

SUCCESSFUL PROGRAMS FOR REDUCING CONTAMINATION

OHIO ENVIRONMENTAL PROTECTION AGENCY

WORKGROUP MEETING

PRESENTED BY

FEBRUARY 6, 2020

JAMES A. SKORA, SC, CHMM





Where it all began.....

- 2010 solid waste plan created MRF fund (\$1.00 gen fee) in preparation of single stream recycling push by larger cities
- District converts MRFs from dual to single stream processing during the 2013-2015 era
- Contamination rears its ugly head
- Next solid waste update began in 2014-2015
- SWOT process indicated contamination issues at District MRFs
- SWOT process indicated that current hauler contracts do not require direct engagement education, just flyers
- National programs program budget education expenses in hauler contracts
- NCO Plan included initiative to conduct direct engagement education and outreach – NCO-1.3



NCO-1.3 Initiative

- Evaluate residential engagement processes to decrease contamination from single stream programs
- Develop direct engagement education program for larger cities as a test/pilot
 - Spot checking participation and recyclable materials using interns
 - Provide information to residents on how to participate properly
 - Work with haulers and MRFs
 - Work with communities on messaging
 - Evaluate the effectiveness of engagement through pre and post audits
- If successful, work with communities to include engagement into contracts



Change Behavior, Maintain Behavior

- People on average get ~5,000 messages per day
 - You have 3-5 seconds to get your message across
- Rule of 7 or 11 replaced rule of 3
- Explain why
- Use negative AND positive reinforcement
- Send messages in multiple formats
- Be creative!
 - Use words AND pictures
 - Comics in local newspapers
 - Advertisements at sporting events
 - Music streaming platform advertisements
 - Videos

What's In, What's Out Campaign – RecycleCT



City of Marysville Cart Tagging Program

*ANALYSIS OF THE EFFECT OF DIRECT
EDUCATION ON REDUCING
CONTAMINATION*





Schedule and Planning

Campaign Tasks	Tentative Date(s)	Comments	Status
Meeting with City, Republic Services, Union Recyclers Staff and NCO	Wednesday, February 13, 2019	Review process, schedule and deliverables	Done
Internship Selection Process	Advertise for Intern by End of February, 2019	In Process	Done
Pre-Audit Conference Call	March 28, 2019	Review audit concept, schedule	Done
Audit at Union Recyclers to Determine Main Contaminants for Marysville	May 16 - Capture Residuals May 20 - Sample Residuals	MK, EO, KT at Union Recyclers Meeting with Skip 3/28	Done
Order Tags and Handouts	By April 2019	EO quotes for Tags Info Mailer Press release/newsletter/media posting	Done
Hire Interns	By end of April 2019	Coordinate with District for interviews	Done
Develop training documents	by May 13, 2019	Daily and weekly procedure for interns, reporting and data collection	Done
Interns Starts	Monday, May 13, 2019	1st three weeks are for training	Done
Meeting with City and Republic to Finalize Route Schedule	by May 15-16, 2019	Done	Done
9 Week Campaign	June 3, 2019 – August 4, 2019	Done	Done
Mail top issue to households	Monday, July 15, 2019	Done	Done
Conduct Post Audit at Union Recyclers to Verify Reduction in Contaminants	August 1 - Capture Residuals August 5 - Sample Residuals	Done	Done
Presentation to City and NCO	Wednesday, October 30, 2019	Done	



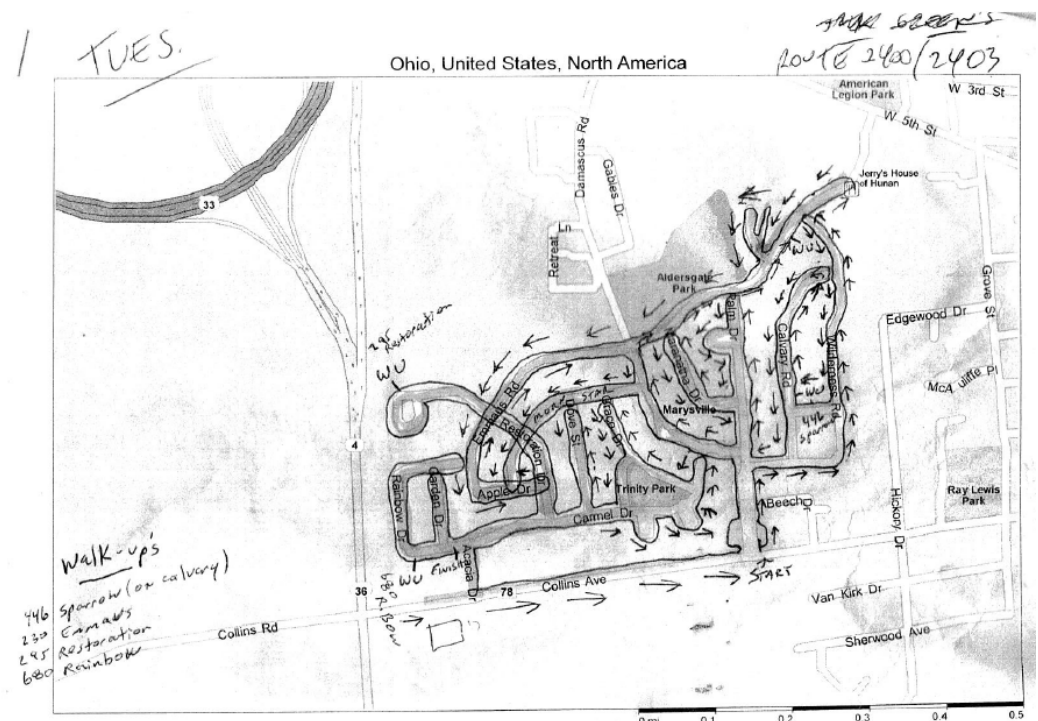
Interns

- Sadia Akhter Aurna from the University of Findlay



- Tyler Nicol from The Ohio State University







Engagement Count

- Newsletter Mailer (1)
- Newspaper article (2)
- Web site updated (3)

Recycling program being examined in city



By
MAC CORBELL
marysvillecity.com

Marysville residents have seen someone looking through their recycling carts and the person has no intention of stopping, at least for a couple of weeks.

Marysville Public Services Director Mike Andrako said the city has been selected to participate in an audit of its recycling program.

He said that in the spring, the North Central Ohio Solid Waste District (NCSWD) hired an intern to survey the city's trash. Everything coming from the city to the Union Recycling facility was examined. The sort looked at how much of what was coming in was actual recycling, in an acceptable format, and how much wasn't. Officials used the study to create a baseline for compliance.

In June, the intern began walking city trash routes ahead of the recycling truck, looking into recycling carts set along the curb for collection.

"They are not going through the recycling. They are just lifting the lid and looking in," explained Andrako.

He said the surveyors should not be examining any of the actual items in the cart, removing trash or really even moving anything.

"They are looking for non-recycling in the recycling cart," Andrako said. Additionally, Andrako said the auditor is looking to make sure the customers are putting the correct recycling in the cart correctly. Officials said all metal food and beverage cans, all paper, plastic bottles with a 1 or 2 on the bottom and all brown, clear or green glass is acceptable.

If the customers cart looks correct, the surveyor shuts the lid and moves to the next bin. If the surveyor sees something that doesn't belong, they shut the lid and put an informational tag on the cart. The sticker indicates how the recycling was incorrect — wrong items, garbage, too big, too tangled or if the

recycling was bagged.

"It is meant to be an informational and educational outreach to get customers to not do that again and to help them understand the service," Andrako said.

He said Republic will still empty recycling carts, even if they have an informational tag.

Later this summer, the stream coming into Union Recyclers will be examined again.

"The hope is to see a reduction in the amount of nonrecycling coming through that stream," Andrako said. "The goal is that after they do this, customers will do a better job of eliminating contaminants (items not meant to be in the recycling)."

Andrako said Union Recycling factors the amount of contaminants into its price to take the city recycling.

"So, the better job customers do at keeping contaminants out of their recycling, the less it will cost them in the long run," Andrako said.

The auditor has been keeping track and said the number one issue with Marysville recycling is customers who bag their recycling before putting it into the cart. Officials said recycling should not be in a bag inside the cart, but rather dumped loose inside the cart. NCSWD officials said plastic bags can clog up sorting equipment which leads to increased

(See Recycle on page 2A)



PLEASE LEAVE THESE ITEMS OUT!





May 2019 audit categorization of residuals sorted by Union Recyclers before material was sent to the landfill



Sample pulled from Thursday recycling route

May 2019 audit categorization of residuals sorted by Union Recyclers before material was sent to the landfill



Sample pulled from Thursday recycling route



Week	Admin Assignments	Recycle Route Assignments Follow: 630am - 230pm Inspect: 5am - 1pm				
	Monday 8am - 4pm	Tuesday	Wednesday	Thursday	Friday	Saturday
May 13-19, 2019	Payroll Paperwork Orientation	2403 Follow	3403 Follow	4403 Follow	5403 Follow	No Work
May 20-26, 2019	Recycle Audit	2404 Follow	3404 Follow	4404 Follow	5404 Follow	No Work
May 27 - June 2, 2019	Holiday, No Work	Prep Tags, Supplies	2702 Follow	3702 Follow	4702 Follow	5702 Follow
June 3 - 9, 2019	Prep Tags, Supplies	2403 Inspect	3403 Inspect	4403 Inspect	5403 Inspect	No Work
June 10 - 16, 2019	Data Tracking, Prep Tags	2404 Inspect	3404 Inspect	4404 Inspect	5404 Inspect	No Work
June 17 - June 23, 2019	Data Tracking, Prep Tags	2702 Inspect	3702 Inspect	4702 Inspect	5702 Inspect	No Work
June 24 - 30, 2019	Data Tracking, Prep Tags	2403 Inspect	3403 Inspect	4403 Inspect	5403 Inspect	No Work
July 1 - 7, 2019	Data Tracking, Prep Tags	2404 Inspect	3404 Inspect	Holiday - No Work	4404 Inspect	5404 Inspect
July 8 - 14, 2019	Data Tracking, Prep Tags	2702 Inspect	3702 Inspect	4702 Inspect	5702 Inspect	No Work
July 15 - 21, 2019	Data Tracking, Prep Tags	2403 Inspect	3403 Inspect	4403 Inspect	5403 Inspect	No Work
July 22 - 28, 2019	Data Tracking, Prep Tags	2404 Inspect	3404 Inspect	4404 Inspect	5404 Inspect	No Work
July 29 - August 4, 2019	Data Tracking, Prep Tags	2702 Inspect	3702 Inspect	4702 Inspect	5702 Inspect	No Work
August 5 - 11, 2019	Recycle Audit	Data Summary and Final Report, PP Presentation				No Work
Republic Route Supervisor	Terry Fenton	937-844-2865				



**Residential Contamination Data
Collection Form**

City of Marysville

Day: _____ Weather: _____ Driver: _____
 Date: _____ Route #: _____ Vehicle #: _____

Contamination reasonings:

1. In Plastic Bag
2. Plastic Bags
3. Non-recyclable Paper
4. Non-recyclable Plastic
5. Tangles (rope, cords, etc)
6. Food Waste
7. Big Items (wood, furniture, metal)
8. Garbage

(Specify Below)

	Contamination #1	Contamination #2	Contamination #3	House Number	Street
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					



PLEASE LEAVE THESE ITEMS OUT!



RECYCLE MORE OF THESE:



Please recycle this tag







Postcard

North Central Ohio Solid Waste District
815 Shawnee Road, Suite D
Lima, Ohio 45805

Dear Resident,

Our City is focusing on helping the recycling program run at its best, but we need your help! Plastic bags can clog up sorting equipment which leads to increased recycling costs. Help us by keeping recyclables loose and not in plastic bags. Loose recyclables is the key to success. To recycle bags, please take your plastic bag to retailers (such as Kroger, Meijer, Walmart, etc. and ask about their take-back program.)

Make the biggest impact!

1. Loose recyclables in recycling cart (no bags)
2. Recycle only #1 and #2 plastics (no #3-#7)

Happy Recycling!

FIRST CLASS
AUTO
US POSTAGE
PAID
CLEVELAND OH
PERMIT #498

Postcard informing residents
of most common
contaminates





Engagement Count

Tagging Week 1 (4)

Tagging Week 2 (5)

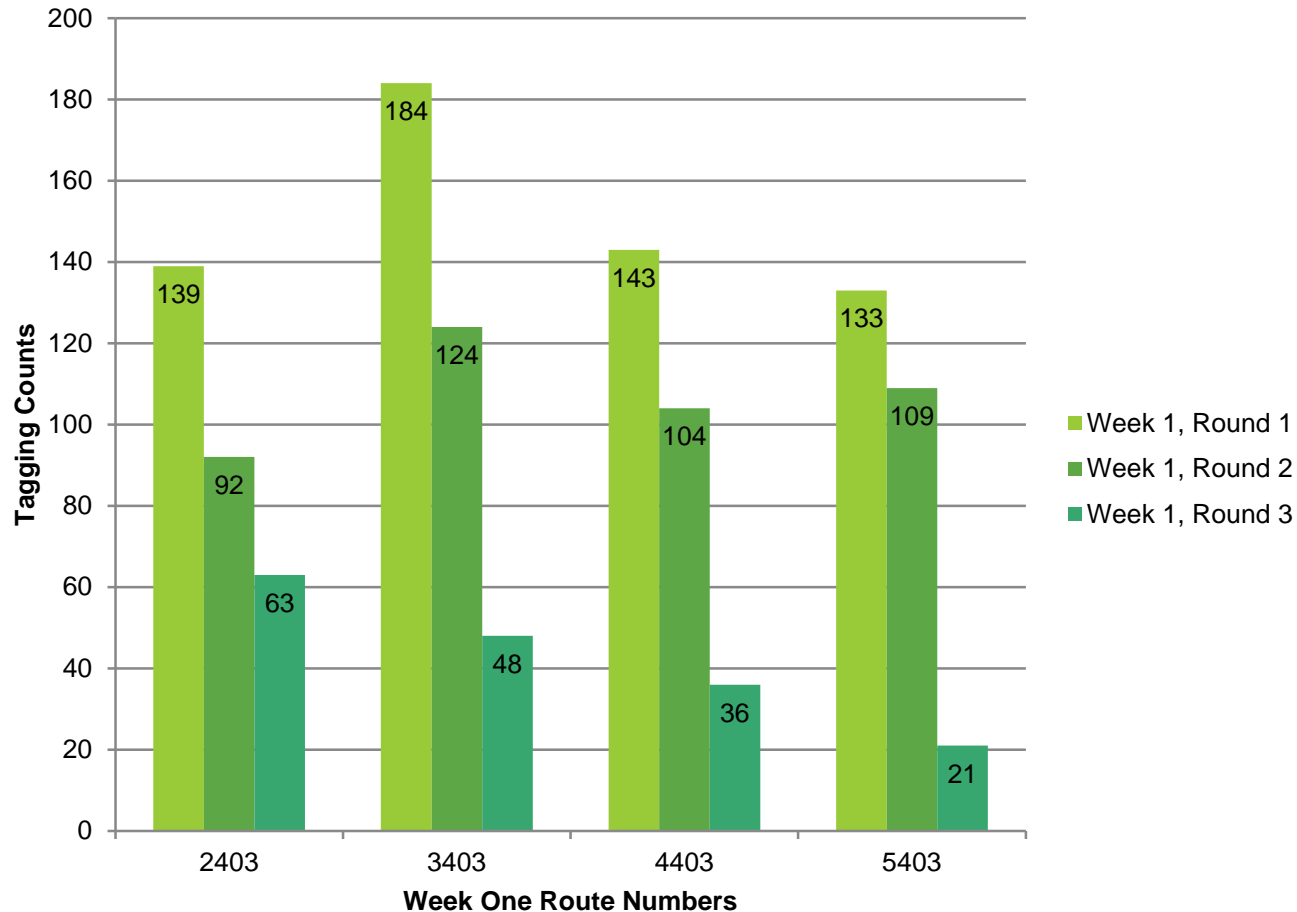
Mailer Sent to Each HH (6)

News Paper Article (7)

Tagging Week 3 (8)

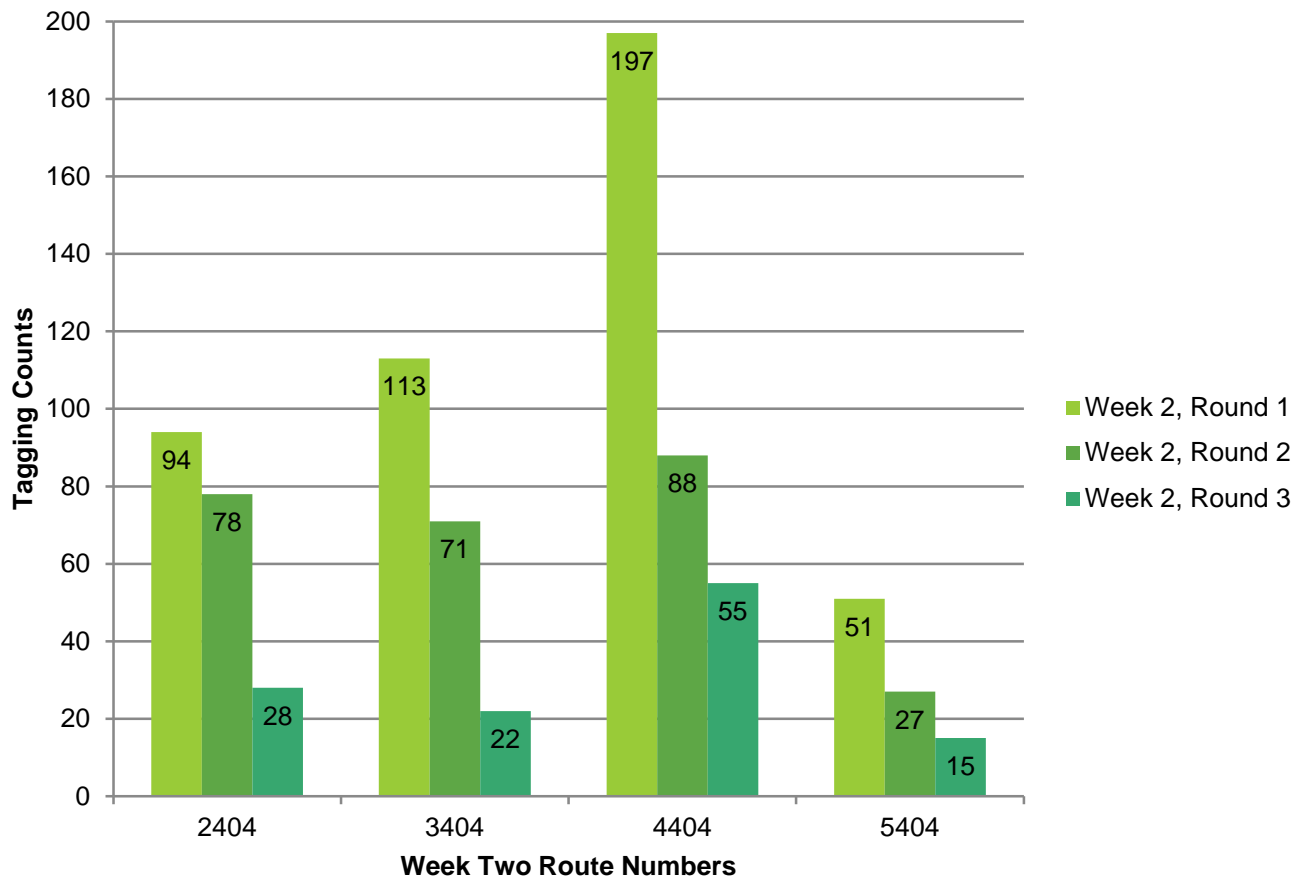


Round 1 Tag Counts



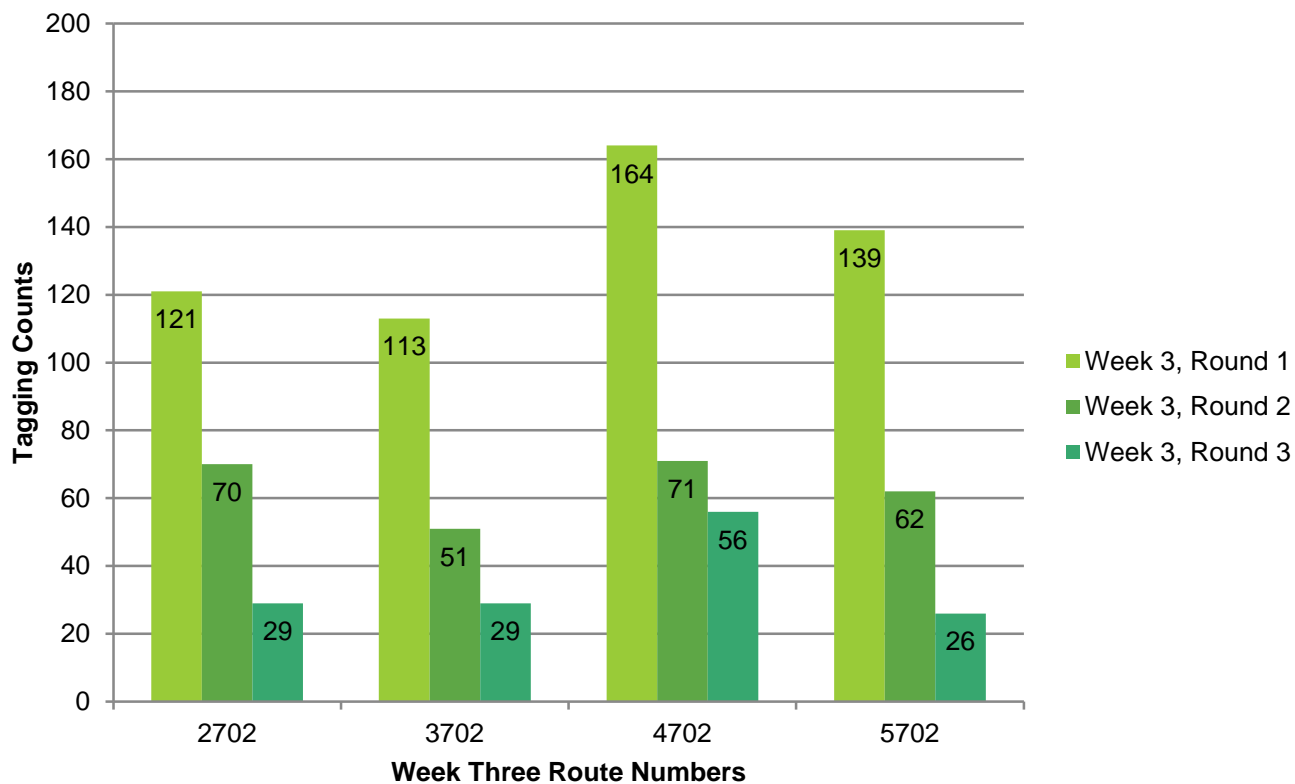


Round 2 Tag Counts





Round 3 Tag Counts





Tag Count for Each Area and Round

	Round 1		Round 2		Round 3	
Area 1	Week 1		Week 4		Week 7	
	Weekly Total	599	Weekly Total	429	Weekly Total	168
Area 2	Week 2		Week 5		Week 8	
	Weekly Total	455	Weekly Total	264	Weekly Total	120
Area 3	Week 3		Week 6		Week 9	
	Weekly Total	537	Weekly Total	254	Weekly Total	140

Each area reduce their tags by at least 70%!

August 2019 audit categorization of residuals sorted by Union Recyclers before material was sent to the landfill



Sample pulled from Thursday recycling route

August 2019 audit categorization of residuals sorted by Union Recyclers before material was sent to the landfill



Sample pulled from Thursday recycling route



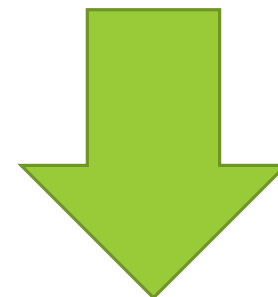
Largest Impact

Percentages of:

- Unacceptable Plastics in Recyclables
- Collection Bags
- Trash/Other

	May	August	% Change Difference
Plastics Total	57.9%	33.0%	43.0%
Collection Bags	2.4%	1.2%	50.0%
Trash/Other	14.6%	11.8%	19.2%
Total of greatest impact contamination	74.9%	46.0%	38.6%

Percent Reduction for Key Contaminates



The top contaminants were reduced by 38% when comparing the samples!



Questions?

2019 National Recycling Coalition Outstanding Outreach Program

