



How to Beat Residential Recycling Contamination



THE RECYCLING
PARTNERSHIP

NERC/NEWMOA Webinar
The Recycling Partnership
February 22, 2018

OUR FUNDERS:

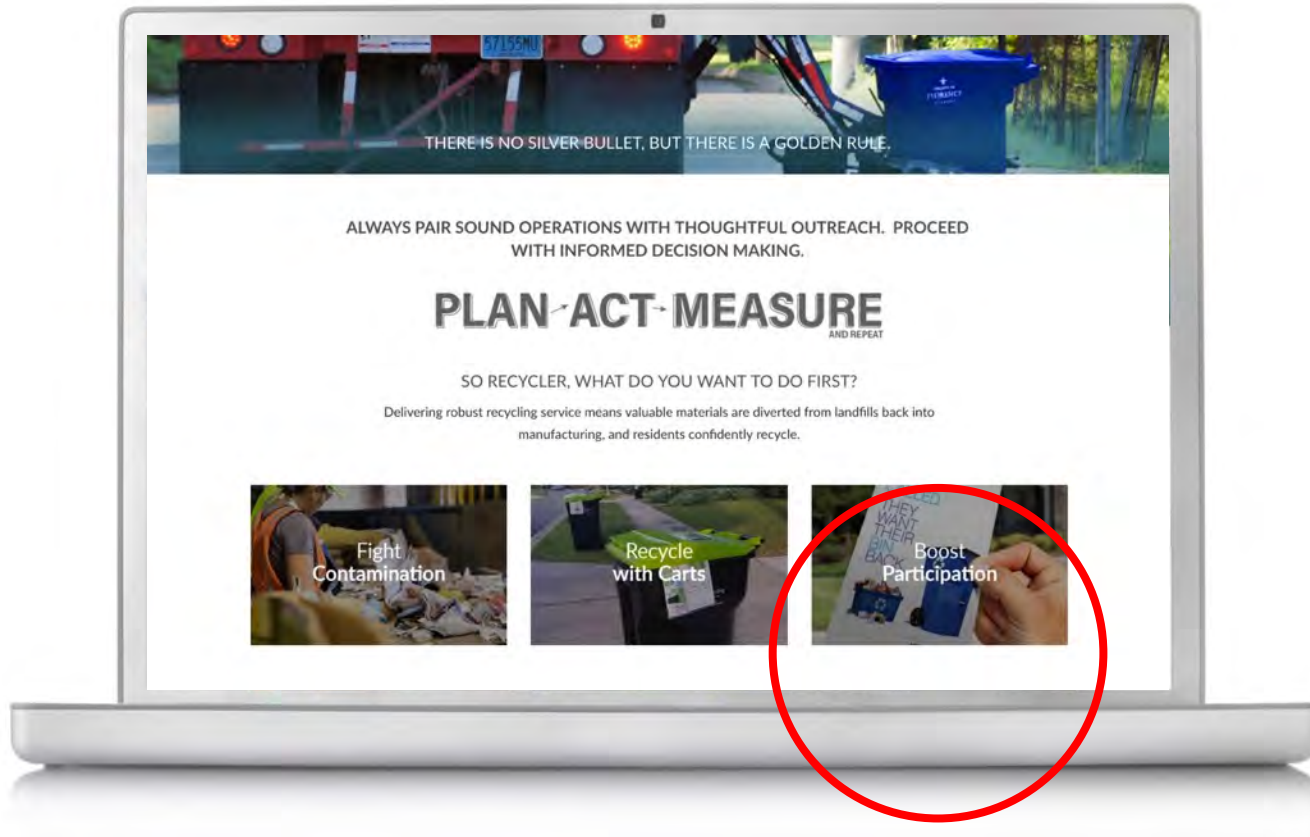


Nonprofit, working hand-in-hand with communities and companies across the country to improve recycling.



Find them on our website:

www.RecyclingPartnership.org



We Deliver Measurable Results



DENVER, CO



COLUMBIA, SC



FLORENCE, AL



CUYAHOGA CO, OH



GREENVILLE, SC



EMMET CO, MI



RICHMOND, VA



ATLANTA, GA



CHICAGO, IL



SANTA FE, NM



ATHENS, OH



ST PAUL,
MN



OUTAGAMIE CO,
WI



SOCRRA, MI



MEMPHIS, TN



PORTLAND, ME

THROUGH 2017, OUR COMPLETED IMPACTS TOTAL:

580

COMMUNITY
PARTNERS

\$27+_{MM}

TOTAL INVESTMENT

7:1

LEVERAGE
OF SPEND

400+_K

RECYCLING
CARTS

29_{MM}

HOUSEHOLDS
IMPACTED

115_{MM}lbs

RECYCLABLES
DIVERTED

164

GHG AVOIDANCE
(KMt CO₂E)

What Are Recyclables Anyway?

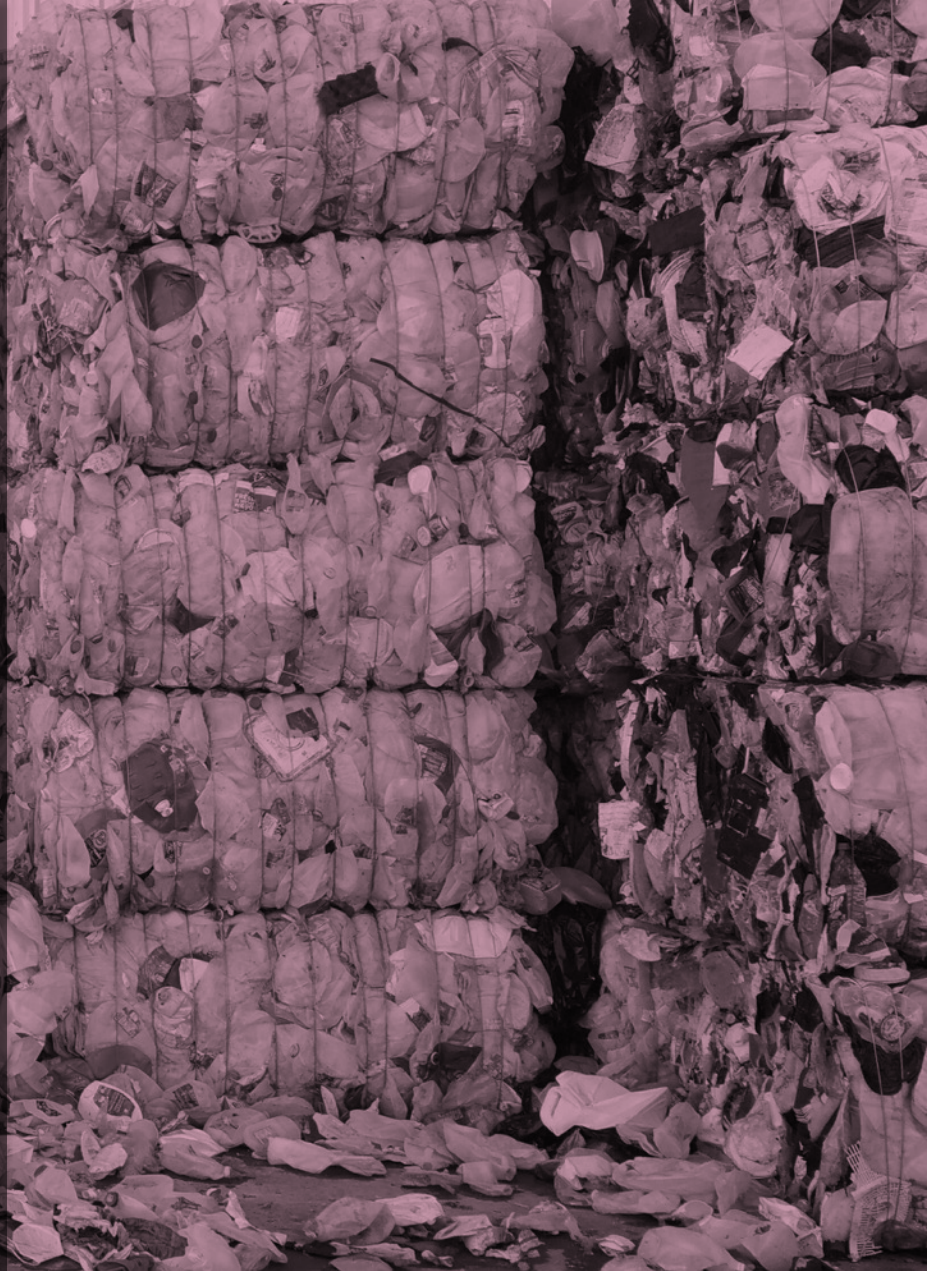


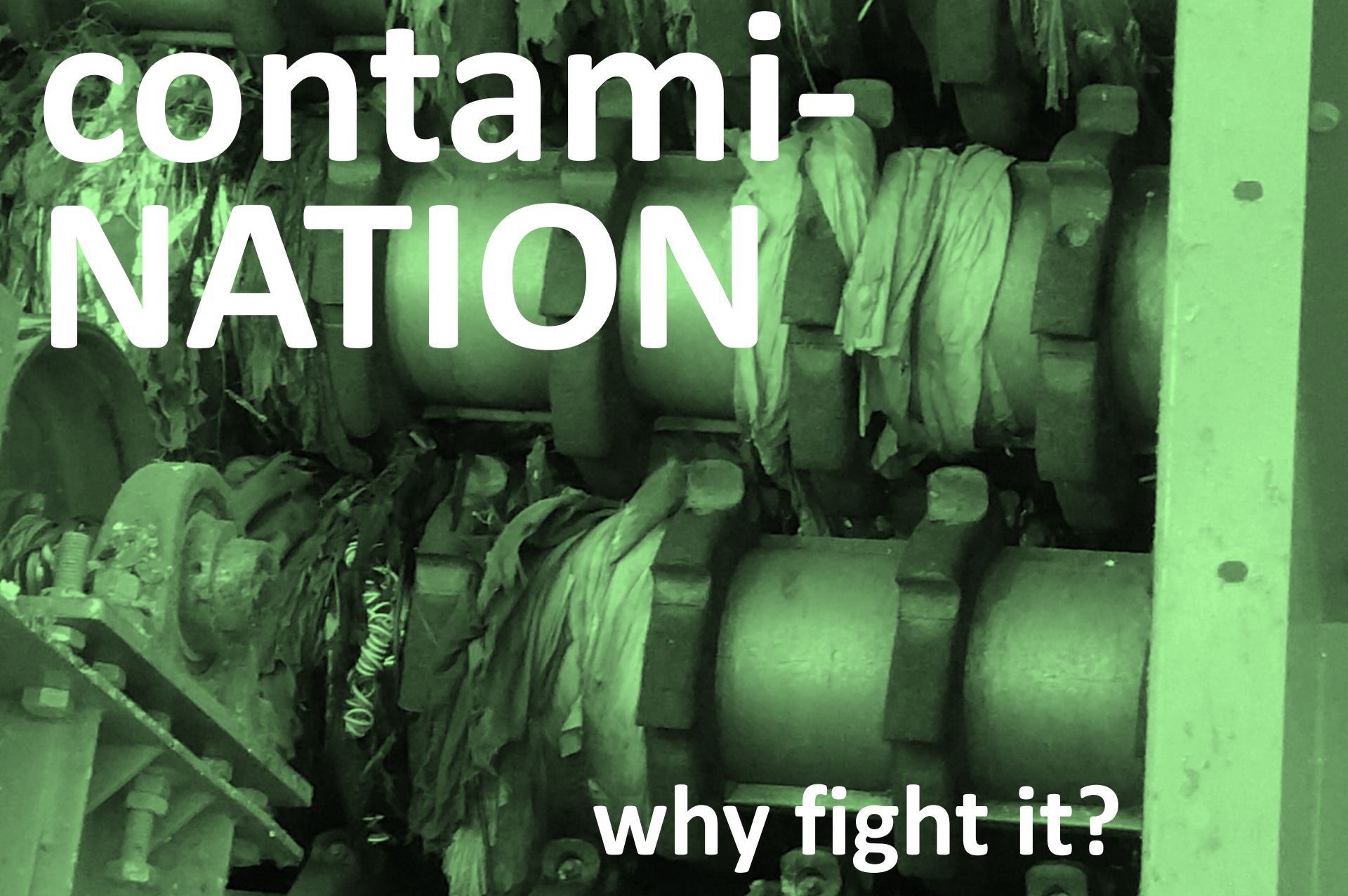


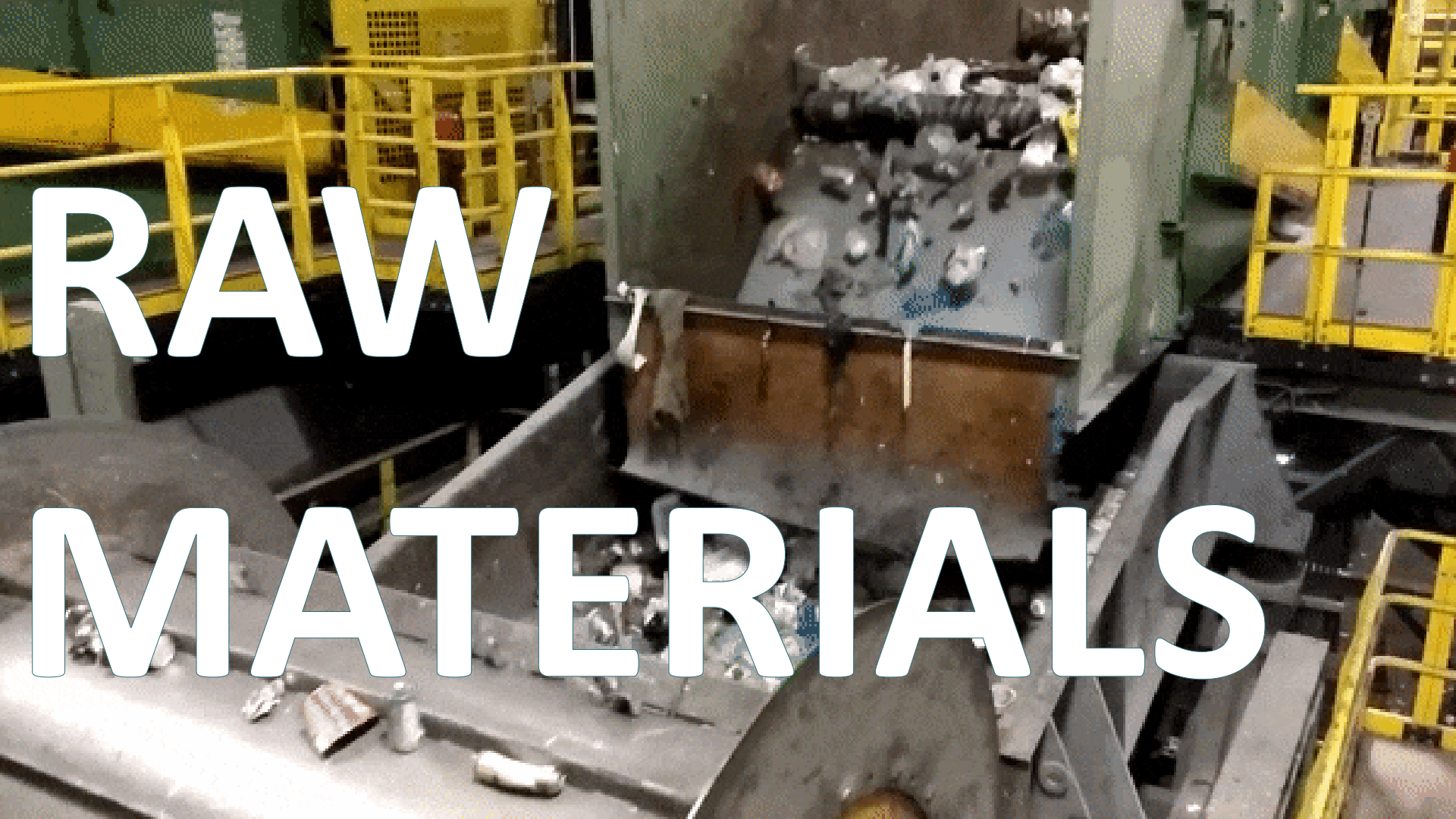
RAW MATERIALS

**MANUFACTURING
FEEDSTOCK that competes
with OTHER raw materials**

**Only when RECYCLED
CONTENT REPLACES virgin
content, we enjoy the
ECONOMIC and
ENVIRONMENTAL benefits
RECYCLING promises and
delivers.**







RAW MATERIALS



#CleanRecyclingIsBetter

Recycling Corner: A Dear John Letter from Xi Jinping

China's War on Foreign Garbage

Imported recycling has been a boon for China. So why ban it?

TOP STORY

Recycling hits a snag

What comes next after China's scrap ban surprise?

National Sword & China's Scrap Ban

- Scrap ban enacted Jan. 1, 2018
- 0.5% Contamination threshold Mar. 1, 2018
- Challenging for MRFs



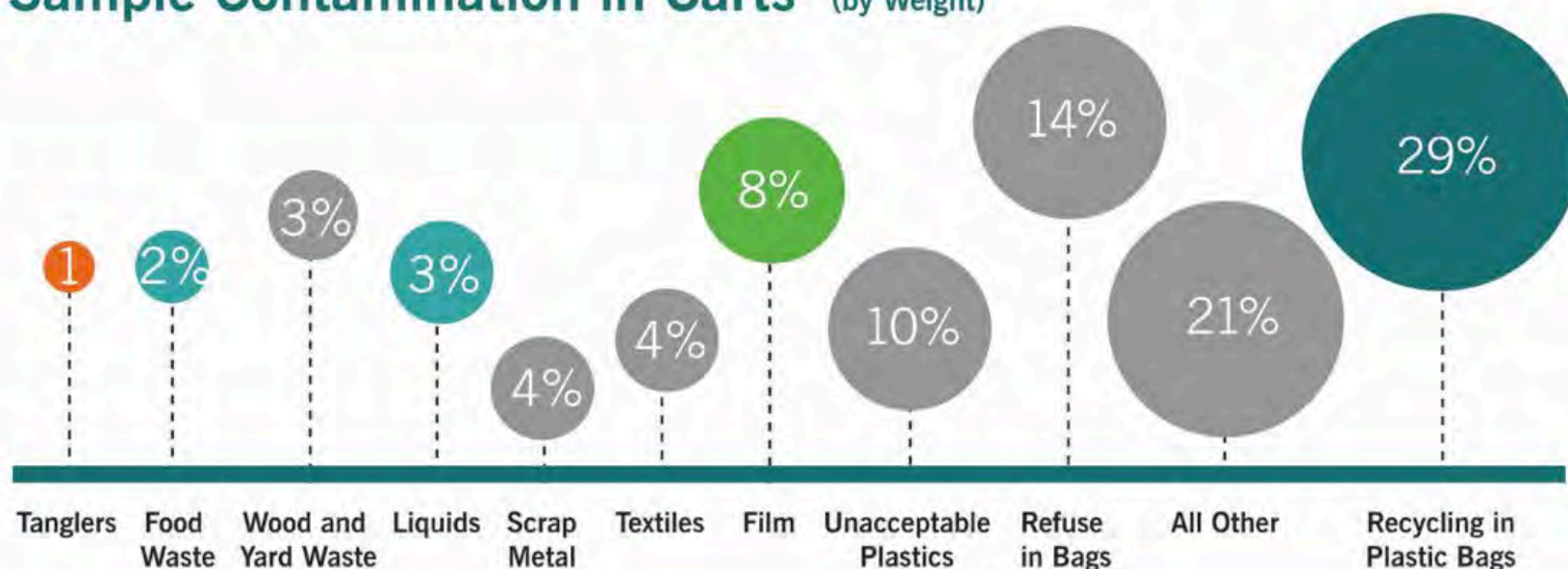


#CleanRecyclingIsBetter



Weight Alone Doesn't Tell the Story

Sample Contamination in Carts (by Weight)



vs

Top 5 Contaminants

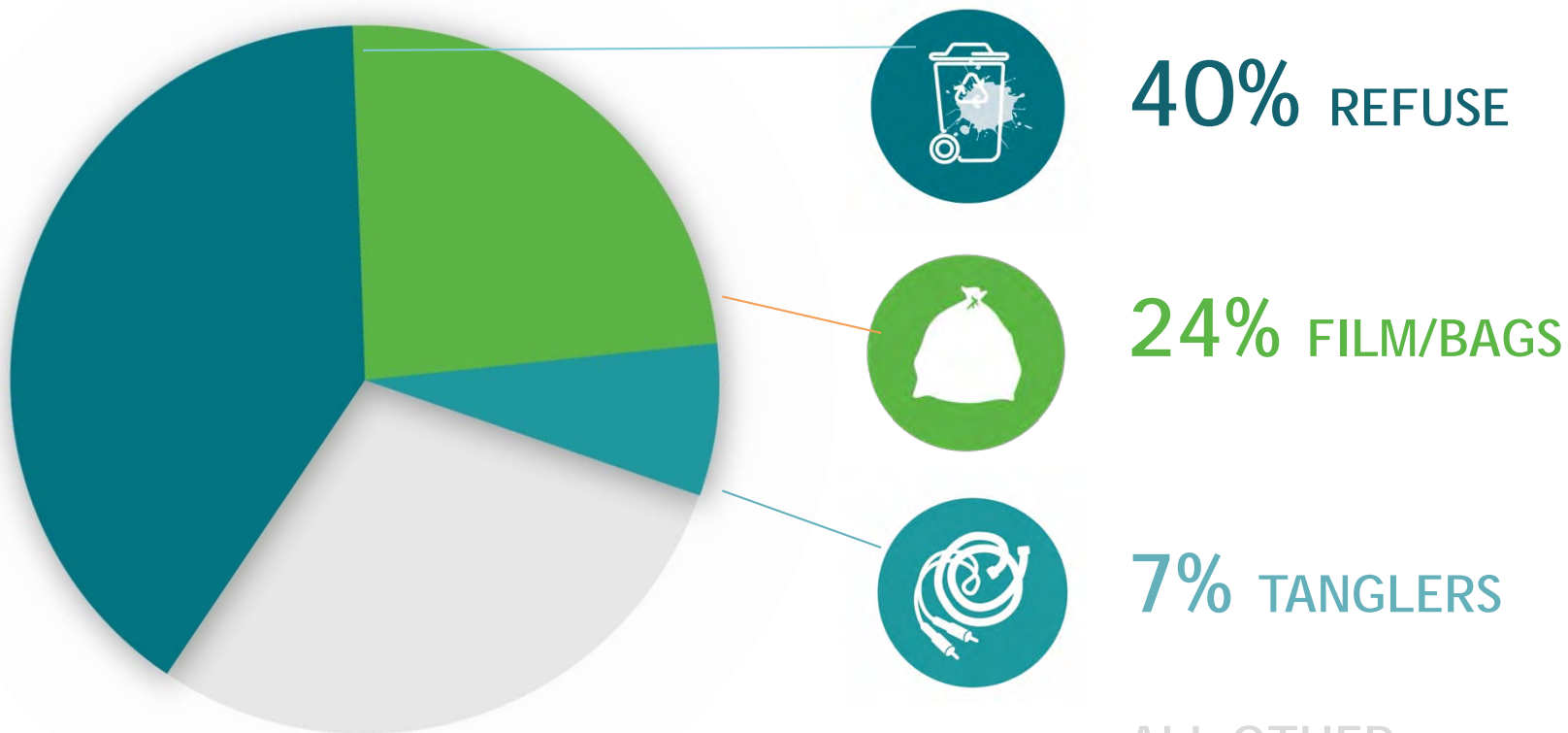
according to 2016
The Recycling Partnership
MRF survey

1. **Tangles** (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.)

	Labor (In hours)	Facility Down Time (In hours)	Disposal (In pounds)	Equipment replacement/repair/wear and tear (In dollars)	Staff Injury (In hours)	Lost Value of Other Recyclables (In dollars)
Film/bags						
<u>Tanglers</u>						
Needles						
Refuse						
Propane Tanks						
Glass <small>(ONLY if not on your ACCEPTABLE list)</small>						
Textiles						
Scrap Metal						
Food						
Hazardous Materials (diapers, batteries, medical waste, etc.)						
Totals						

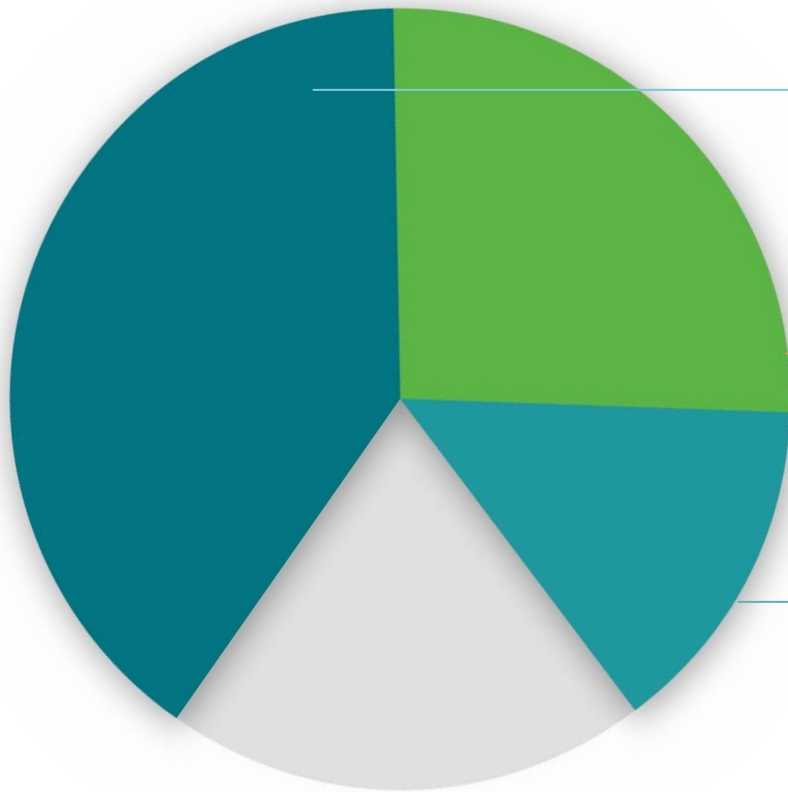
What makes up the greatest costs of a contaminated recycling stream?

TOP THREE CONTAMINANTS = 71%



What makes up the greatest costs of a contaminated recycling stream?

TOP THREE EXPENSES = 80% OF ALL COSTS



40% DISPOSAL



26% VALUE LOST OF
RECYCLABLES



14%
LABOR

ALL OTHER COSTS

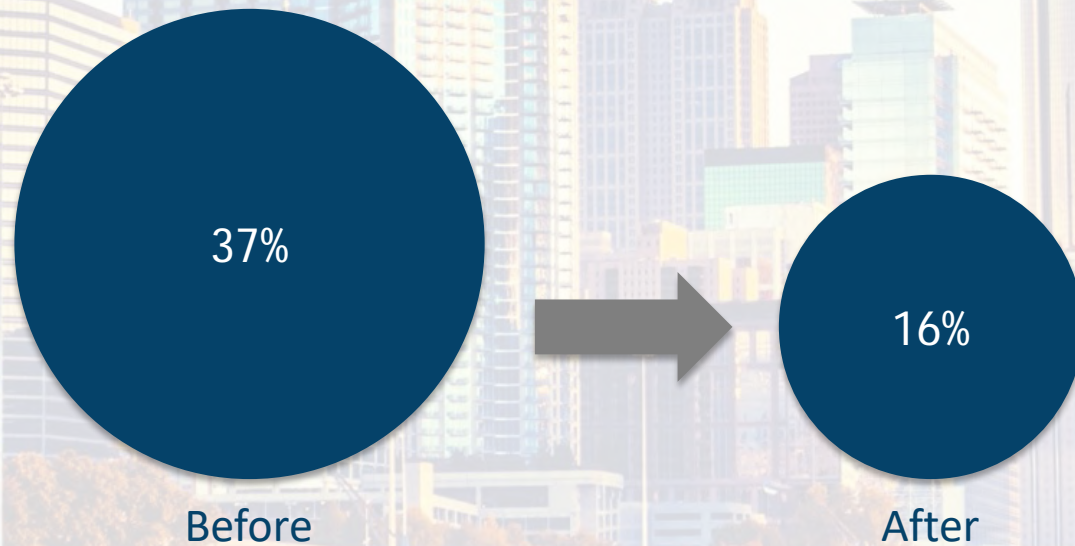


#CleanRecyclingIsBetter



FIGHTING CONTAMINATION ATLANTA

ATLANTA CONTAMINATION



participation remained level

SNAPSHOT OF ATLANTA

Overall Capture Rate



27%

Overall Contamination



57%

Overall Bagged Recyclables



62%



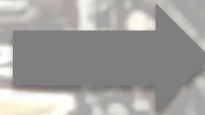
OPTIMIZATION & GROWING AWARENESS CHICAGO

2
3

CHICAGO CONTAMINATION

28%

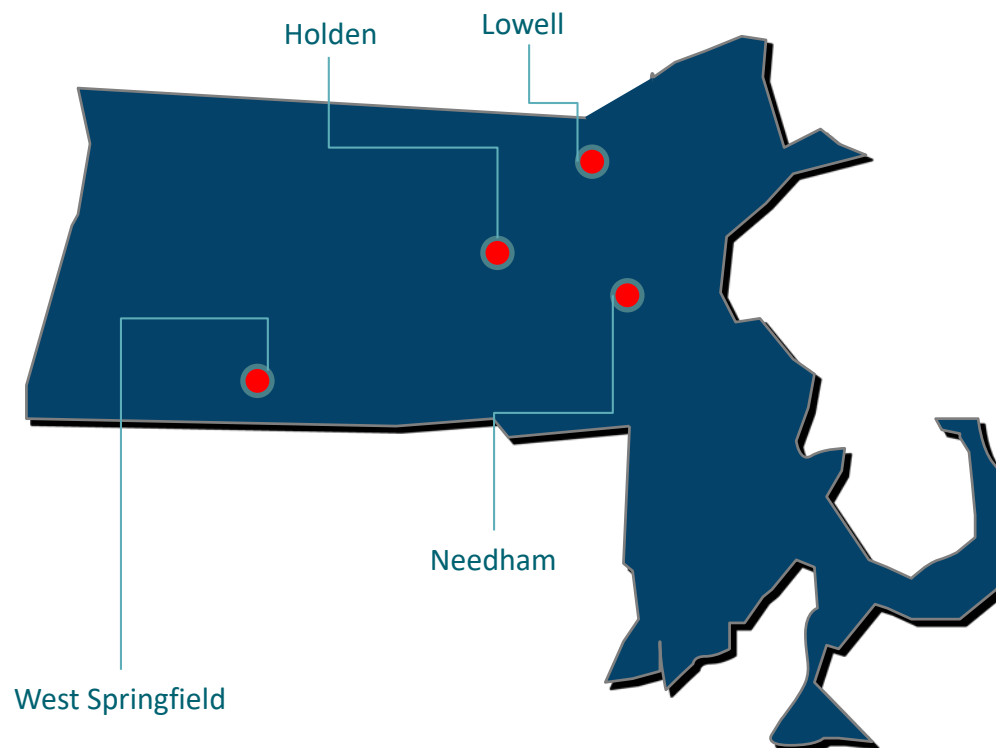
Before



19%

After

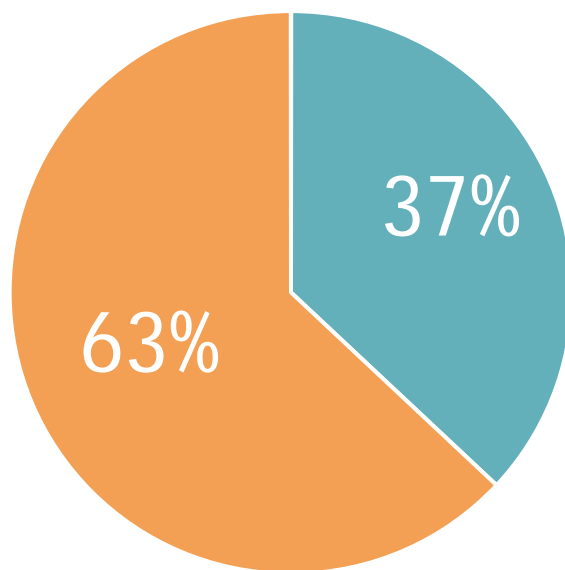
MASSACHUSETTS CONTAMINATION (2016)



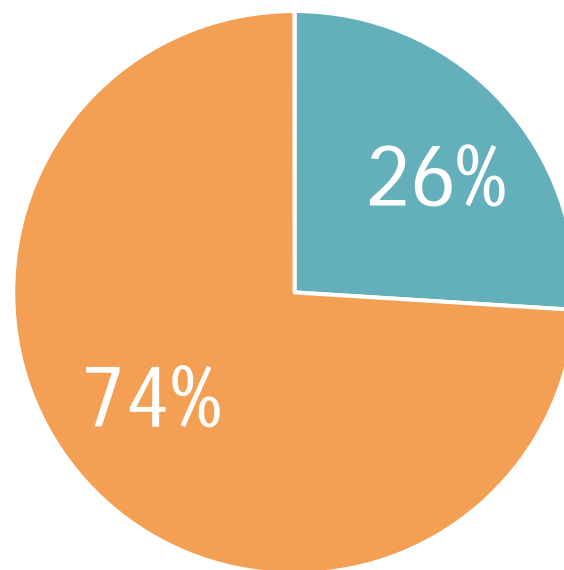
CURBSIDE: Overall Contamination Trended Downward

LOWELL and W. SPRINGFIELD

● Contamination
● Recyclables



BEFORE

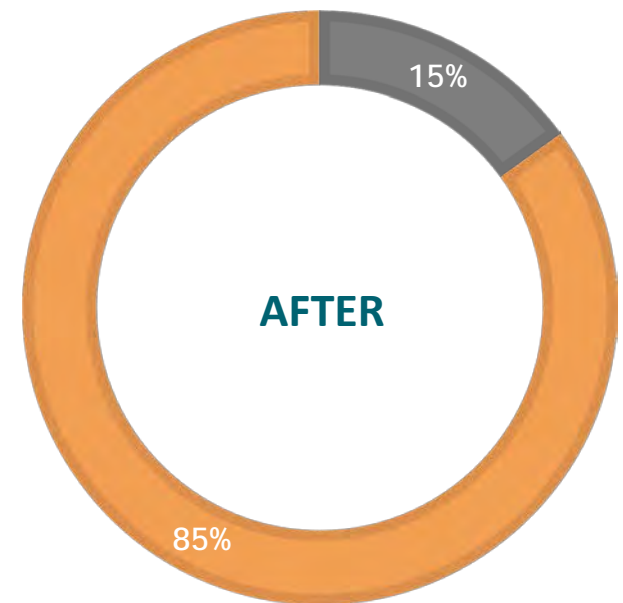
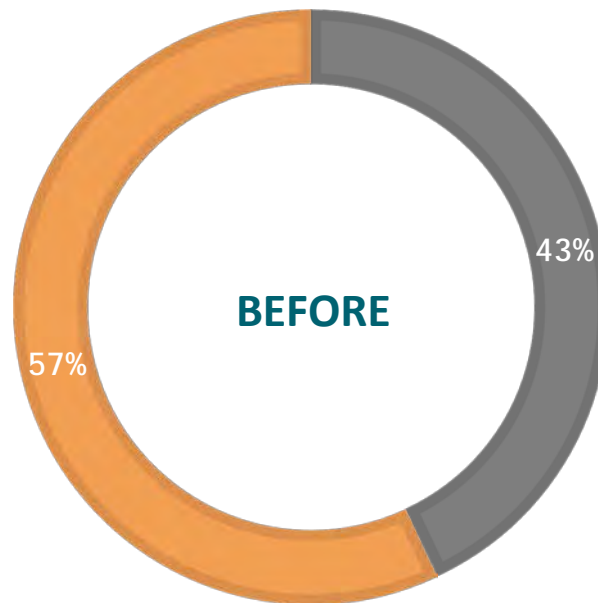


AFTER

CURBSIDE: Targeted Material Trended Downward

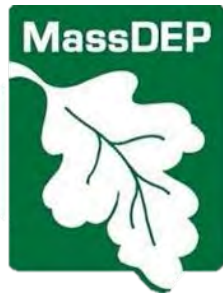
LOWELL and W. SPRINGFIELD

- Stuff in Bags
- All Other Contamination





#CleanRecyclingIsBetter



Reducing Contamination in Recycling Programs

Brooke Nash

*Branch Chief, Municipal Waste
Reduction*

brooke.nash@state.ma.us

How We Got Here

- ▶ 2014 stakeholder group on contamination
- ▶ 2015 MassDEP market research on recycling knowledge and behavior showed:
 - Residents confident about recycling knowledge
 - But opposite is true; only 1 in 10 are “all” or “mostly” correct in recycling knowledge index
 - Nearly 8 in 10 think all plastic w/resin ID is OK in household recycling bin



How We Got Here

- ▶ MRFs, haulers and municipal officials concurred: contamination is growing problem
 - Top five contaminants
 - The “dirty dozen” - Springfield, MA
 - Equipment shutdowns, fires, costly repairs
 - Audits of incoming material; surcharges
- ▶ Then.... National Sword



MassDEP and TRP Join Forces

- ▶ Two grants to Recycling Partnership (2016 & 2017)
- ▶ Test strategies to reduce contamination, increase participation
- ▶ Hands-on, not your typical education initiative
- ▶ Staff on the street: lifting lids, leaving oops tags, tracking tagging rate over time
- ▶ Goals: Increase Quality, Increase Quantity



The Recycling IQ Kit is Born!

Recycling IQ Kit

.....

Improving Your Recycling Program

A Step-By-Step Guide

CURBSIDE

IT'S ALL YOU RECYCLE

If you are looking to promote recycling participation, want to educate your residents to recycle right, and have the ability to get out into your community to accomplish these goals, the Recycling IQ Kit might be for you.

We know this is no easy task! The Recycling IQ Kit has been designed to provide steps, tools, and resources to help you Improve the Quality of your recycling program. It will require resources, planning, and time on your end, as well as a partnership with your MRF and hauler, but the benefits are many. Increasing the quantity and quality of the recycling stream can save on disposal fees, improve resident satisfaction with your program, and ensures the success and sustainability of the recycling system.

To get started, use this **ASSESSMENT TOOL** to make sure your community is ready to take on this challenge. Before starting this project you'll need to assess your budget, present your case to decision makers, and get buy-in from your city/town officials, your hauler and your MRF.

This toolkit includes:

- ❑ Guidance to help you broach this subject with your MRF and hauler
- ❑ Visual instructions and tools for targeted messages
- ❑ Tips to help you get the best results
- ❑ Tools to help you track and report results



Brought to you by
the Massachusetts Department of Environmental Protection
and The Recycling Partnership

Tested and Refined

- ▶ 10 communities implemented the IQ Kit in 2016 and 2017
- ▶ Kick-off meeting with key players
- ▶ TRP and MassDEP staff on the ground with municipal staff
- ▶ 8 to 16 weeks of “interventions” at the curb
- ▶ Results/lessons learned reported at conclusion



What's in the IQ Kit?

- ▶ Guidance for engaging with MRF and hauler
- ▶ Step by step instructions:
 - Identifying and training enforcement staff
 - Deploying core tools (education/outreach)
 - Budgeting for program costs
 - Collecting data, tracking results
- ▶ Customizable artwork



CURBSIDE: Deploy these core tools



Annual info card mailer



Curbside feedback



Top issue mailer



Top issue signage



CURBSIDE: Follow these steps and timeline



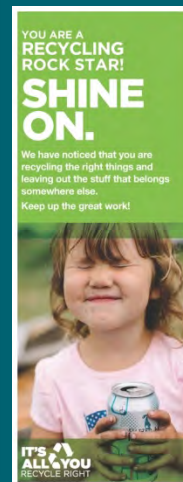
CURBSIDE: Tools

INFORM – BASIC DO'S AND DON'TS



POSTCARD/MAGNET

PERSONALIZED FEEDBACK



CART TAGS

ISSUE SPECIFIC COMMUNICATIONS



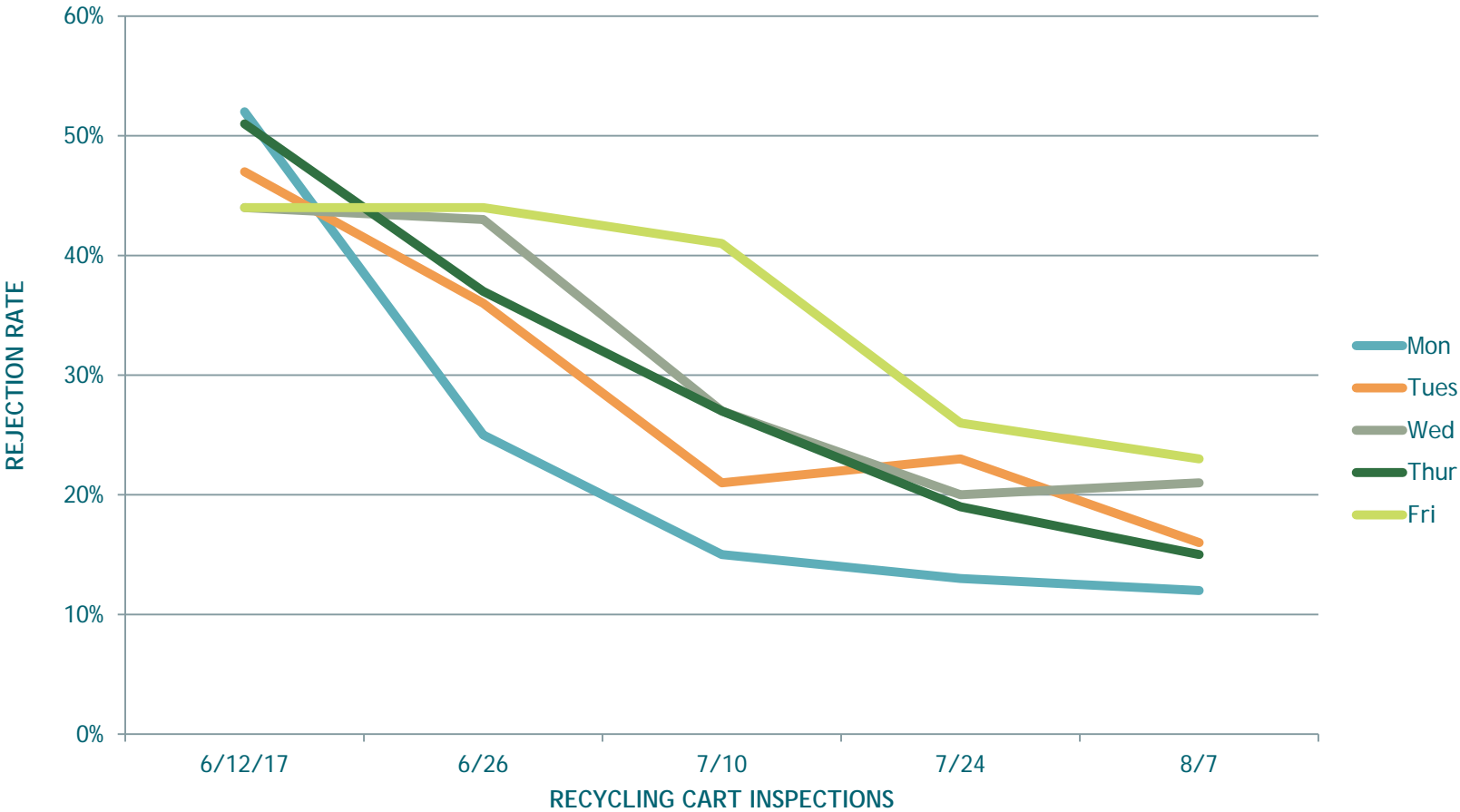
MAILERS + MEDIA





City of Lynn

Recycling IQ Progress Blue Week

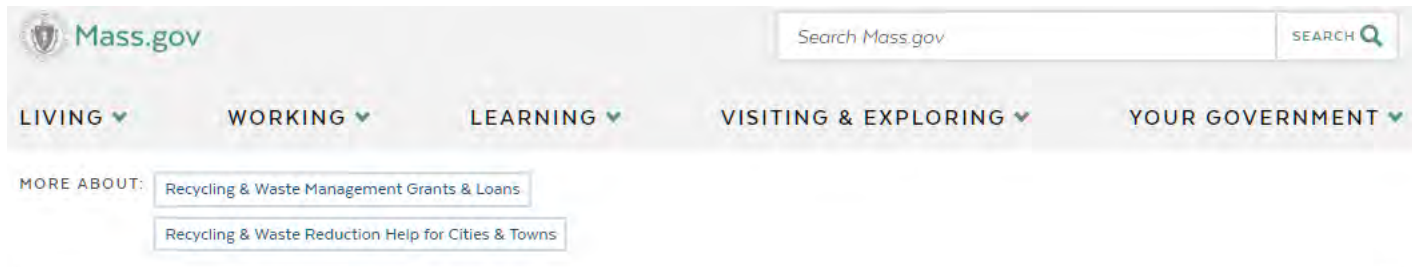


Recycling IQ Kit Grants

- ▶ All resources are “open source” .
- ▶ Recycling IQ Kit GRANT
 - Up to 40 hours of technical assistance
 - Funds for: printed materials, distribution, staff or temp workers for enforcement and data tracking.
- ▶ Curbside communities: \$10,000 to \$40,000
- ▶ Drop-off communities: up to \$7,500



Find it on MassDEP website



MassDEP Recycling IQ Kit

If your community is dealing with recycling contamination challenges, the Recycling IQ Kit might be for you.

Recycling IQ Kit for Curbside Communities ➔

Recycling IQ Kit for Drop-Off Communities ➔

THE DETAILS

How to get

How to get

Next steps

CONTACT

MassDEP Recycling IQ Kit

Phone

Janice Paré 617-292-5848



What We've Learned

- ▶ Direct feedback at the curb (or drop-off) matters
- ▶ Hands-on approach is critical
- ▶ Leaving contaminated carts at the curb, with oops tag, is a must
- ▶ NOT an easy lift; political buy-in and resources are key
- ▶ Not a “one and done” effort



How Far Can We Take This?

- ▶ National Sword has hit hard in Mass
- ▶ Even greater urgency around contamination
- ▶ MassDEP committing substantial resources (grants and staff)
- ▶ 75 communities in next 3 years?
- ▶ 2018 IQ Kit Grant Application is open
- ▶ 7 awards next week; 10 more in pipeline



Next Steps

- ▶ Universal recyclables list - from MRFs
- ▶ PR/Marketing firm - assist with earned media and publicity:
 - IQ programs in action
 - What to recycle and why “quality matters”
 - Website splash page
- ▶ Ongoing dialogue with haulers and MRF operators



Questions?

Janice Paré, Program Lead

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Or

Brooke Nash, Branch Chief

brooke.nash@state.ma.us





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FIGHTING CONTAMINATION ATLANTA

THE ISSUE



The Plan:

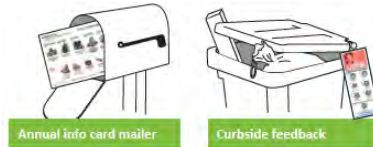


The Execution:



General Info

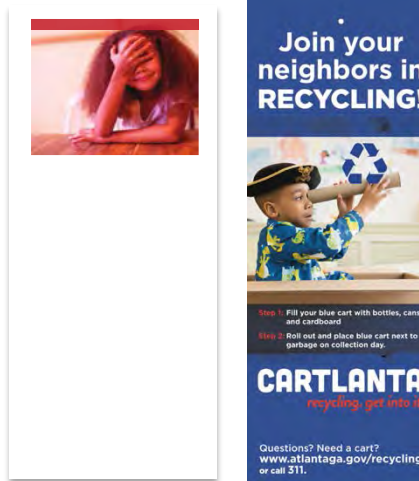
The Plan:



The Execution:



General Info



Direct Engagement

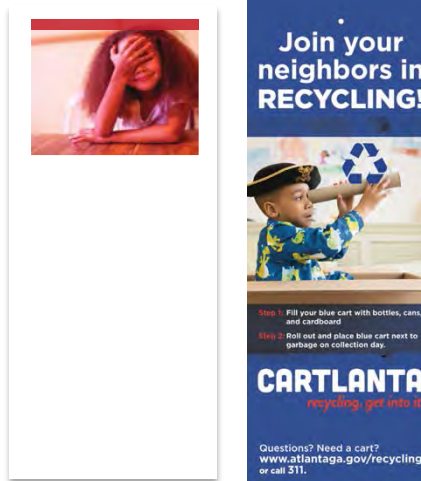
The Plan:



The Execution:



General Info



Direct Engagement



Supporting Campaign

Contaminant Specific

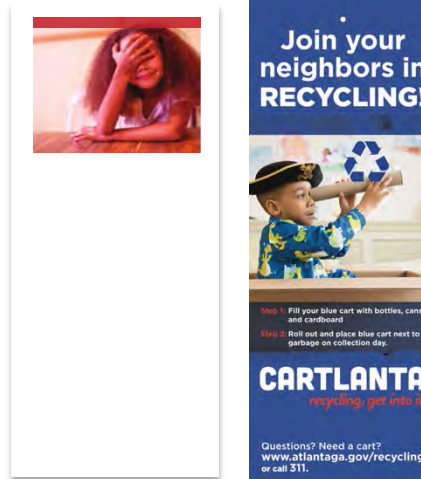
The Plan:



The Execution:



General Info



Direct Engagement



Supporting Campaign

Contaminant Specific



THE APPROACH

PREP: 6-8 weeks

MONITOR: 8 Collection Cycles

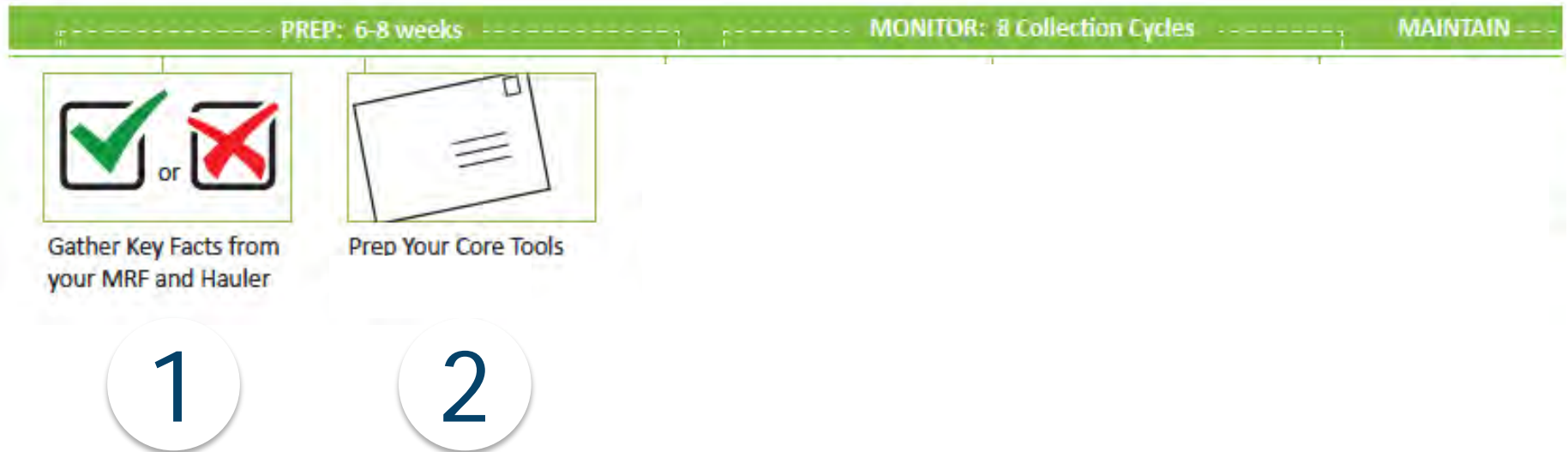
MAINTAIN



Gather Key Facts from
your MRF and Hauler

1

THE APPROACH



THE APPROACH



THE APPROACH



THE APPROACH



WHAT DO WE KNOW?

DISRUPTION

CHANGES
BEHAVIOR

TAGGING WORKS

73%

recalled
tag



25%

increase in
capture

REJECTION WORKS

45%

tagging decrease
in Dartmouth



22%

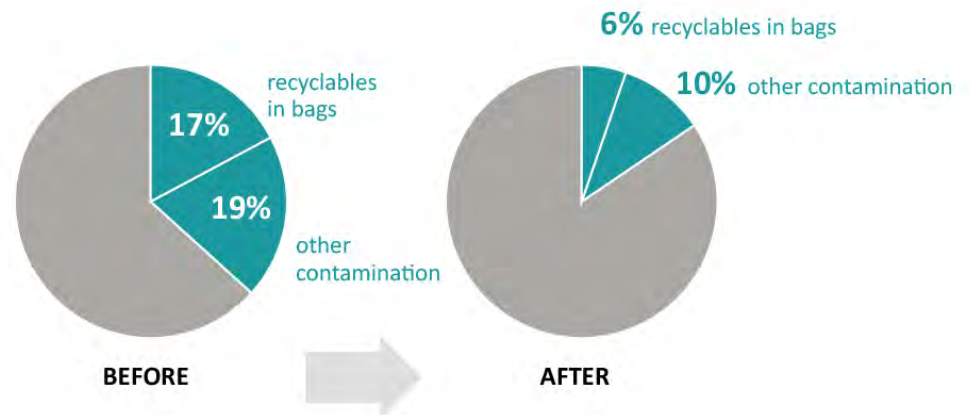
tagging decrease
in New Bedford



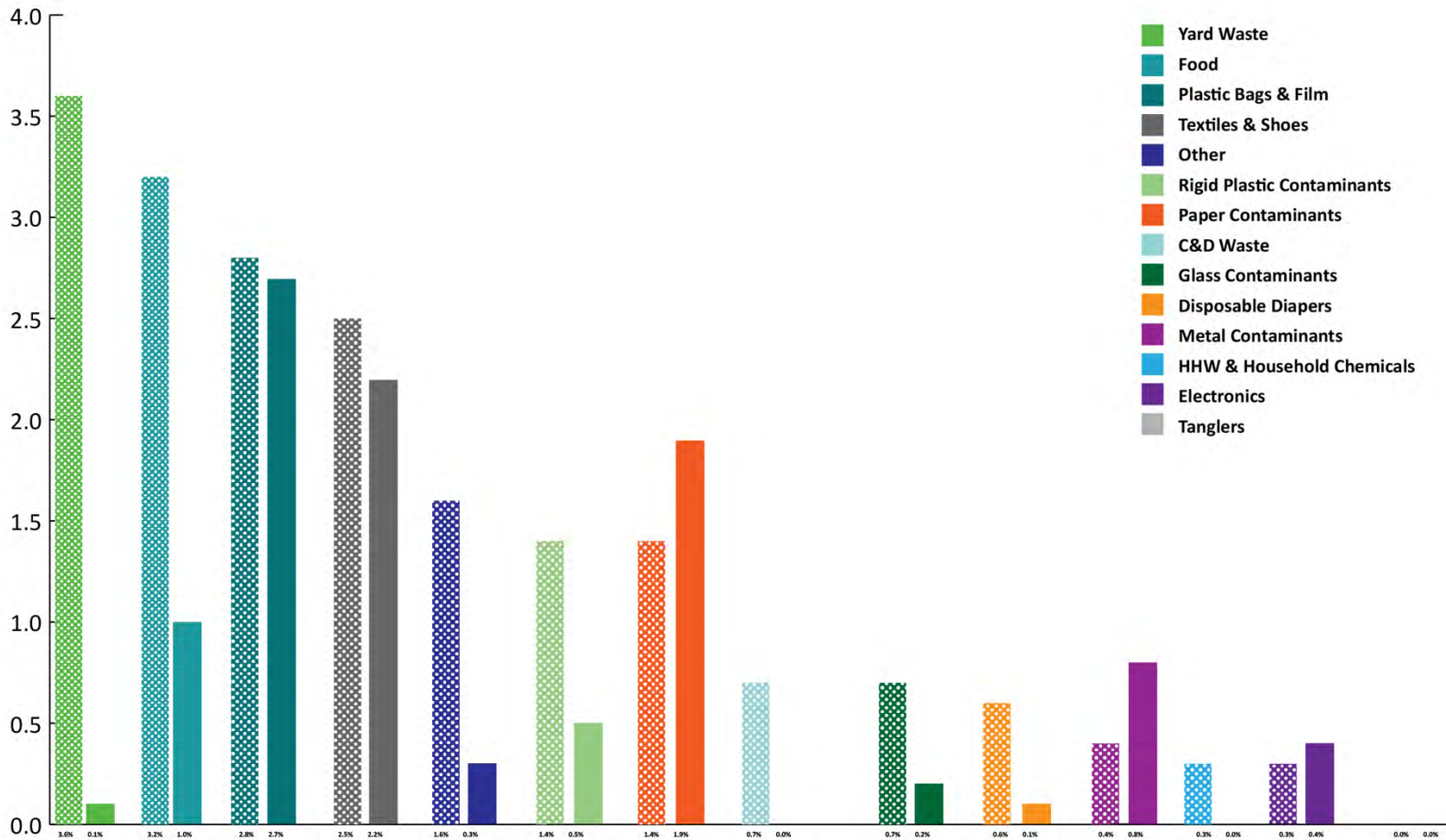
IT'S NEVER DONE

DEEPER DIVE ON DATA

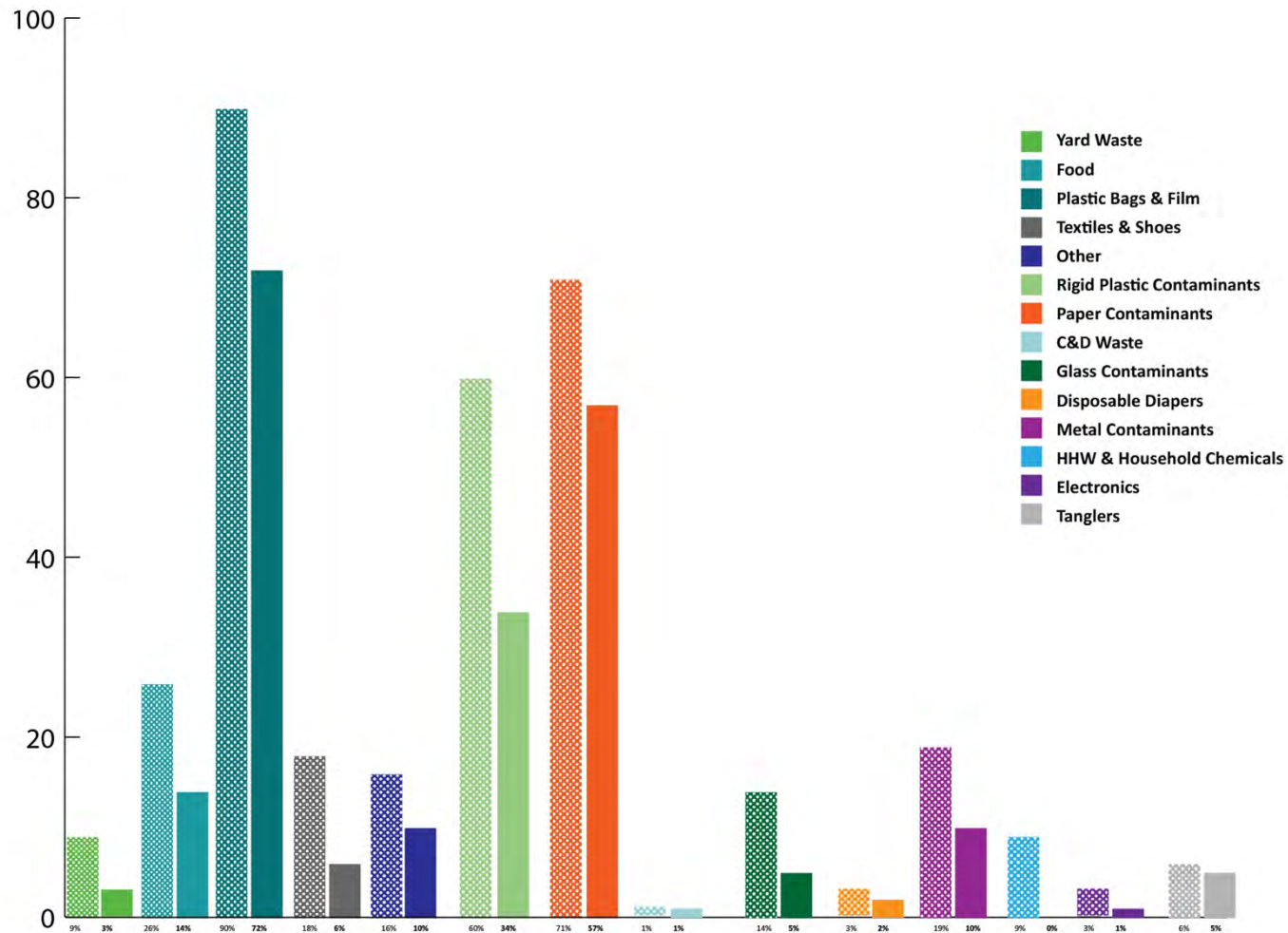
Atlanta Aggregate Contamination in Cart



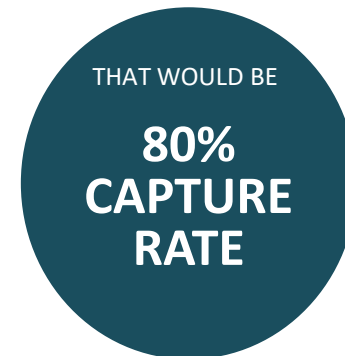
Contamination by Weight (before and after)



Contamination by Occurrence (before and after)



CAPTURE RATE



ATLANTA - CAPTURE RATES

Before and After Data 2017 Pilot Areas - Single-Family - Curbside Service

OVERALL CAPTURE RATE

- Capture increased from 52% to 66%
- 8 out of 9 categories increased



ATLANTA – PAPER CAPTURE RATES

Before and After Data 2017 Pilot Areas - Single-Family - Curbside Service

WHERE WAS THE PAPER?



ATLANTA – METAL CAPTURE RATES

Before and After Data 2017 Pilot Areas - Single-Family - Curbside Service

WHERE WAS THE METAL?



ATLANTA – PLASTIC CAPTURE RATES

Before and After Data 2017 Pilot Areas - Single-Family - Curbside Service

WHERE WAS THE PLASTIC?



ATLANTA – GLASS CAPTURE RATES

Before and After Data 2017 Pilot Areas - Single-Family - Curbside Service

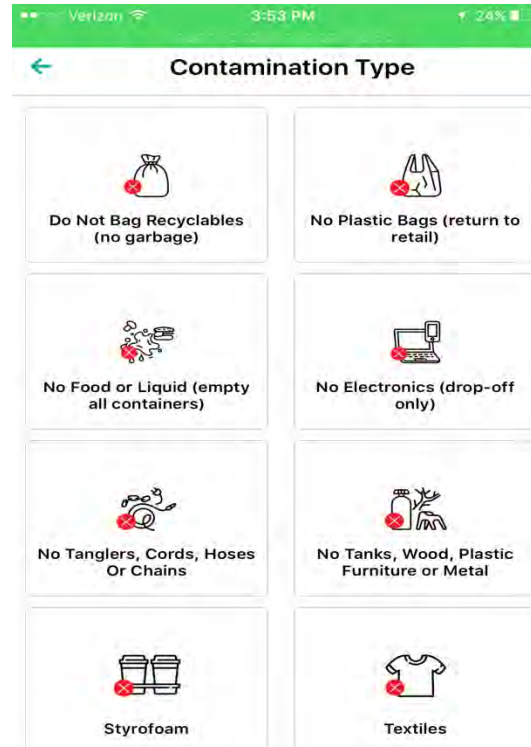
WHERE WAS THE GLASS?



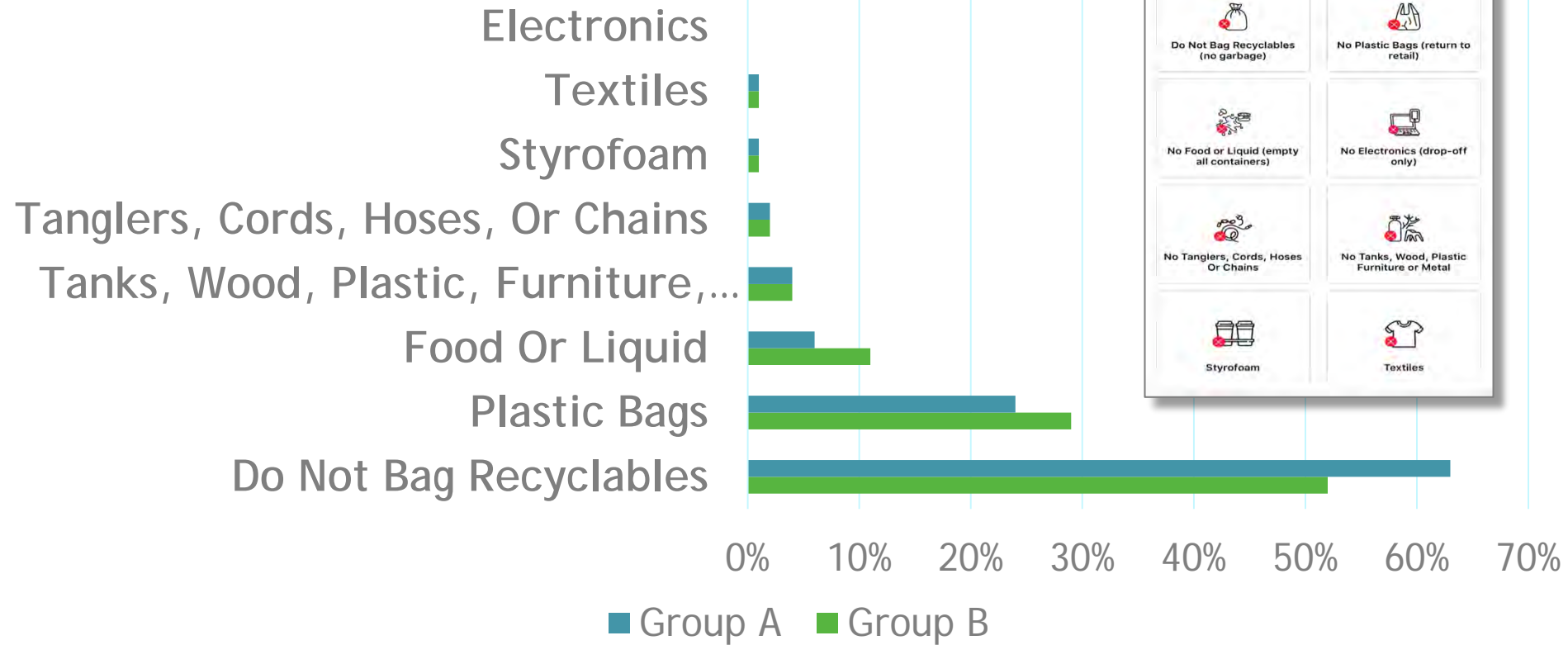
Homes with bagged
recyclables fell from
52% to 22%



RUBICON GLOBAL APP

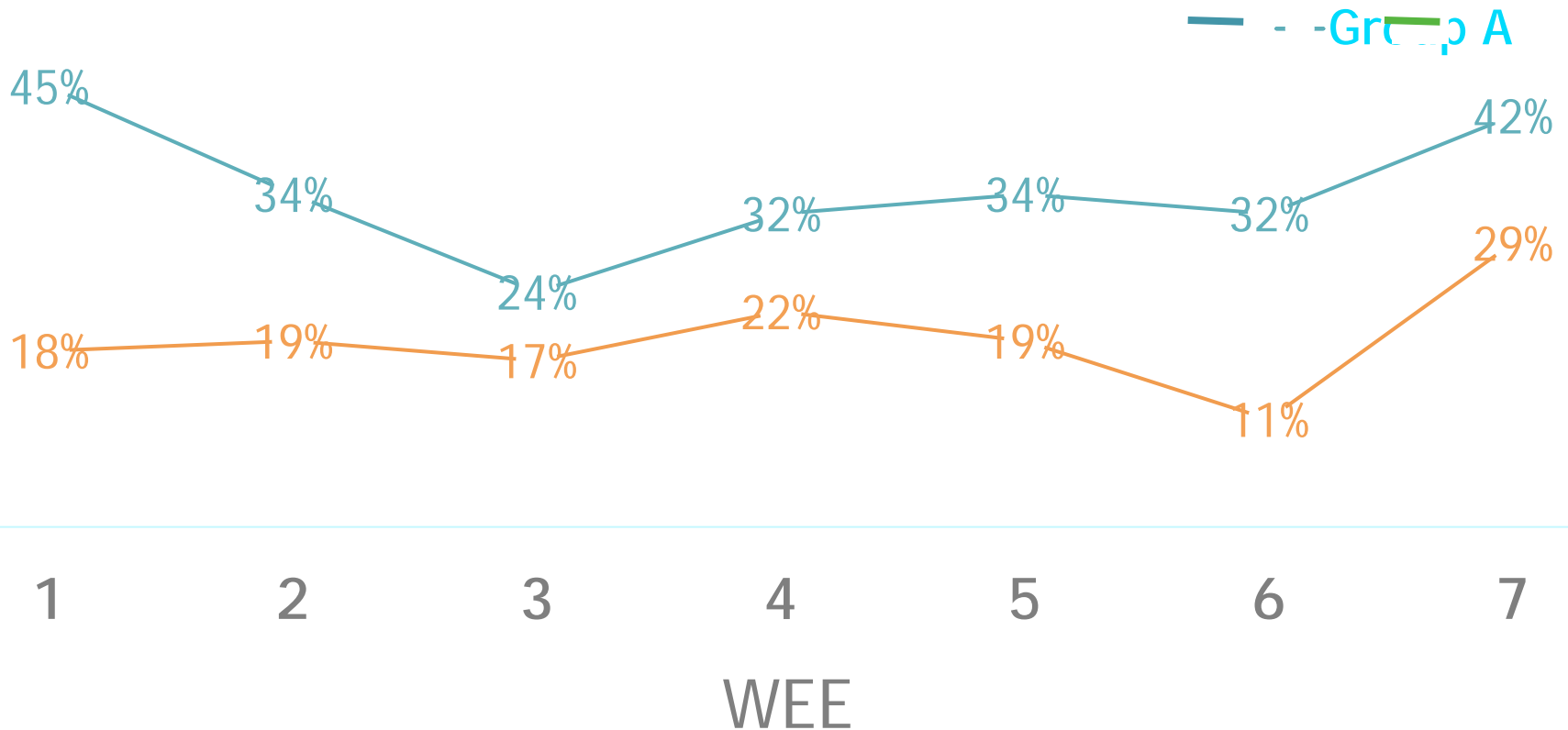


Rejections at Curb by Category



**Note: Textiles and Styrofoam were added in last two weeks*

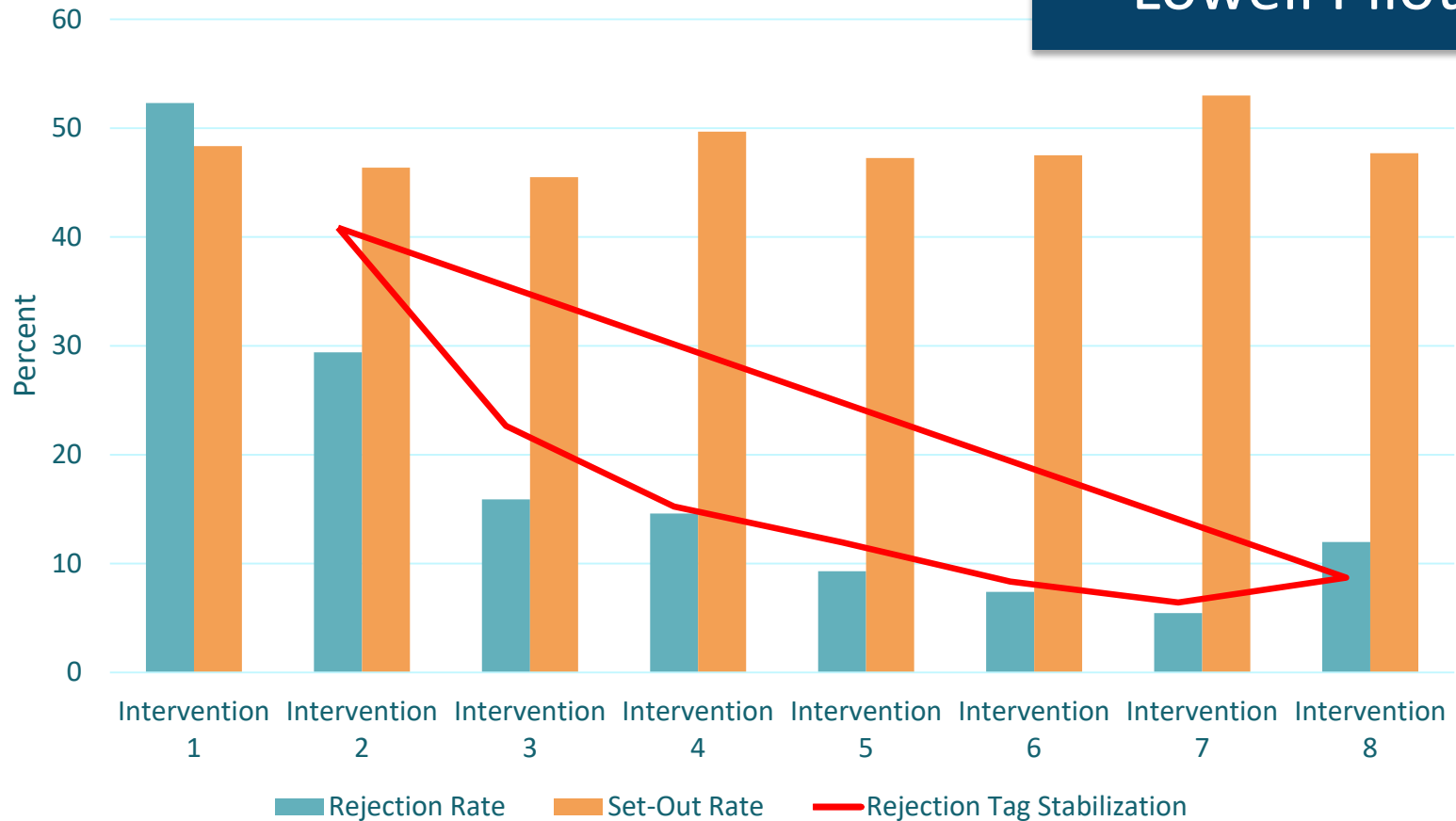
SET-OUT THROUGH TEST PERIOD



Participation Group A: 82%
Participation Group B: 57%
(resident used cart at least once in 7 week period)

Rejection and Set-Out Rates for Lowell Pilot

Poor Quality Route



NEXT ACTIONS

1

Download at
Tools.RecyclingPartnership.org or MassDEP

2

Sign up for
e-newsletter

3

Follow us on Twitter
& Facebook

#CleanRecyclingIsBetter