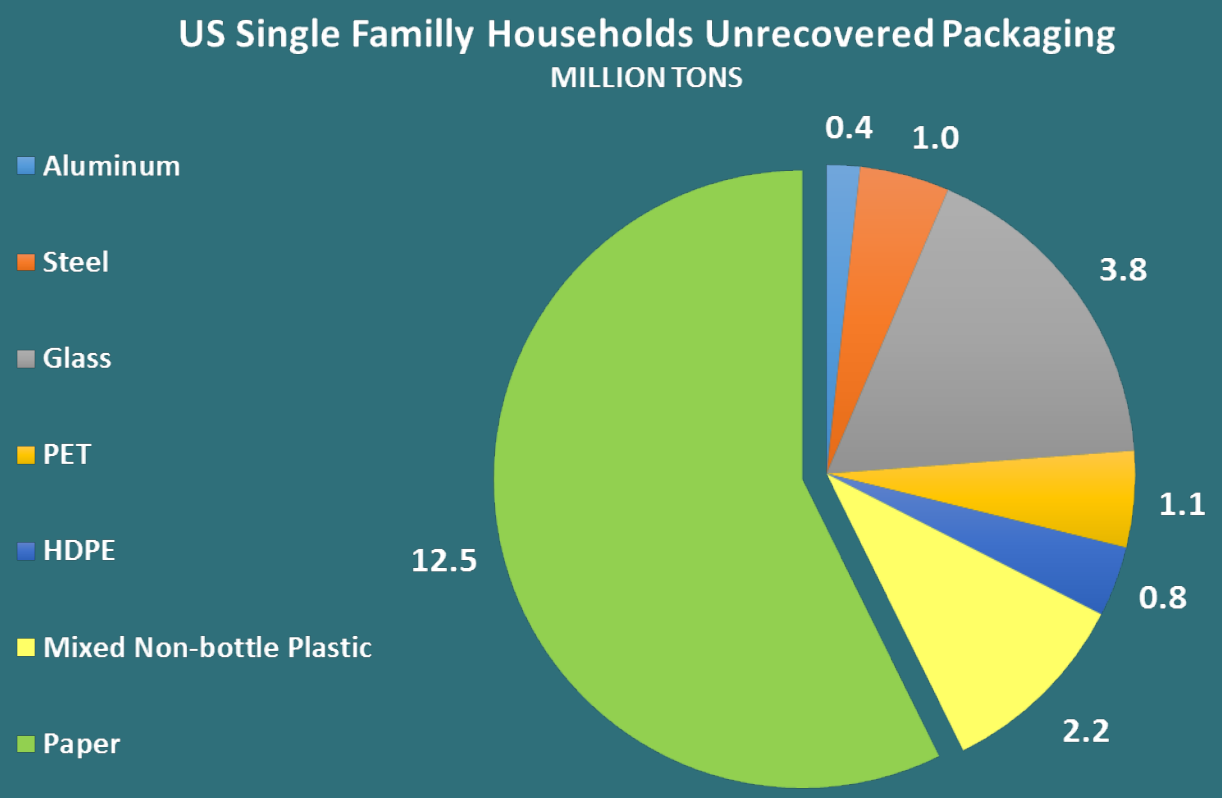
450 LB/HH/Yr

Value of $1.8BN/yr

At the MRF

How Much Recyclable Packaging Is Left in Single Family Homes?

Hypothetical Example



Total of 22 Million Tons

Estimates Using Recovery Rate Data From Previous Slide

Moving The National Rate with Single Family Homes

What is the best way to recover the 22 million tons of recyclables still in US single family homes?

Cart Gap:
40 Million Carts

8 Million Tons/Yr

Number of Un-carted Single Family Homes
Estimated Based on SPC Access Study

+

Reach 100%
Recovery Rate

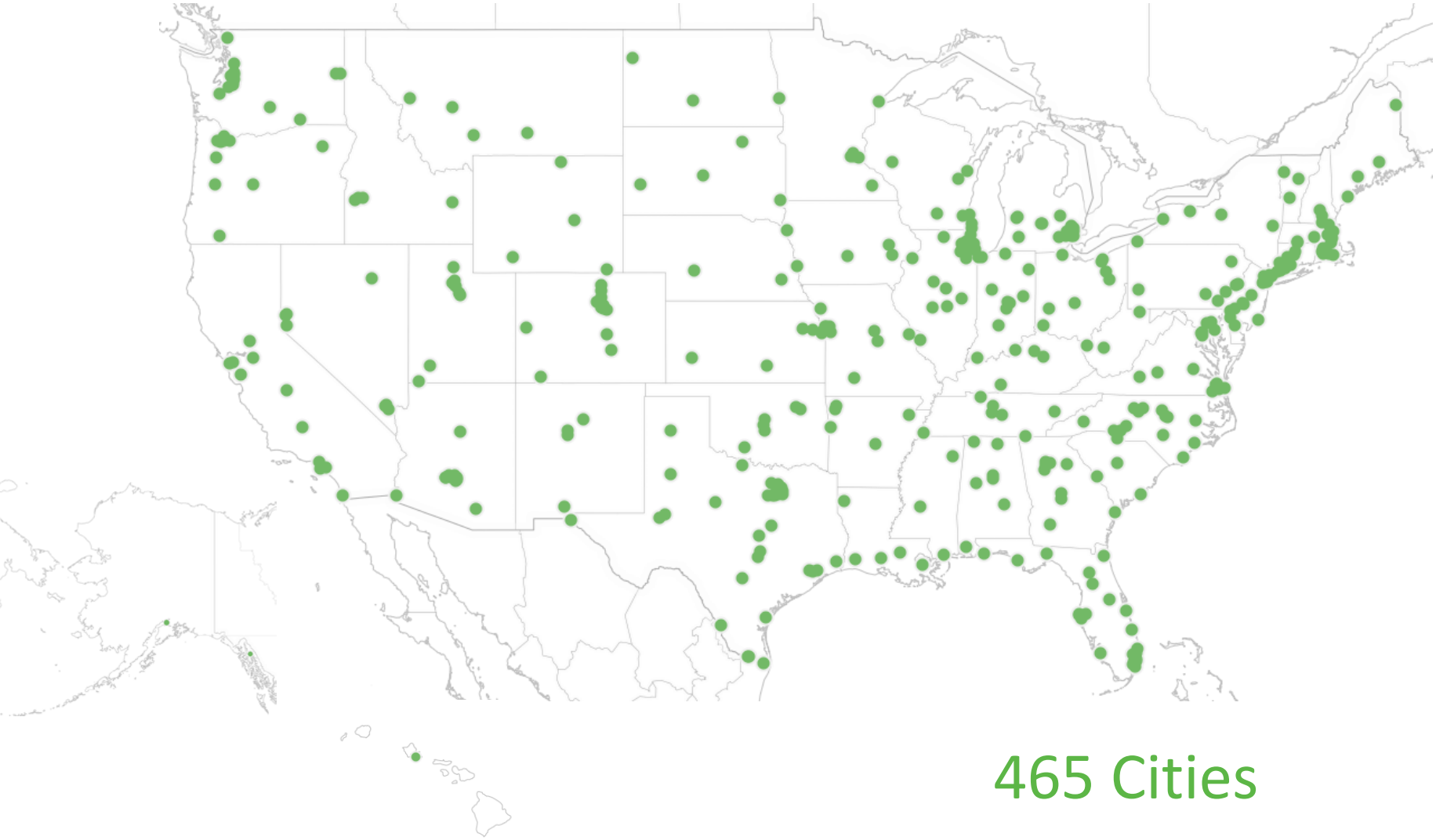
14 Million Tons/Yr

2016 STATE OF CURBSIDE REPORT

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

Geographically Diverse Set of Surveyed Cities



465 Cities

National Average MSW Tip Fee:

$30/ton

HIGHER

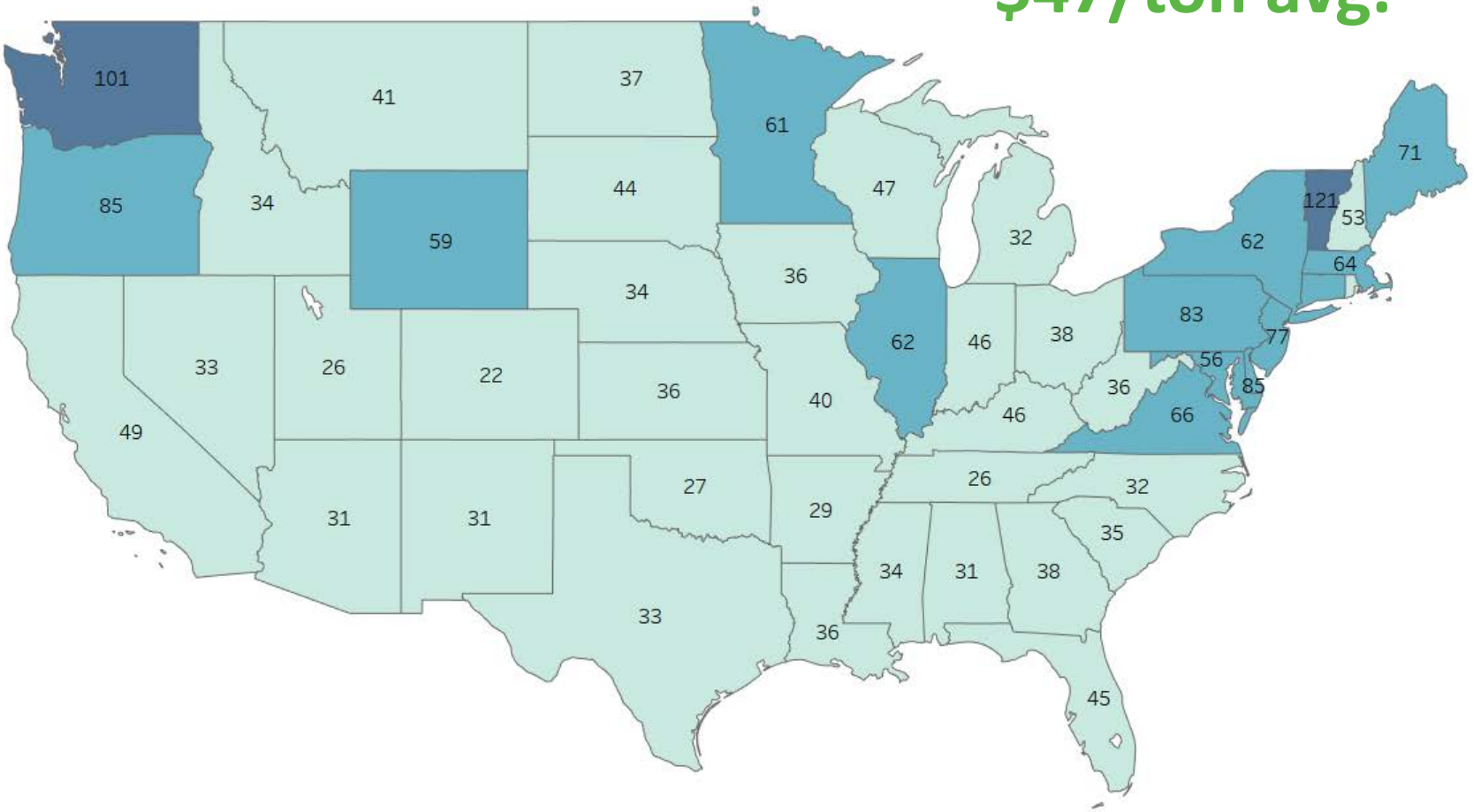
— or —

LOWER?

Surveyed Cities Show Wide Range of MSW Tip Fees.

MSW TIP fee by state ($/ton)

$47/ton avg.



National lbs/hh/year Average:

***Between 800 and 1,000 lbs of recyclables available in the home**

500 lbs/hh/yr

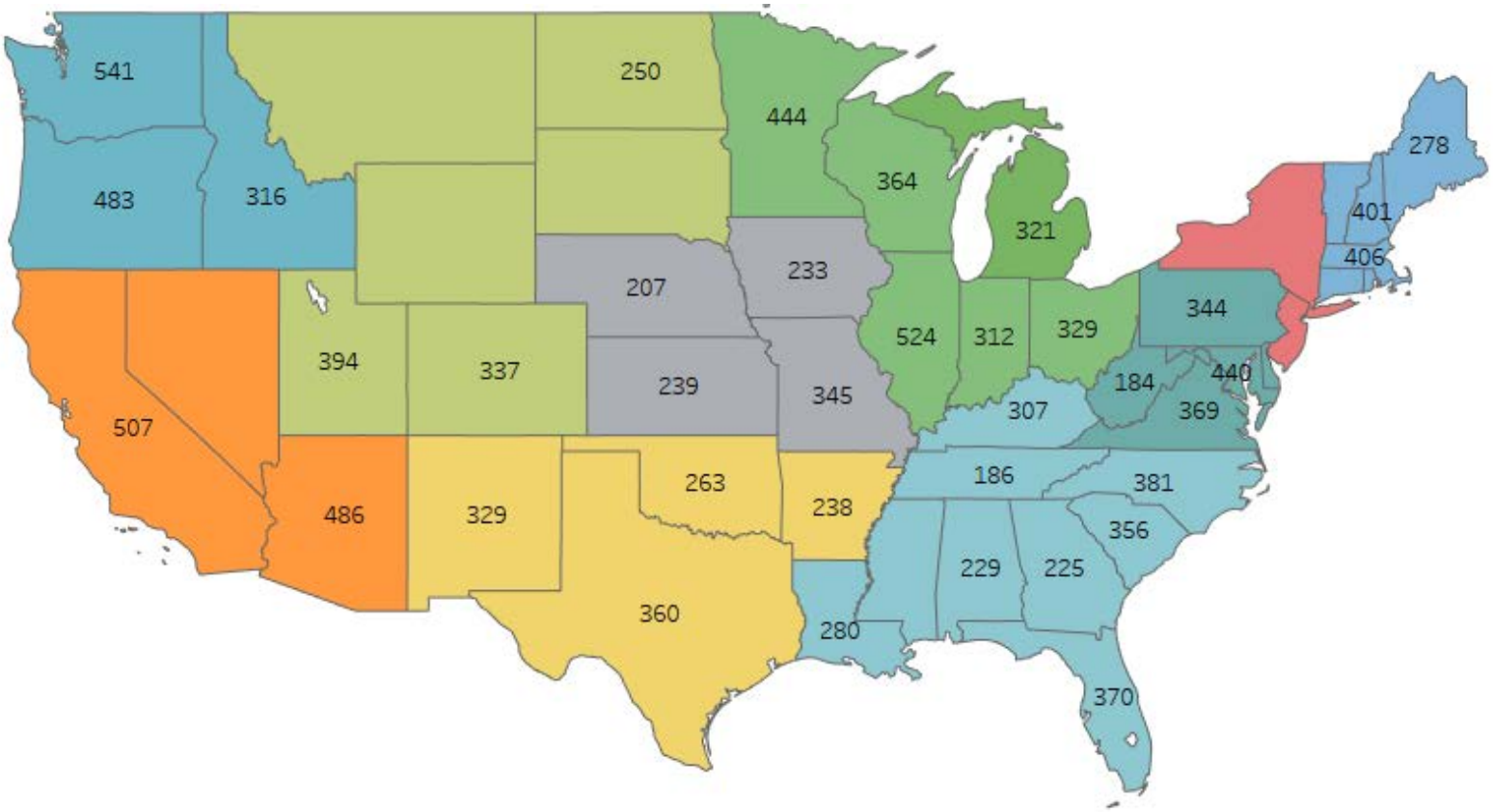
HIGHER

— or —

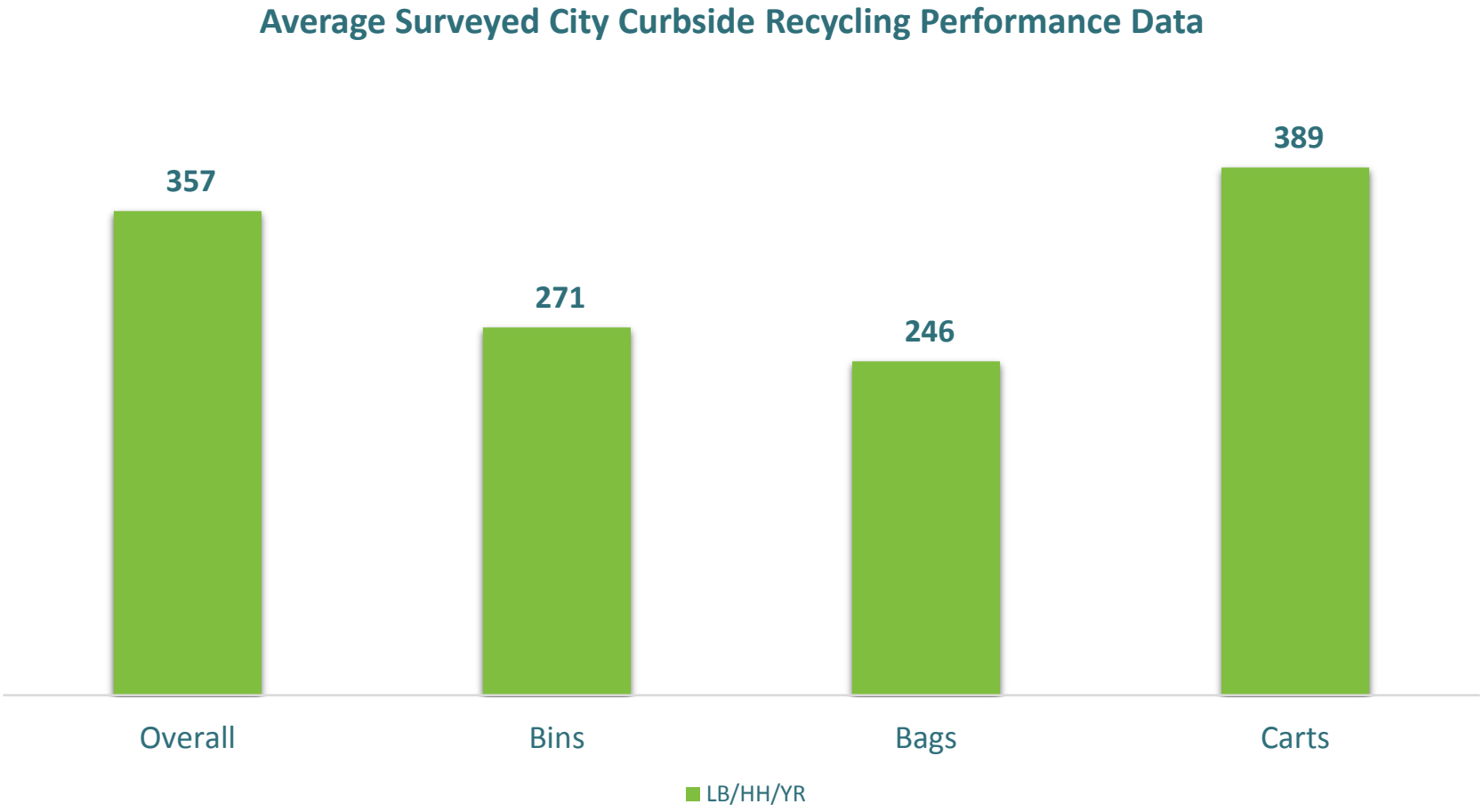
LOWER?

Surveyed Cities Show Wide Range of Recovery Performance.

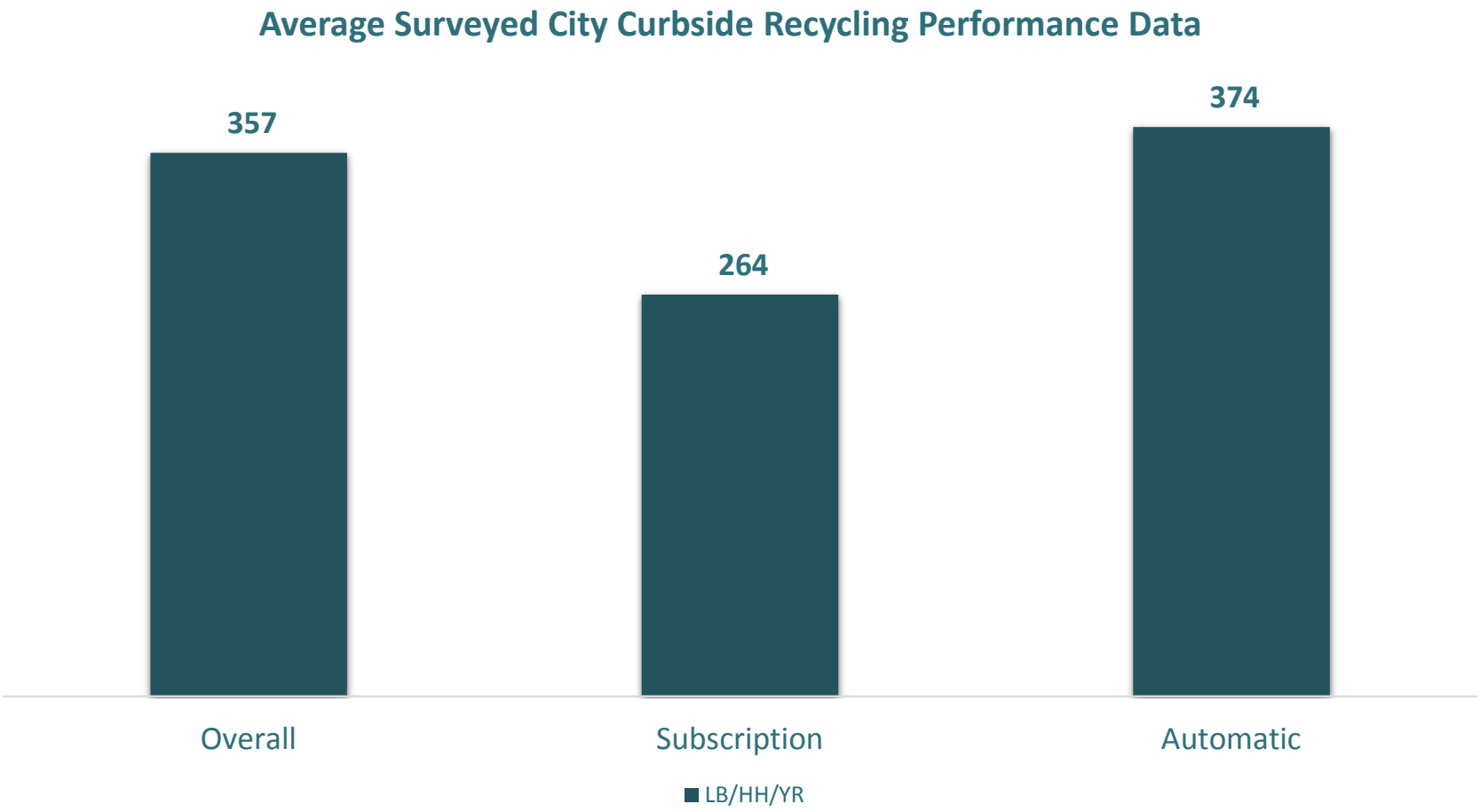
357 LB/HH/YR AVG.



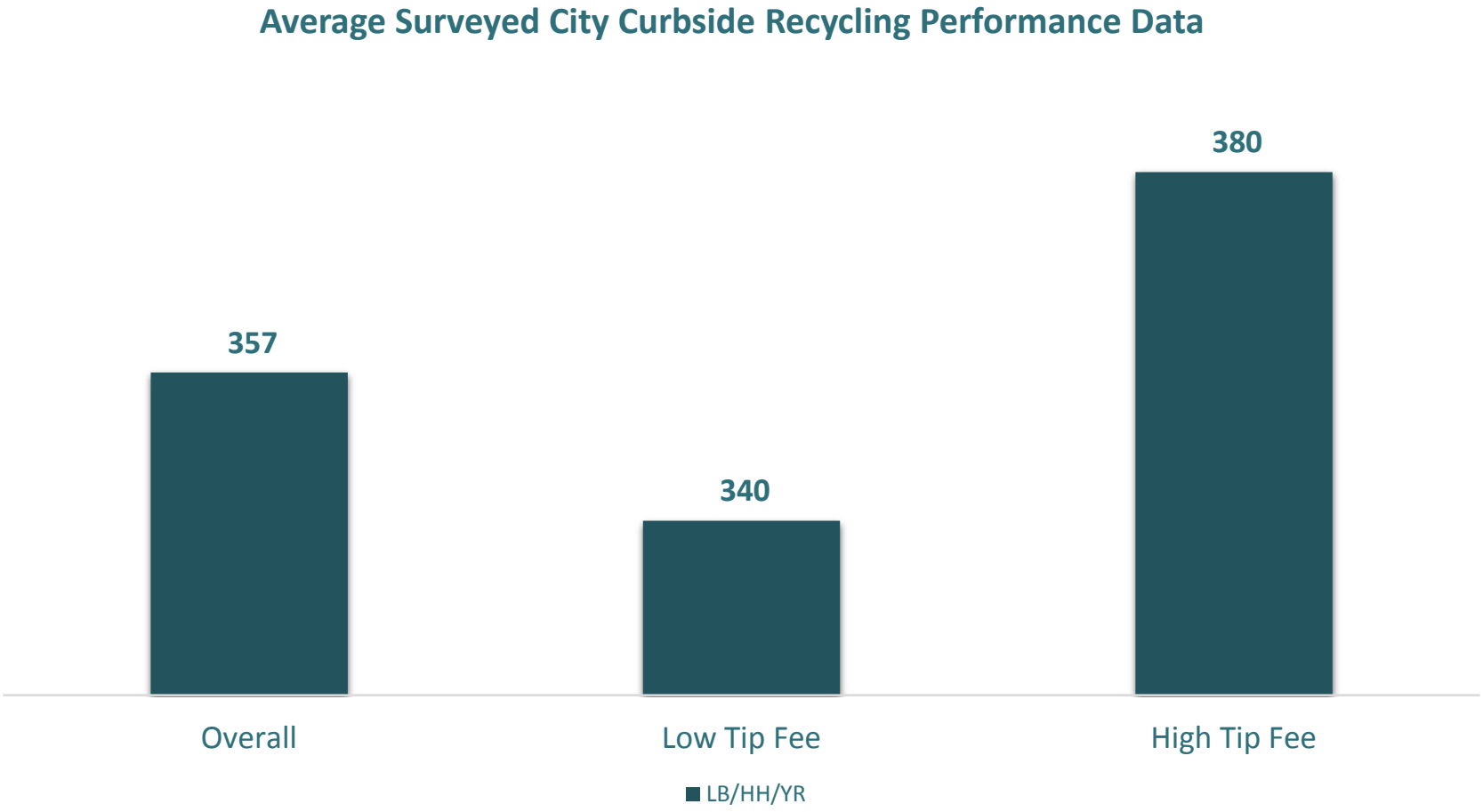
Container Type



Service Provided:
Automatic vs Opt-in Service



MSW Tip Fee (Low <$40/ton)



Number of US Presidents from Ohio:

6

HIGHER

— or —

LOWER?

Number of US Presidents from Ohio:

8

William Henry Harrison
Ulysses S. Grant
Rutherford B. Hayes
James A. Garfield
Benjamin Harrison
William Mckinley
William Howard Taft
Warren G. Harding

Inaugural year of the hot dog (invented in Ohio)

1895

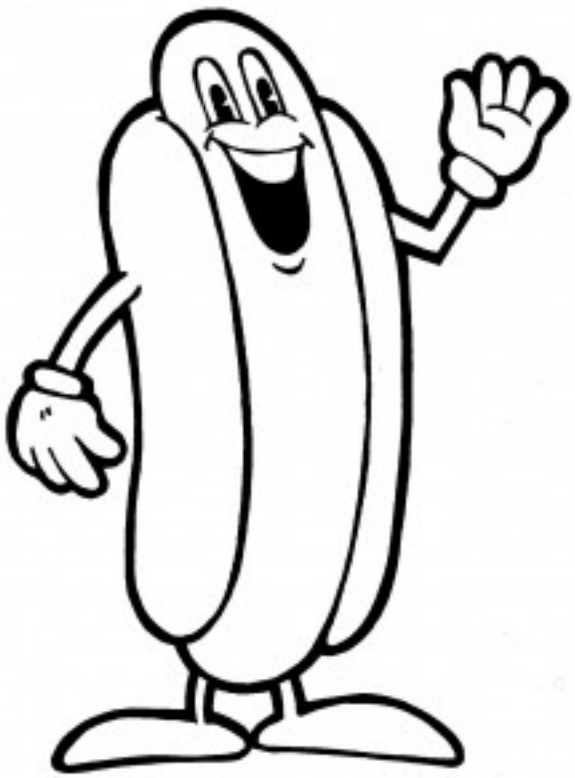
HIGHER

— or —

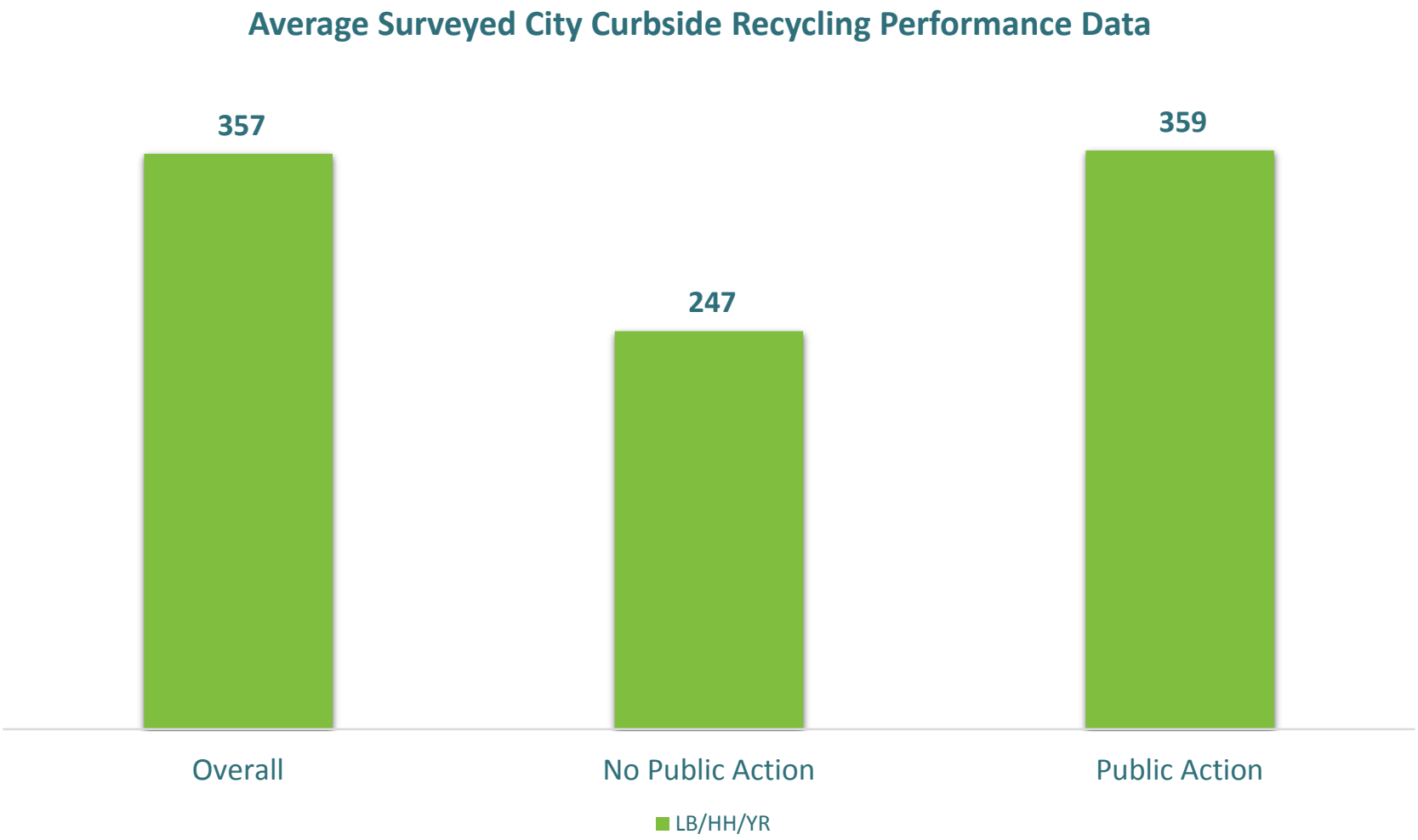
LOWER?

Inaugural year of the hot dog (invented in Ohio)

1900



Public Action Impact



What Do Top Recovering Communities Have in Common?

PROFILE OF THE HIGHEST-PERFORMING CITIES SURVEYED (OVER 400 LBS/HH/YR)

83%
COLLECT IN CARTS

93%
PROVIDE COLLECTION AUTOMATICALLY

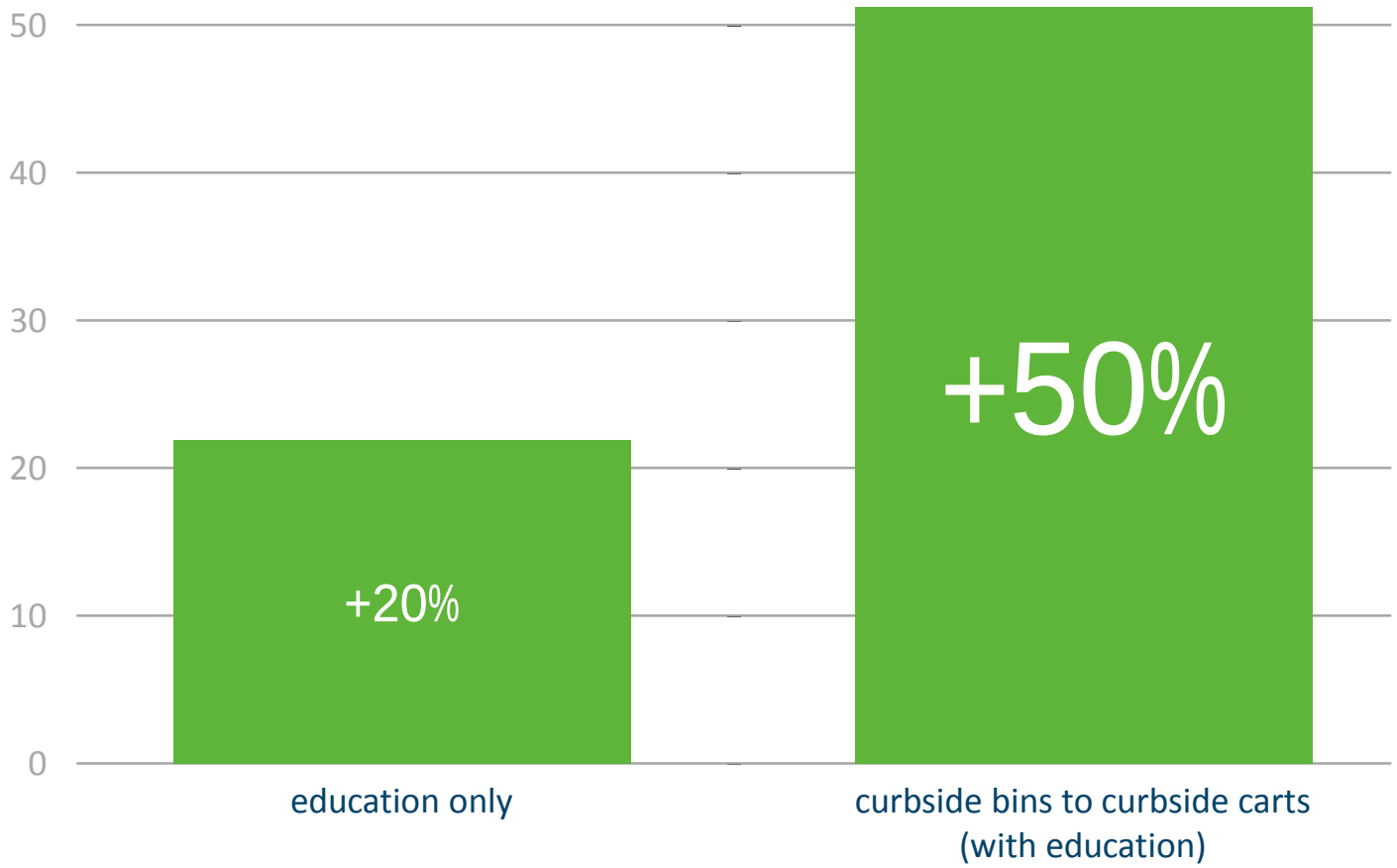
96%
SINGLE-STREAM COLLECTION

WHEN THE LOCAL GOVERNMENTS ARE ENGAGED IN THE RECYCLING PROGRAM AND HAVE TRIGGERED AN "ACTION" TO INCENTIVIZE RECYCLING IS WHEN YOU SEE THE MOST SUCCESS.

100%
PUBLIC ACTION

COMMUNICATIONS

Education + Operations = Best Results



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

HOW LONG IS THE AVERAGE ATTENTION SPAN TODAY?

8

seconds

HOW MANY THINGS CAN SOMEONE REMEMBER AS A SEQUENCE?

up to

7

Try It

Start with 7

Fish

Deer

Cow

Horse

Dog

Mouse

Eagle

NAME THE 7

Try It

Some like 10

Aardvark
Lion
Cat
Alligator
Hippo

Buffalo
Bear
Fox
Hawk
Rat

NAME THE 10

Try It

Some like 12

Elephant
Jackal
Monkey
Beaver
Sloth
Crane

Kangaroo
Shark
Peacock
Buffalo
Squirrel
Gecko

NAME THE 12

Try It

We like no more than 5

Dog
Cat
Bird
Horse
Fish

NAME THE 5

Try It

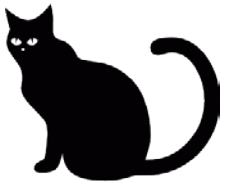
Repetition aids memory

Dog
Cat
Bird
Horse
Fish

NAME THE 5

Try It Again

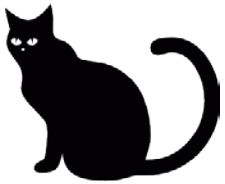
An image is worth 1,000 words



NAME THE 5

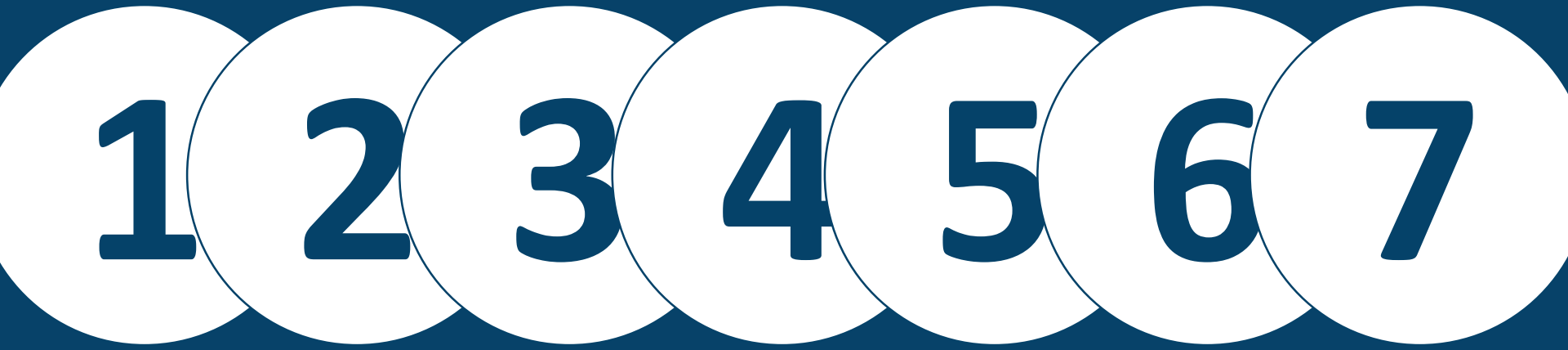
Try It Again

One last time



NAME THE 5

It’s Never One and Done



For Important Messages, Keep It REALLY Simple

1

For Important Messages, Keep It REALLY Simple

NAME THE 1

Set the Expectation

It's **not** just about
saying NO…

It's about
telling them what you want.

WHAT DO WE KNOW?

NAME THE 5

GETTING TO A COMMON SUITE

Cuyahoga County

DISTRICT

59
Local Governments

500k
Single Family Homes

1.3M
People

CONTAINERS

1 cart/bin mix program

2 bin programs

3 with no curbside

7 bin/bag mix programs

14 blue bag programs

32 cart programs

4 MRFs

HAULERS

23

Gather Key Facts

Simple messaging takes work.

THE RECYCLING PARTNERSHIP

ft Bags
Tissue Paper
Ice Cream Container
Other:

ACCEPTABLE MATERIALS

GLASS PRODUCT — ACCEPT — NOT DANGER

Bottles and Jars
Window
Mugs
Drinking Glass
Other:

ALUMINUM PRODUCT — ACCEPT — NOT DANGER

Can
Foil or Foil like container (e.g. aluminum trays)
Other aluminum containers
Aerosol
Other:

STEEL PRODUCT — ACCEPT — NOT DANGER

Can
Aerosol
Pots and pans
Scrap metal
Directions on how to Prepare
Other:

How do you educate what plastic is accepted:

- By object shape and/or size. (e.g. bottles – neck smaller
- By resin type #1-7
- By resin type #1 and #2
- By resin type #1, 2, 3, 4, and 5
- Other:

ACCEPTABLE MATERIALS

PLASTIC PRODUCT — ACCEPT — NOT DANGER

PET Bottles & Jars
Non-bottle PET Containers & Lids (e.g. Clear plastic fast food cups)
PET thermoform (e.g. fruit container)
HDPE Bottles & Jars
Non-bottle HDPE Containers & Lids
PP Bottles
PP Containers & Lids
Other Drink Bottles (e.g. Juice in #7)
Other Food bottles & Jars (e.g. items in #3,4,6 or 7)
Other Household bottles & Jars (e.g. #3 shampoo bottle)
Other Tubs & Lids (e.g. tubs that are #3,4,6,or 7)
Produce, Deli & Bakery Containers, cups, trays
Exclusions, size or preparation requirements
Other containers & Packaging (ie baskets, molded packaging, food storage containers)
Exclusions, size or preparation requirements

ACCEPTABLE MATERIALS

PLASTIC PRODUCT — ACCEPT — NOT DANGER

Bulky plastic (e.g. crates)
Exclusions, size or preparation requirements
Buckets (any size)
Exclusions, size or preparation requirements
Toys
Size or preparation requirements
Flower Pots
Exclusions, size or preparation requirements
Bags, wraps, film (bag in bag)
Plastic bags (loose or bag in bag)
EPS Foam Blocks & Shapes
EPS Foam food Service & Other containers
Plastic Size Requirements?
Other Preparation Requirements?

PROHIBITIVE ITEMS

If you could only tell citizens 5 things not to put at the curb -

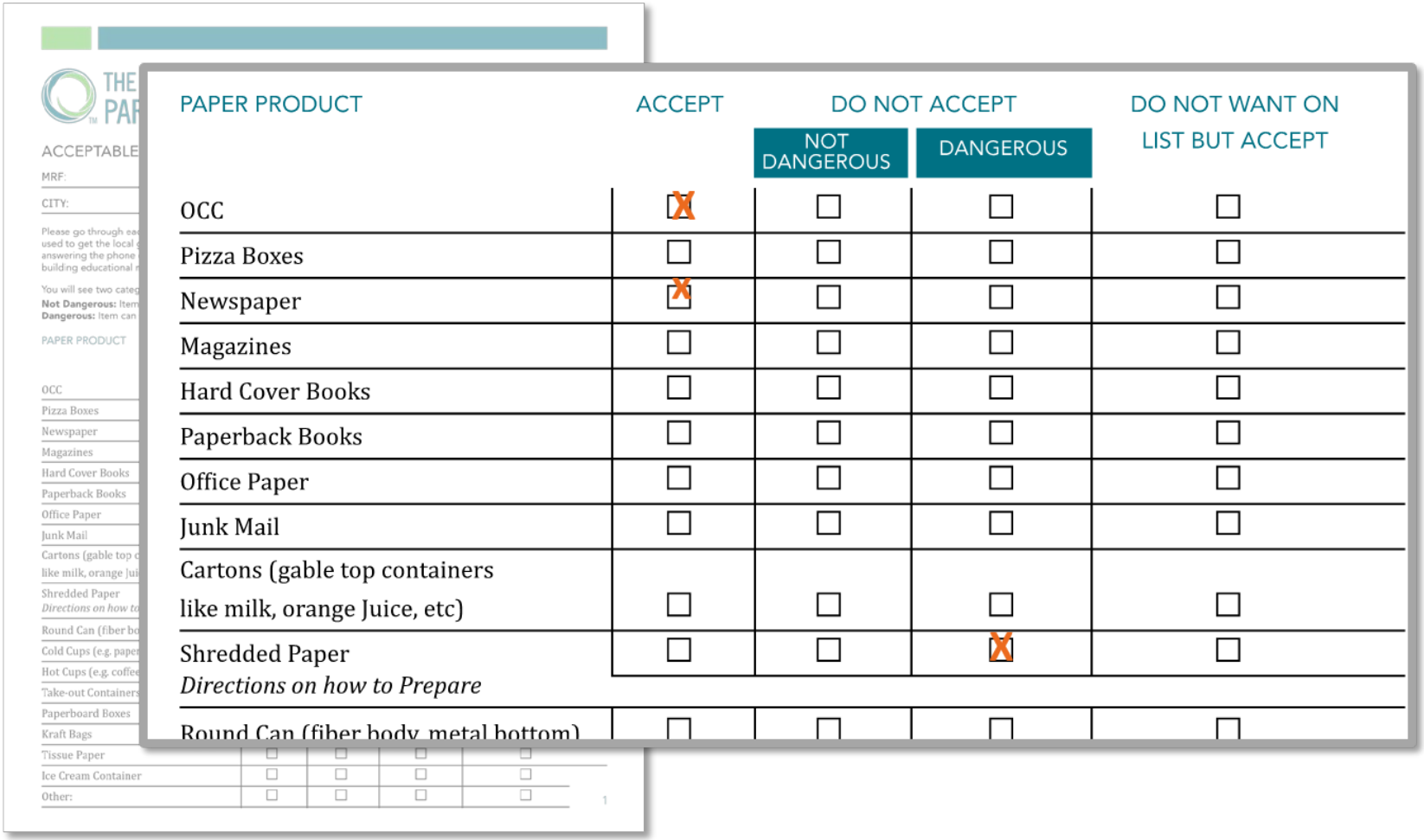
Rank the top five (5) unacceptable items that are causing the most problems in your facility, i.e. Degrades other commodities significantly, casues damage to MRF equipment, dangerous to staff, etc. Please rank with numbers "1" through "5." Put a "1" in the box of the worst contaminant. Only rank the top five and leave everything else blank.

PROHIBITIVE ITEMS	TOP 5
Plastic Bags	
Shredded Paper	
Propane Tanks	
Aerosol Cans	
EPS Foam (block and/or food service containers)	
Yard Waste	
Food Waste	
Bulky Plastics	
Wire, hose, cords, rope, chains	
Scrap metal	
Pots and Pans	
White Goods	
Textiles/clothes	
Flexible Packaging	
Motor oil containers	
Glass	
Fluorescent Bulbs	
Plastic toys	
Plastic furniture	
Electronics	
Cartons	
Ink/printer cartridges	
General hazardous waste	
Needles	
Pet food bags	
Mercury containing objects	
Dishes	
Wood	
Other	
Other	
Other	

5

Getting to a COMMON SUITE

STEP 1



PAPER PRODUCT	ACCEPT	DO NOT ACCEPT		DO NOT WANT ON LIST BUT ACCEPT
		NOT DANGEROUS	DANGEROUS	
OCC	☒	☐	☐	☐
Pizza Boxes	☐	☐	☐	☐
Newspaper	☒	☐	☐	☐
Magazines	☐	☐	☐	☐
Hard Cover Books	☐	☐	☐	☐
Paperback Books	☐	☐	☐	☐
Office Paper	☐	☐	☐	☐
Junk Mail	☐	☐	☐	☐
Cartons (gable top containers like milk, orange Juice, etc)	☐	☐	☐	☐
Shredded Paper *Directions on how to Prepare*	☐	☐	☒	☐
Round Can (fiber body, metal bottom)	☐	☐	☐	☐

Getting to a COMMON SUITE

STEP 2

SHARED ACCEPTABLE ITEMS:

Fiber
OCC
Pizza Boxes
Newspaper
Magazines
Office Paper
Junk Mail
Cartons (gable top containers like milk, orange Juice, etc)
Paperboard Boxes
Kraft Bags

Glass
Bottles and Jars

Aluminum
Can

Steel
Can

Plastic
PET Bottles & Jars
HDPE Bottles & Jars
Other Drink Bottles (e.g. Juice in #7)
Other Food bottles & Jars (e.g. items in #3,4,6 or 7)
Other Household bottles & Jars (e.g. #3 shampoo bottle)
Non-bottle HDPE Containers & Lids
Other Tubs & Lids (e.g. tubs that are #3,4,6,or 7)
PP Bottles
PP Containers & Lids

TOP 5 PROHIBITIVE:

1) Plastic Bags
2) Needles
3) Tanglers (rope, hose, cord, wire)
4) Textiles
5) Scrap Metal

Getting to a COMMON SUITE

STEP 3

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, Boxes, and Cardboard
flatten

Plastic

Kitchen, Laundry, Bath: Bottles and Containers
empty and replace cap

NO!
NO INCLUIR

No Propane Tanks

No Plastic Bags (return to retail)

No Hypodermic Needles

No Clothing or Linens (use donation programs)

No Tanglers (no hoses, wires, chains, or electronics)

MRF-shed Research

Rumpke's Columbus MRF

MRF-shed Research

Studied 42 communities funneling recyclables into Rumpke's Columbus MRF.

How similar/dissimilar are the acceptable materials lists from each of the communities funneling material into the same MRF?

Are the communities using words or imagery, or both, to communicate those acceptable materials?

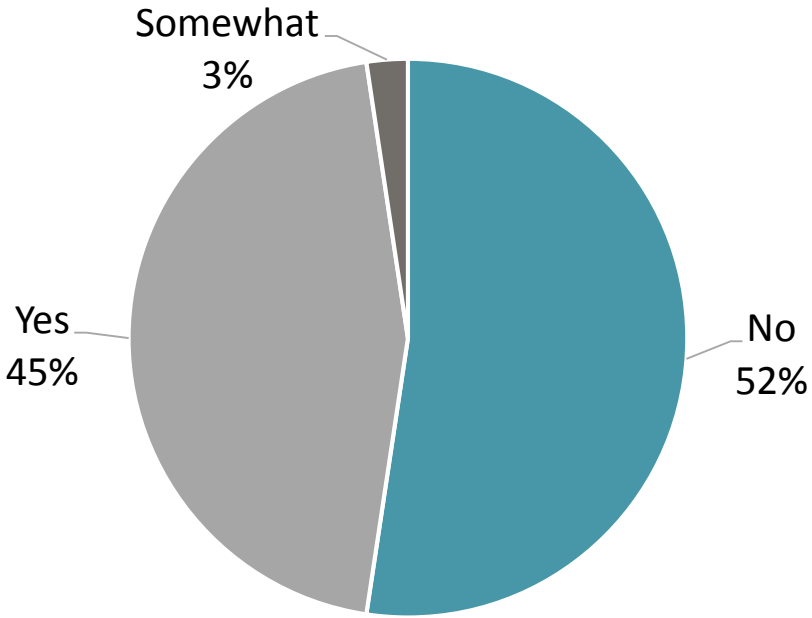
How difficult or easy it was to obtain this information?

MRF-shed Website Research

What Department Oversees Garbage and Recycling
(i.e., Operations, Education or Both)

2%	Community Services
2%	Resident Services
2%	Public Works
2%	Trash Collection
3%	Administrative Office
3%	City Services
5%	Streets, including Streets and Utilities
10%	Public Services, including Public Service and Engineering
26%	Service, including Service and Engineering
45%	No Information Available

Was Recycling Information Easy to Obtain?



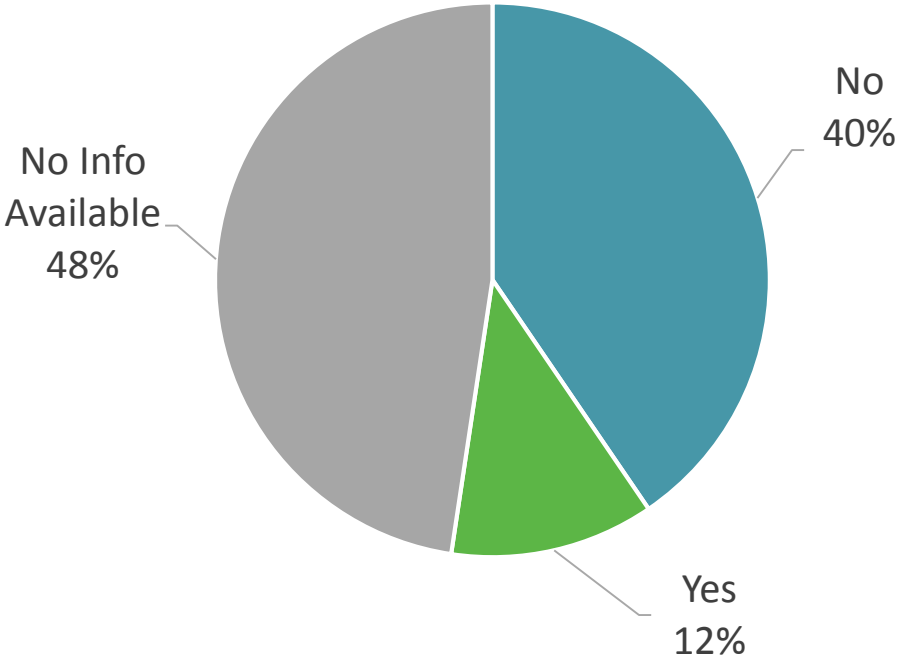
20 municipal sites had recycling information that could be found in an average time of 13.15 seconds.

19 communities had no information to be found.

3 municipal programs had recycling information, but it took over two minutes to find.

Rumpke's Acceptable Materials List

Was Material List Consistent with Rumpke's List?



20 sites did not have information available (19 sites provided no information whatsoever, while one site linked to Rumpke's site, but the link was broken).

17 sites had lists that differed from Rumpke's.

5 sites either used Rumpke's educational materials or linked directly to the Rumpke site/materials.

How Was Material List Different from Rumpke's List?

The following materials **WERE** included on a community's acceptable materials list:

7	All plastic containers labeled 1-7 *Plastics #1-#7 are accepted, though plastic take-out containers, butter tubs, yogurt containers and bags are not.*
5	HDPE and PET plastics (#1 - #7)

Orange *= the number of communities*

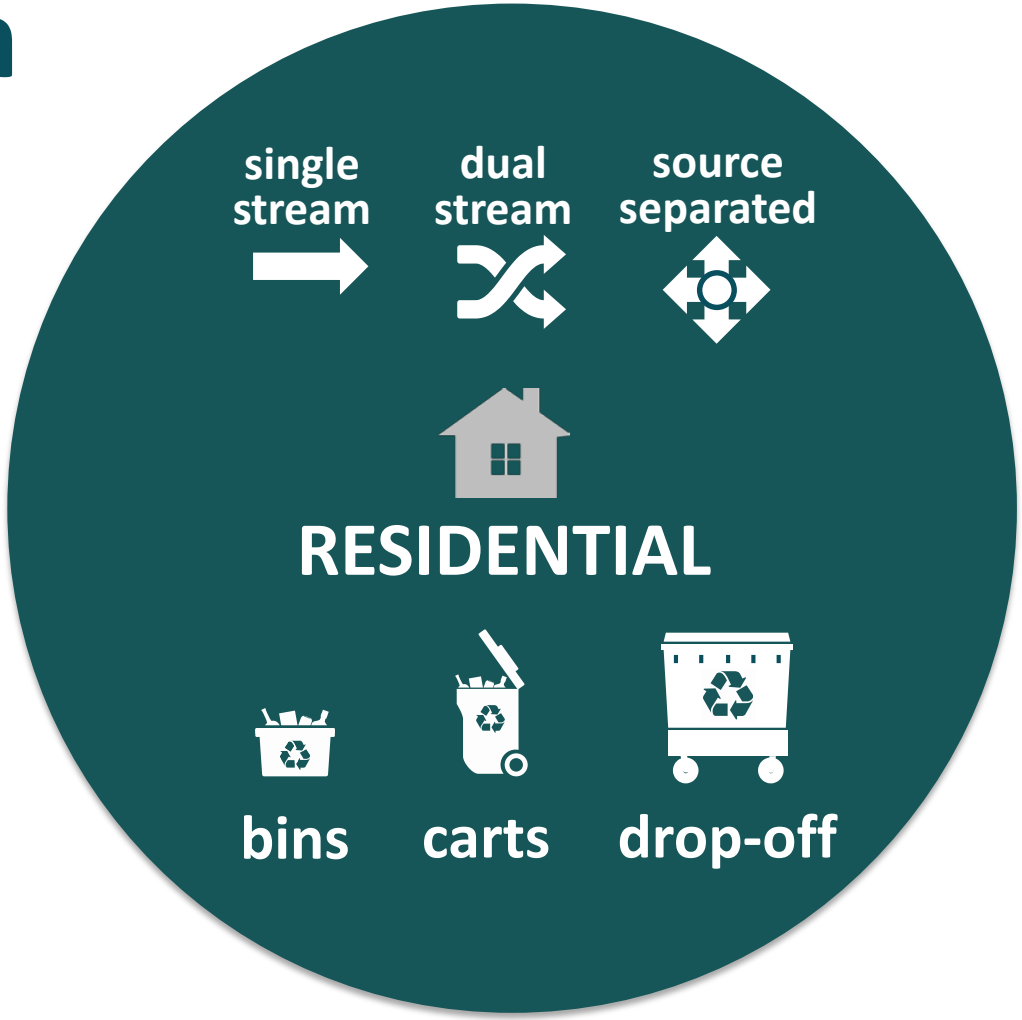
CONTAMINATION

THE ISSUE

contamination

[kuh n-tam-uh-ney-shuh]

1. The wrong materials in the system.
2. The right materials prepared the wrong way.



WHY FIGHT CONTAMINATION?

WHAT ARE WE FIGHTING?

List materials we need to target.

HOW SHOULD WE FIGHT IT?

Design a flyer, handout, or similar communications tool.

Tools

Prioritized. Clear. Simple.

Annual info card mailer

Curbside feedback

Top issue mailer

Top issue signage

Tools

INFORM
basic do's and don'ts

POSTCARD/MAGNET

PERSONALIZED FEEDBACK

CART TAGS

Tools

ISSUE SPECIFIC COMMUNICATIONS

MAILERS + MEDIA

GENERAL ADVERTISING

Steps and Timeline

Each step makes the core tools more accurate, strong, and effective.

Gather Key Facts

Full court pressin the areas with the poorest quality

Considerations

- Which material is most problematic?
- Which routes are producing the lowest quality materials?
- Consider 20% rule

Train Staff

Train them well. Set a standard.

Track Results

Technical tools and resources.

MRF MATERIAL TRACKING FORM **Date:** _____

City: _____ Hauler: _____

Truck Number: _____ Container Number (if drop-off): _____

Route Number: _____ Container Material (if drop-off): _____
(e.g. bottles/cans, cardboard, paper)

QUALITY GRADE (circle one)

A Quality is acceptable. **Less than 10%** of material is contaminated.

B Quality is poor. **10% to 20%** of material is contaminated

C Quality is bad. **Over 20%** of material is contaminated.

Grade B or C? Check main contaminant:

☐ Recyclables in Bags ☐ Refuse in Bags ☐ Loose bags/film ☐ Scrap Metal

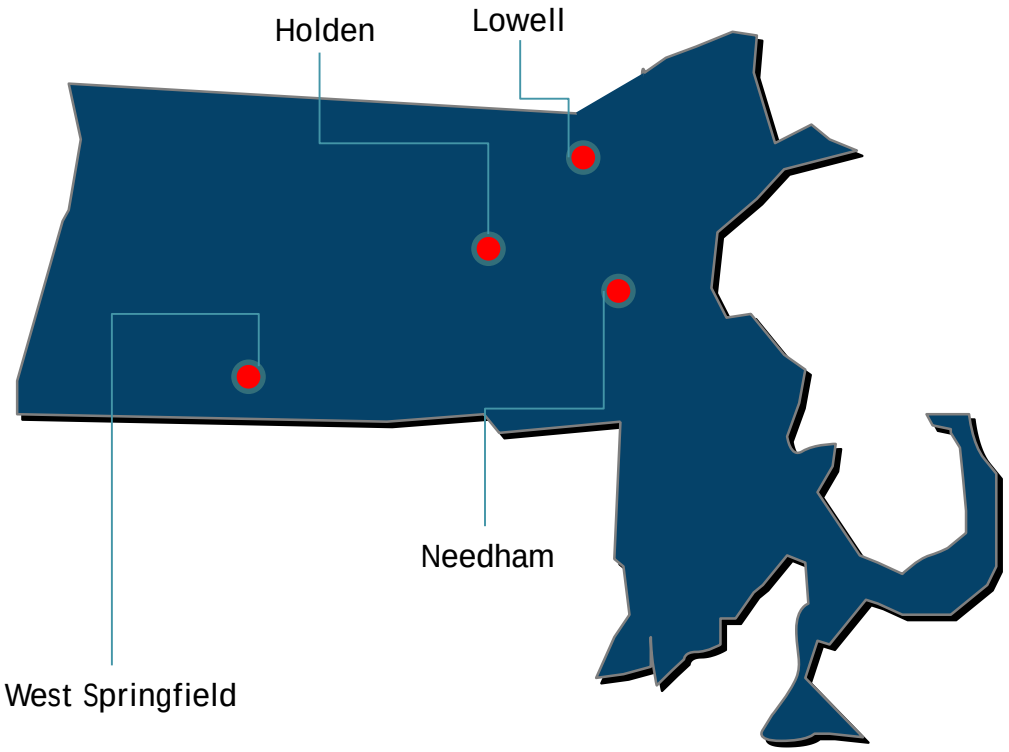
☐ Wood Waste ☐ Large bulky/heavy Items ☐ Hazardous Waste ☐ Tanglers ☐ Textiles

Other: _____

Photographed? Quality Inspection Signature: _____

Driver Signature: _____

Sample Results



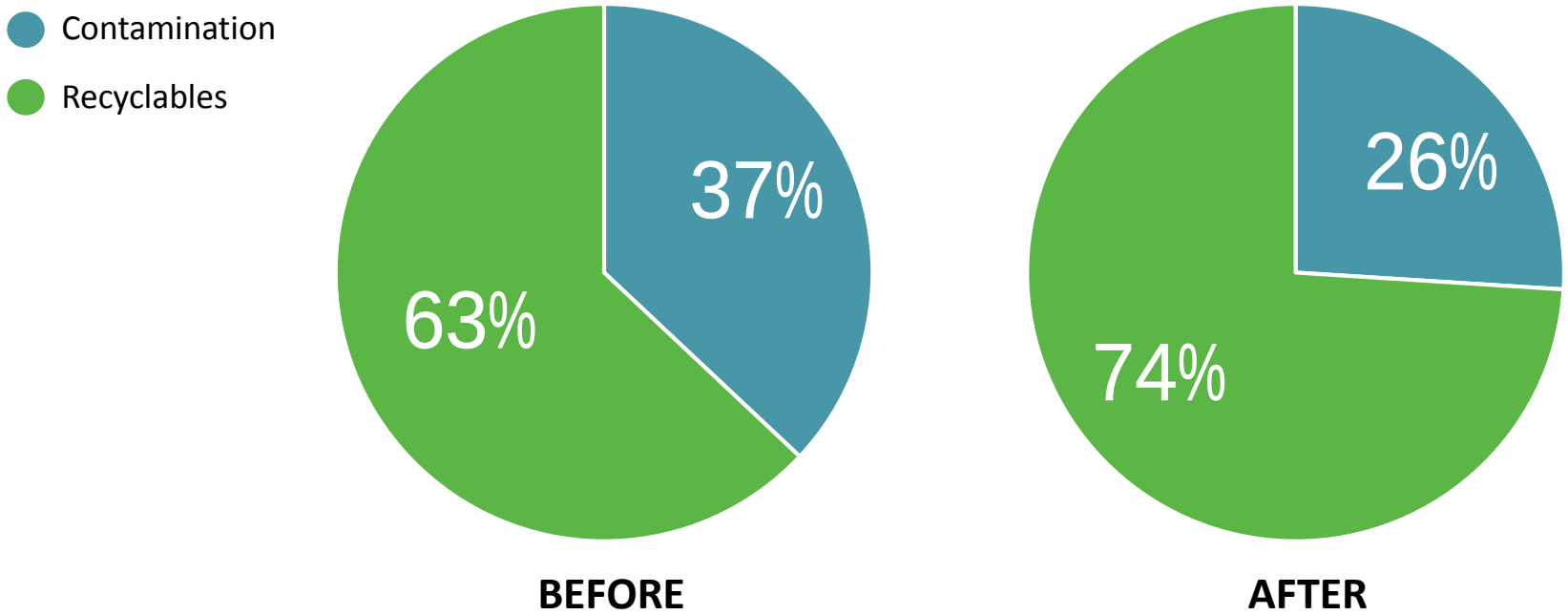
Overall Contamination Trended Downward

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.



Targeted Material Trended Downward

"Stuff in Bags" dropped from 43 to 15 percent contamination by weight.

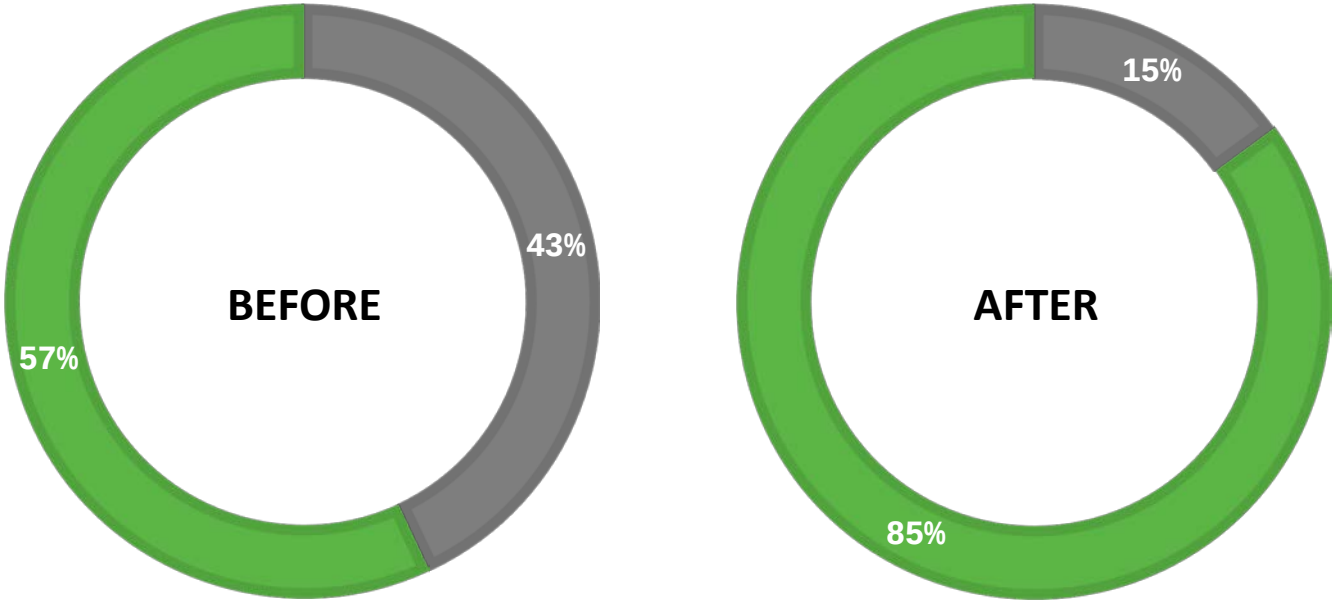
LOWELL and W. SPRINGFIELD

Curbside
Entire toolkit was used

- Recyclables in bags and trash in bags were identified as the most problematic contaminant.
- That material was specifically targeted.

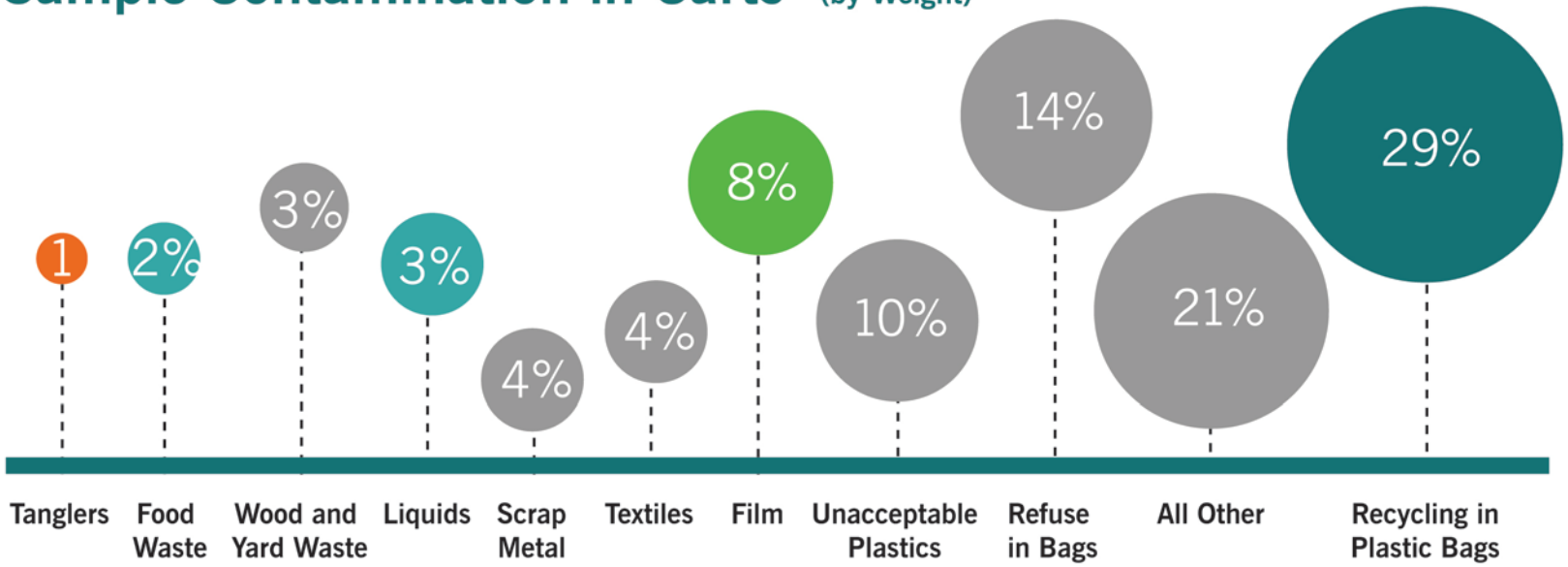
Stuff in Bags

All Other Contamination



Weight Alone Doesn't Tell the Story

Sample Contamination in Carts (by Weight)



VS

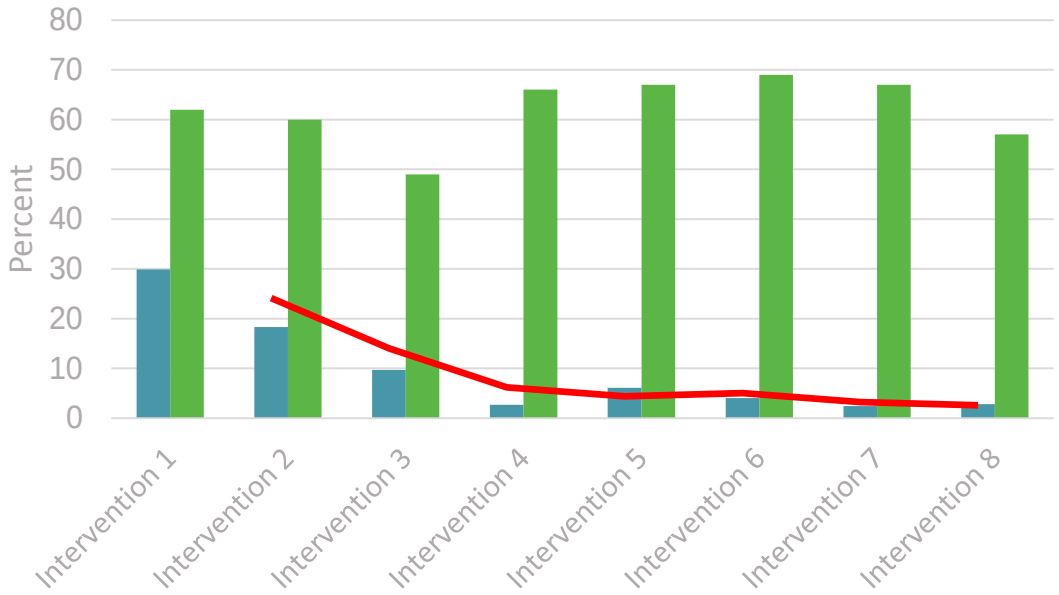
Top 5 Contaminants

according to 2016 The Recycling Partnership MRF survey

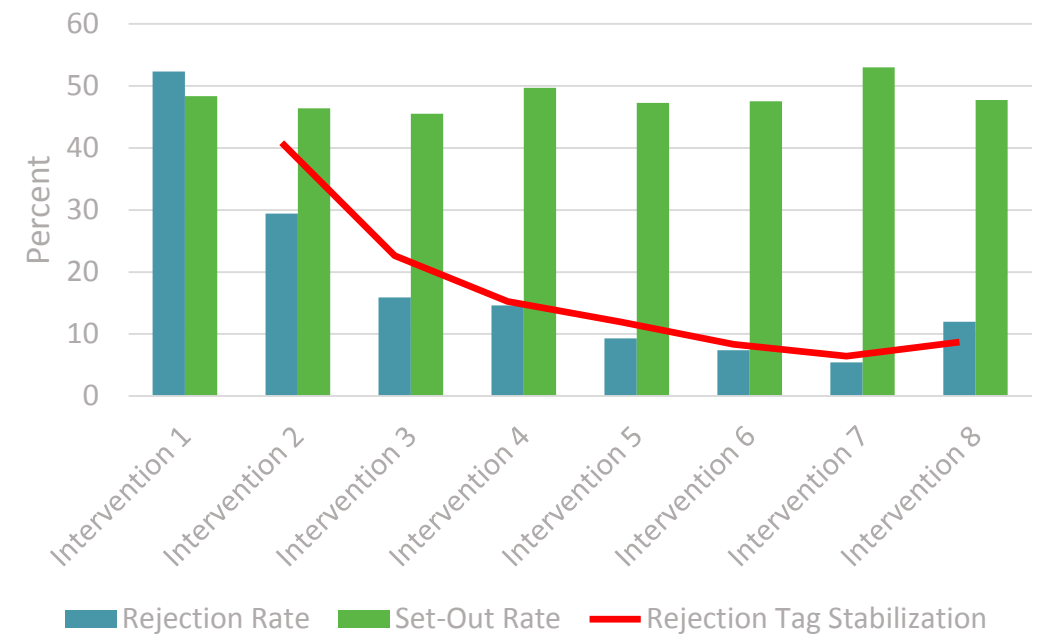
1. **Tanglers** (hoses, cords, clothes)
2. **Film** (plastic wrap or bags)
3. **Bagged Things** (refuse or recycling)
4. **Hazardous Material** (propane tanks, needles/sharps)
5. **Yuck** (food, liquids, diapers, etc.)

Rejection and Set-Out Rates for Lowell Pilot

Average Quality Route



Poor Quality Route



Implications

 # Contaminated carts

Overall contamination

Most problematic contaminant

Set-out rates and resident satisfaction remained steady

DROP-OFF: Tools

TOP ISSUE SIGNAGE

IN-PERSON FEEDBACK

SITE SIGNAGE

ANNUAL INFO CARD

Overall Contamination Trended Downward

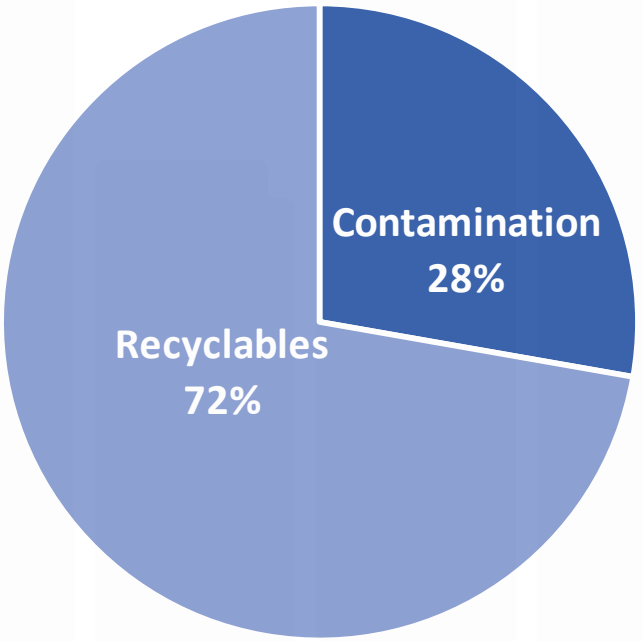
Total contamination dropped from 28 to 14 percent (by weight).

NEEDHAM

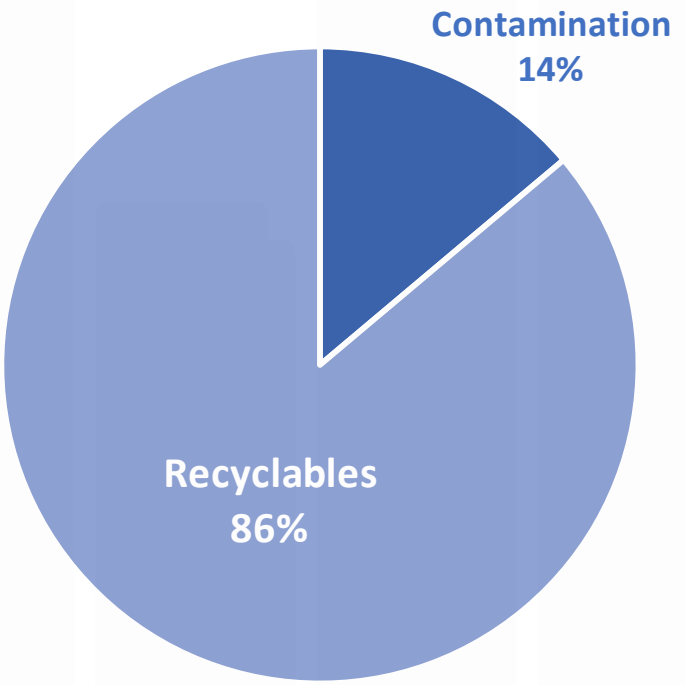
Drop-Off
Entire toolkit was used

- Contamination decrease was specifically due to reduction in target material (stuff in bags).
- During the same time period, recovery of recyclables did not change.

BEFORE



AFTER



Targeted Material Trended Downward

"Stuff in Bags" dropped from 94 to 53 percent contamination by weight.

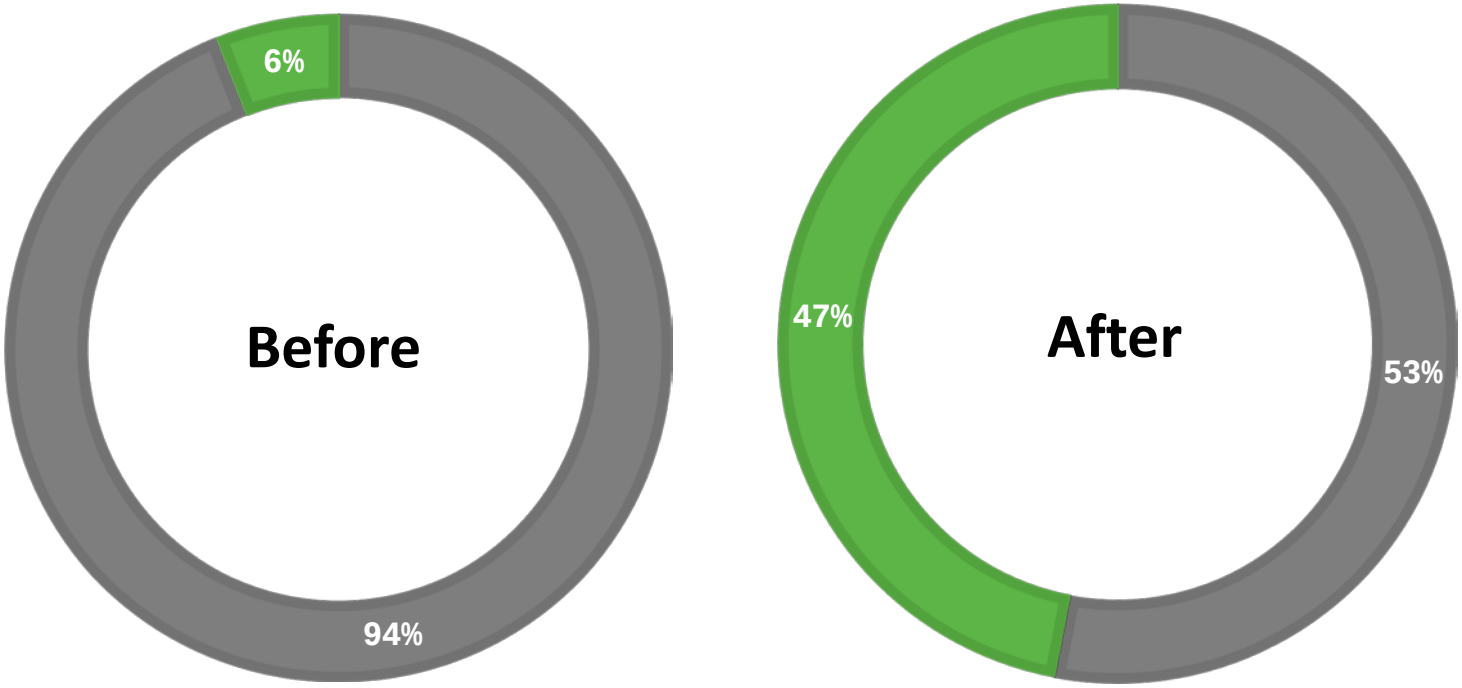
NEEDHAM

Drop-Off
Entire toolkit was used

- Recyclables in bags and trash in bags were identified as the most problematic contaminant.
- That material was specifically targeted.

Stuff in Plastic Bags

All Other Contamination



CONTAMINATION DISCUSSION

What else would you like to talk about?

COMMUNICATION

Who Is Your Audience?

RESIDENTS

FRONT LINE STAFF

DECISION MAKERS

HAULER / MRF

Have a Plan

HOW DO WE CHANGE BEHAVIOR?

3-1-1

3 THREE KEY ELEMENTS TO CHANGING BEHAVIOR

INFORM – BASIC DO'S AND DON'TS

POSTCARD/MAGNET

PERSONALIZED FEEDBACK

CART TAGS

ISSUE SPECIFIC COMMUNICATIONS

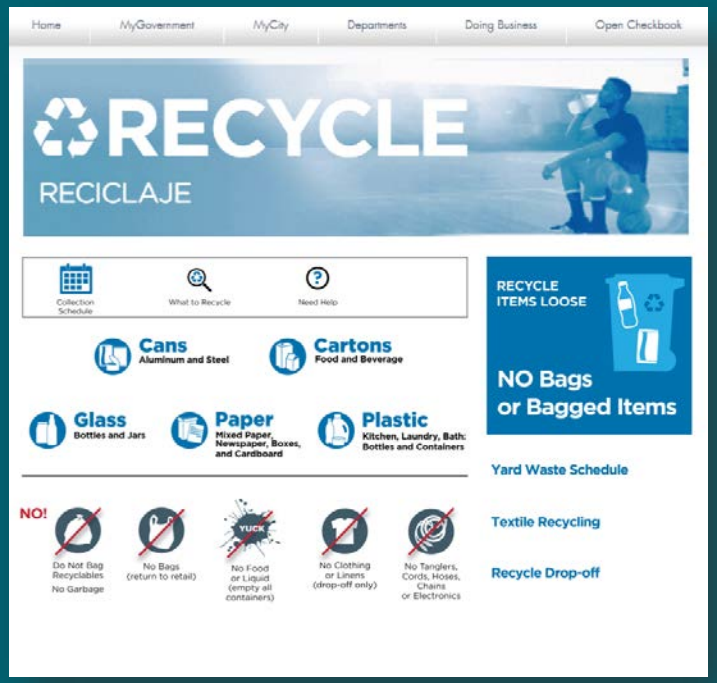
MAILERS + MEDIA

1 BUILD A CULTURE OF RECYCLING

GENERAL ADVERTISING

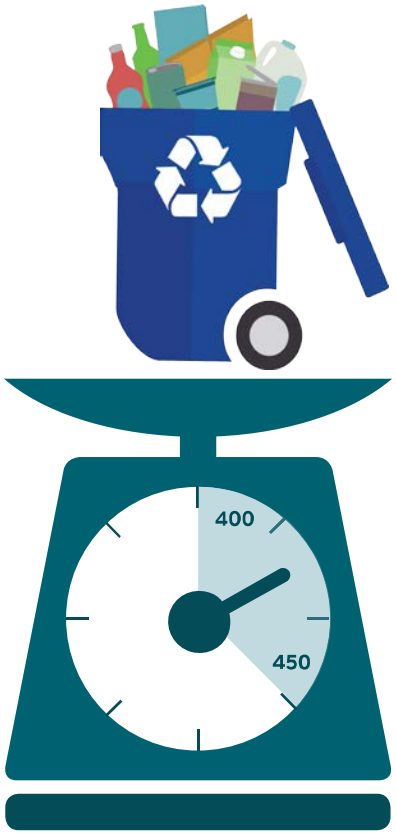
1 GIVE RESIDENTS GREAT CUSTOMER SERVICE

STANDING RESOURCE



MEASURE & SHARE

PROGRAMATIC DATA
Curbside
Multi-Family
Drop-off
Commercial



Detail For CURBSIDE:
Recycling Tonnage
Garbage Tonnage
Set-out
Participation
Contamination

Detail For DROP-OFF:
Recycling Tonnage
Garbage Tonnage
# of Visitors
# of pulls
Contamination

MoreBetter Program

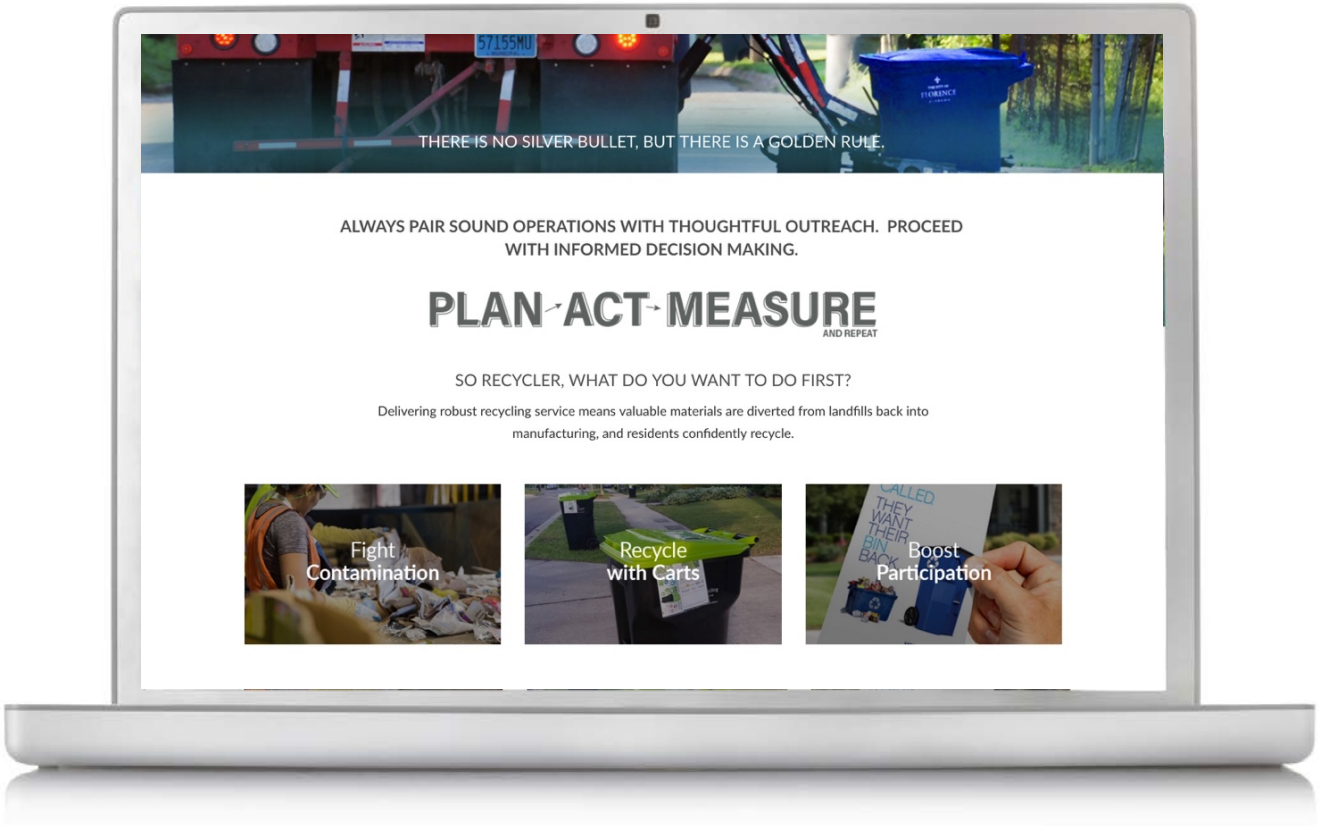
Emotive relatable: “Recycling is a part of life.”

Carts: Grants, Assistance, Resources

How-to guide and open source tools

Open Source Tools Online

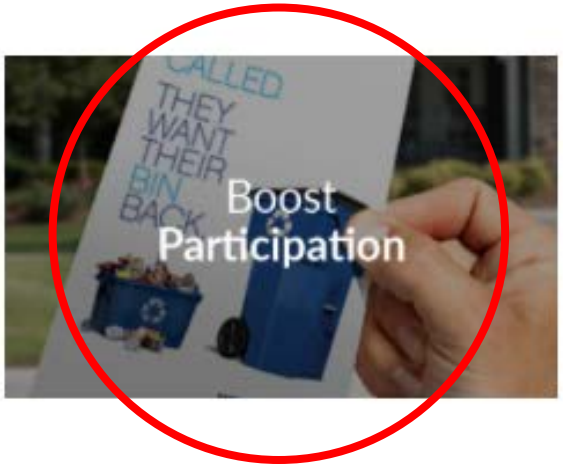
Our website URL **is www.RecyclingPartnership.org**



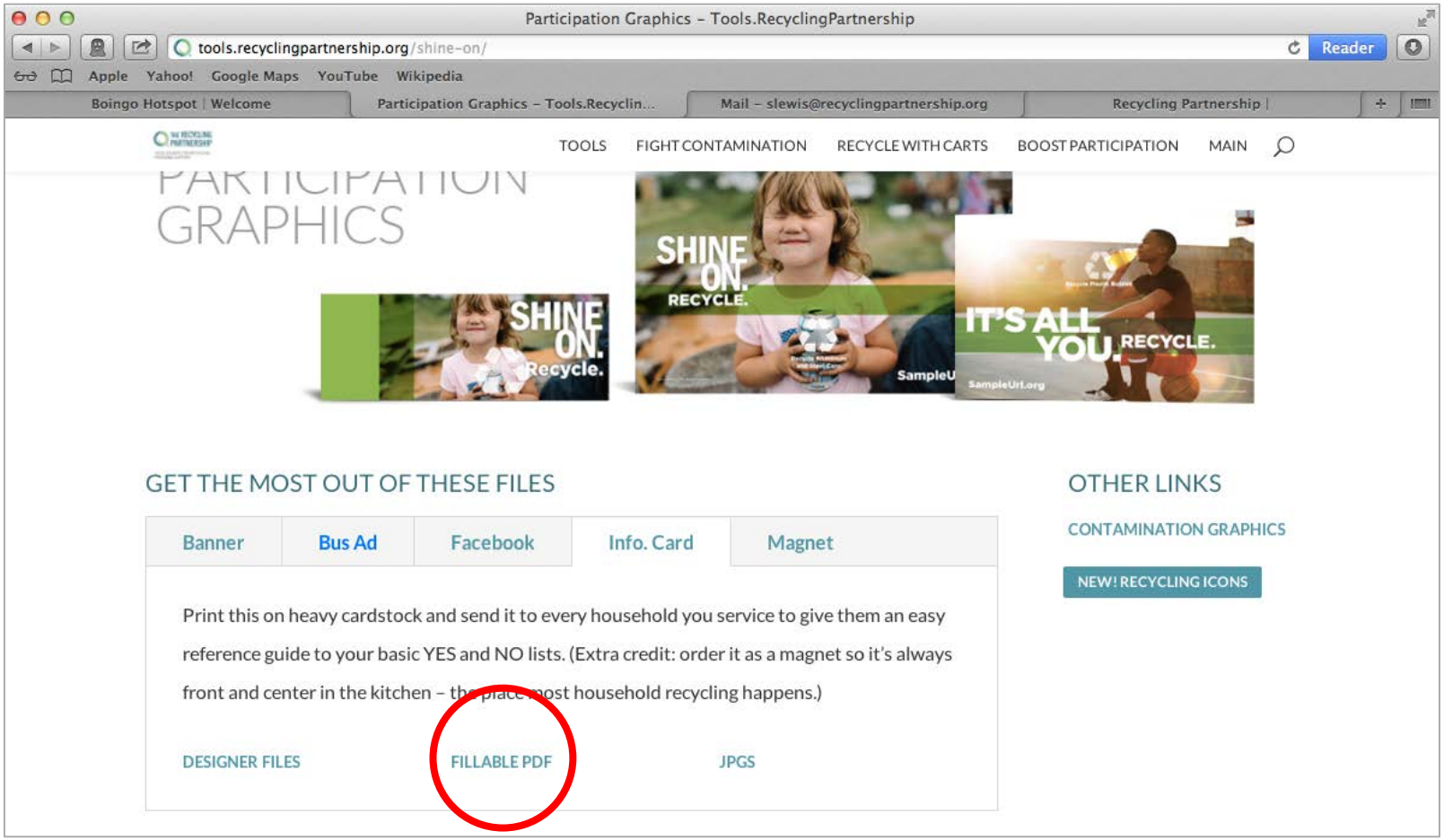
Open Source Tools Online

Three categories

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



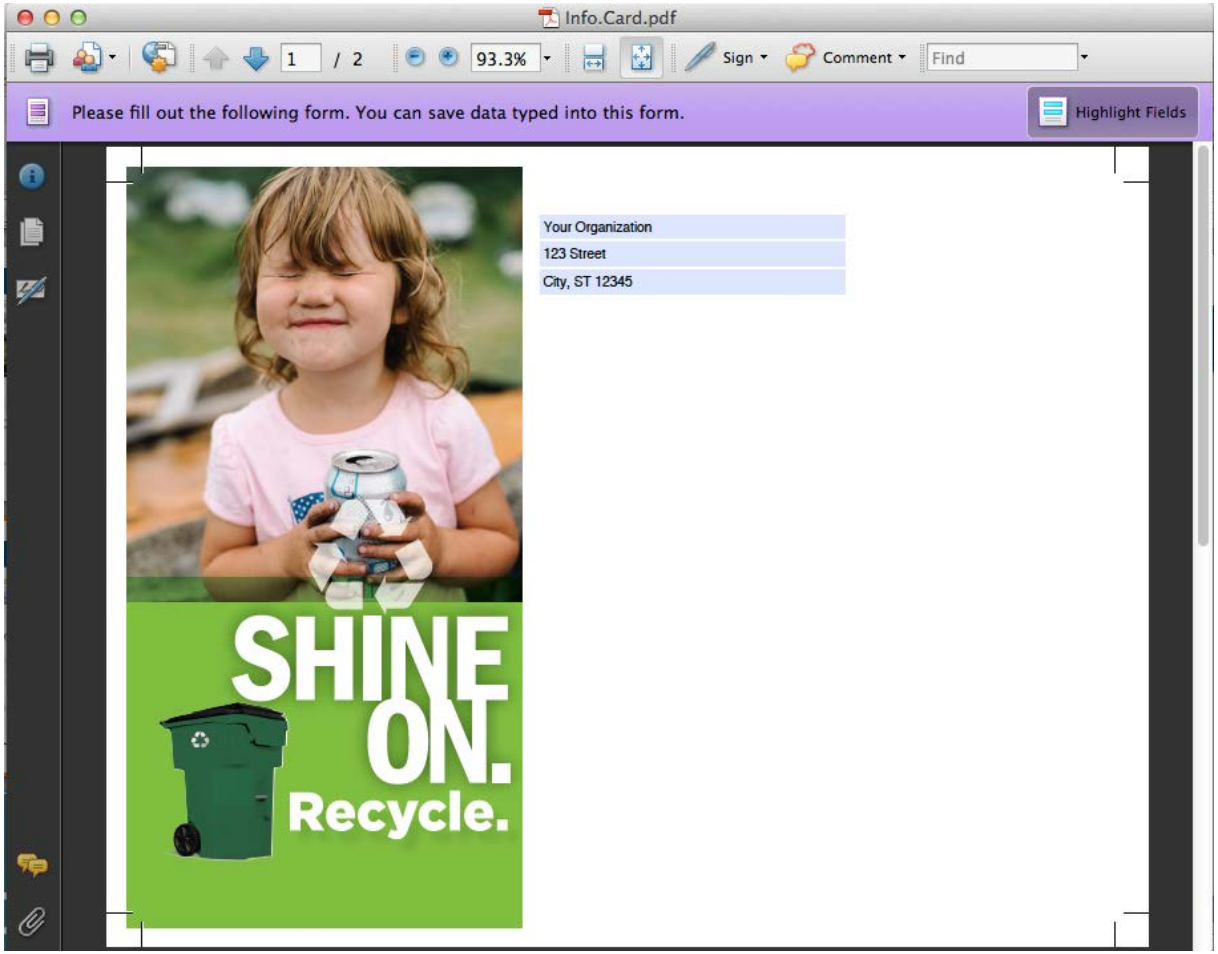
Downloading a Tool



Downloading a Tool

Mailing side of the info card PDF file

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



Downloading a Tool

Back of the info card PDF file

Click in the light blue flelds to place your cursor in the field. Then type in your website URL (top right) and telephone number.

COMMUNICATIONS DISCUSSION

What else would you like to talk about?

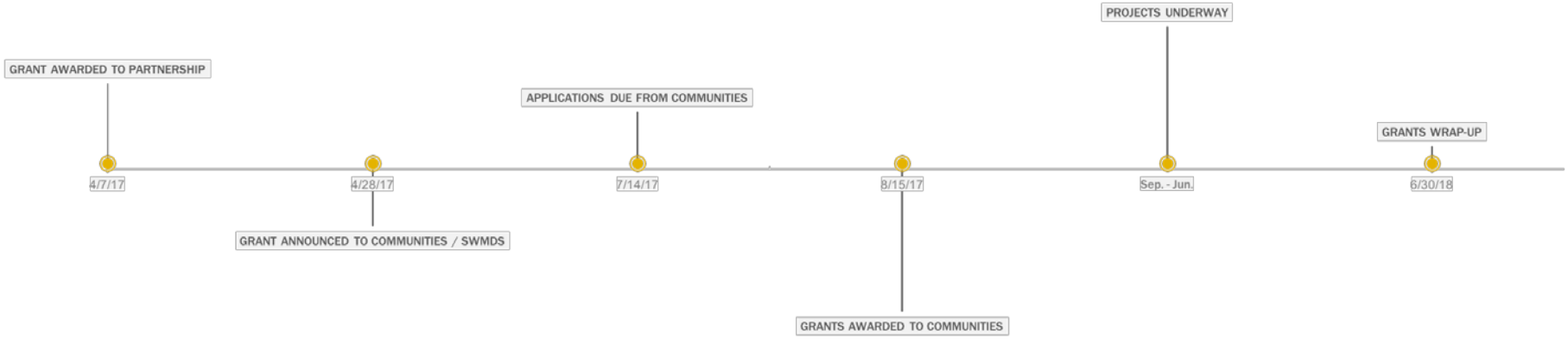
WRAP-UP

Regional Workshops

THURSDAY Lima	FRIDAY Akron
WEDNESDAY Dayton (Moraine)	TUESDAY Athens

Grant Opportunity Pending Ohio EPA Approval

- Applied for Ohio EPA grant, with a notable match
- Technical assistance
- Funded by Ohio EPA & The Recycling Partnership



FINAL WRAP-UP

What else would you like to talk about today?

TRY THESE TOOLS, JOIN OUR NETWORK,

and let's make recycling more & better!

TOOLS	IDEAS	RESOURCES
Online	Webinars	Grants
Library	Newsletters	Campaigns
Starters	E-Books	Tech
BMPs	Forums	Assistance