Recycling and the Materials Economy: Making Recycling Work for You

Dylan de Thomas, The Recycling Partnership
2019 Tribal Lands and Environment Forum (TLEF)
August 21, 2019
We’re all in this bin together
Only half of Americans can recycle at home as easily as they can throw something away.*

Those that can recycle easily are only recycling half of what they could.**

** 2016 State of Curbside Report
Making an Impact

1,110+ communities assisted

$43M+ infrastructure

HH reached 52M+

590K+ new carts

52M+ new carts

231M+ lbs new diversion

382 million gallons water savings

253K metric tons GHG avoidance

382 million gallons water savings

2.0 trillion BTU/yr energy savings
Our Working Model

Infrastructure
Cart grants deliver year over year results and measurable incremental tonnage.

Expert Assistance
Aligning operations and education helps cities deliver better recycling.

Tools and Data
More than 20K local programs lack resources but determine success.

System Solutions
The system is loosely connected but highly dependent.
State and local government program engagement
• What is Recycling?
• National Recycling Landscape (& What Works Best?)
• What About China?
• Will markets Come Back?
• BMPs and Tools
What Are Recyclables Anyway?
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.
THE RECYCLING SYSTEM IS LOOSELY CONNECTED, HIGHLY DEPENDENT
The National Recycling Landscape
A Brief History of Curbside Recycling

- **1973**: First curbside program in California
- **1988**: ~1,000
- **1992**: Nearly 5,000 (a growth of more than 250% in 3 years!)
- **2002**: 8,800
- **2011**: 9,800+
How Much Recyclable Packaging and Printed Paper Is Generated Every Year?

All Sources

US Total Tonnage Generated
MILLION TONS

- Aluminum: 1
- Steel: 2
- Glass: 9
- PET: 3
- HDPE: 2
- Mixed Non-bottle Plastic: 9
- Paper: 78

Total of 105 Million Tons
Location of Recyclable Packaging Tonnage
(Partnership Estimate)

Tonnage of Recyclable Packaging
MILLION TONS

- Total National Generation: 105 million tons
- Generated Industrial & Commercial: 59 million tons
- Generated in Multi Family Homes: 6 million tons (600 LB/HH, 30 Million Homes)
- Generated in Single Family Homes: 36 million tons (850 LB/HH, 85 Million Homes)
- Recovered from Single Family Homes: 14 million tons
- Discarded From Single Family Homes: 22 million tons

Recovery Rate: ~42%
How Much Recyclable Material Is Left in Single-Family Homes?

A Total of 22 Million Tons
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
Average MSW Tip Fee by State of Surveyed Cities ($/te)

$47 avg
Surveyed Cities Show Wide Range of Recovery Performance

357 LB/HH/YR AVG.

National lbs/hh/year Average: ~850 lbs of recyclables available in the home
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
Public Action Impact

Average Surveyed City Curbside Recycling Performance Data

Overall

<table>
<thead>
<tr>
<th></th>
<th>No Public Action</th>
<th>Public Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>LB/HH/YR</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

357
PUBLIC ACTION STARS

• Automatic
• PAYT
• Direct Engagement
• Licensing/Bundling
• Landfill Bans
• Multiple Touchpoints
Here are some goats.
National Sword + China’s Scrap Ban
Where Did It Come From?

• Like Green Fence in 2013, National Sword stemmed from a media scandal

• At core, a political issue for China
WE WERE EXTERNALIZING THE LABOR OF SORTING THE MATERIAL, BUT NOW THAT CHINA HAS GOTTEN TO THE POINT THAT THEIR OWN LABOR FORCE HAS MATURER AND GROWN, THEY'RE ABOUT TO EXTERNALIZE IT THEMSELVES.

THEY'RE STILL BUYING A LOT OF THE SAME MATERIALS: THEY'RE JUST BUYING IT FROM OTHER PARTS OF S.E. ASIA.

DYLAN DE THOMAS
V.P. OF INDUSTRY COLLABORATION
AT THE RECYCLING PARTNERSHIP
Why?
What is the Goal of These Actions?

- Consolidation of recycling facilities into “Eco-Parks”
- Larger, cleaner, better-regulated facilities
- Bolster own domestic markets
- Spur modern solid-waste management
Is the Sky Falling?

- Mixed paper value decline ($88 in Mar 2017 to about $0 now)
- Small number of programs closing/suspending operations
- Smaller number moving to Dual-Stream
- Anti-contamination work widespread
Here are some pandas.
$398 MM in investments and over 387,000 tons of annual consumption
Looking at Paper Recycling Capacity Expansion
North American Paper Recycling Investments
Over $2.5 BN in investments + 5.8 MM tons of annual consumption
Thanks, Smart Magpie.
Best Management Practices!
Best Management Practices – Curbside Recycling

Cart-based Collection

- 294 Lbs/HH

Automated Collection

- 409 Lbs/HH

Carts DO NOT = more contamination
Use of Compaction

Greater Payload + Fewer Hauls + Greater Efficiency = High Return on Investment

Effective signage

Best Management Practices – Dropoff Recycling
Best Management Practices – Hub & Spoke

MRFs need volume and scale for efficiency

Hub & Spoke transfer gives communities processing options

SINGLE STREAM RECYCLING

MSW
Use of Imagery

General Info

Direct Engagement

Supporting Campaign

Contaminant Specific
Best Management Practices – Effective Outreach

Multiple Touches

- Annual info card mailer
- Curbside feedback
- Top issue mailer
- Top issue signage
The Challenge: Forge Ahead

Focus on Quality

Lower costs by focusing on collection efficiency

Stay steady with programs and messaging

Tap into public demand for recycling services

94% of consumers support recycling

74% believe recycling should be made a priority

U.S Carton Council, 2018

The Recycling Partnership
How You Measure Matters!
The Path to Strong Program Metrics

FREE state of the art tool for tracking:
• Curbside recycling
• Drop-off recycling
• Multifamily Recycling
• Organics

Customized recommendations and solutions for your program

Build powerful year-over-year data
Quickly calculate and report key metrics

GET STARTED: https://recyclesearch.com/profile/mmp
Let's customize your campaign materials

Answer five questions to customize your FREE campaign materials to help tackle your top recycling issues. It's like magic, but more practical and effective.

LET'S GO
Tools for Contamination

1. ANTI-CONTAMINATION KIT WITH FREE CUSTOMIZABLE FILES
2. IMAGES, ICONS, MAGNETS, SOCIAL MEDIA KIT

Anti-Contamination Recycling Kit

Improving Quality in Your Recycling Program

If you are looking to clean up your residential recycling stream, this kit might be for you. As you will see, the approach is well tested and the results are both immediate and noteworthy.

This 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 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 assure your budget, present your case to decision makers, and get buy-in from your city/town officials, your hauler and your MRF. Lastly, take advantage of what others have learned by reviewing this PRO TIPS PAGE.

This kit was developed in collaboration with Massachusetts Department of Environmental Protection.
Download: Icons for Recycling Campaign

Designing your own campaign materials? Utilize our free visuals to represent what is and is not accepted in your community's recycling program!
Social Media Kit – Volume 2

A year’s worth of social content: video, memes, photos, illustrations, blog articles, and interactive quizzes and polls.

Insights into Facebook’s News Feed & Tips on Facebook Advertising

A Guide to Community Engagement

The Recycling Partnership presents

Grab & Go
Recycling Matters
Social Media Kit
Posts & Pointers For Your Program
Volume 2

DOWNLOAD THE KIT HERE:
recyclingpartnership.org/social-2018

FOLLOW US
facebook
twitter
Recycling Partnership Grants

Curbside Recycling Cart Grant Program Revamped for 2019

- New flexibility around implementation strategies
- Higher per-cart funding in response to more challenging program economics (up to $15/cart plus $1/household for outreach)
- Eliminate minimum community size requirement
- More information here:

https://recyclingpartnership.org/recycling-cart-grant/
One more panda.