Recycling Resilience:
Tagging and Enforcement

FREE
WEBINAR

November 5
11AM-12:30PM

Brought to you by:

Carolina Recycling Association

NORTH CAROLINA Department of Environmental Quality

Division of Environmental Assistance and Customer Service (DEACS)

Special thanks to the CRA Education and Outreach Committee, which is full of amazing and awesome individuals who worked very hard to bring us this webinar. You can connect with us too!! Contact us for committee information and get involved.

Mary McClellan
CRA

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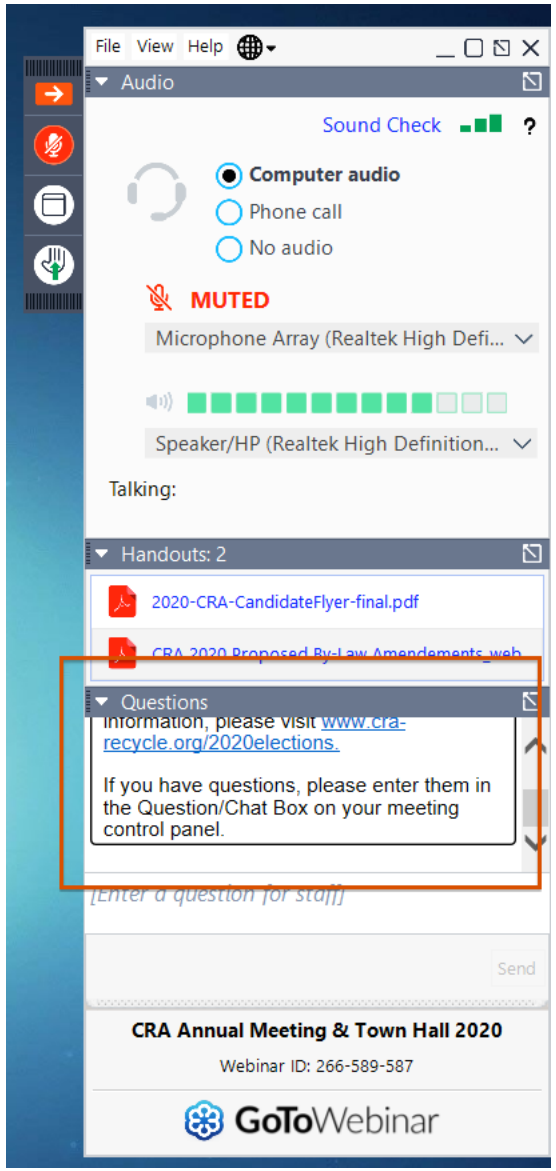
Housekeeping items

- You are muted in listen only mode.
- This event will be recorded.
- Questions will be answered at the end of the webinar but please share questions throughout.
- A recording of this webinar will be available by early next week.

Q&A



Agenda

1. Greetings from CRA!
2. Panelist Introductions & Presentations
3. Audience Q&A

Panelists:

Mike Greene(moderator): NC DEQ, Industrial Development Specialist, mike.greene@ncdenr.gov

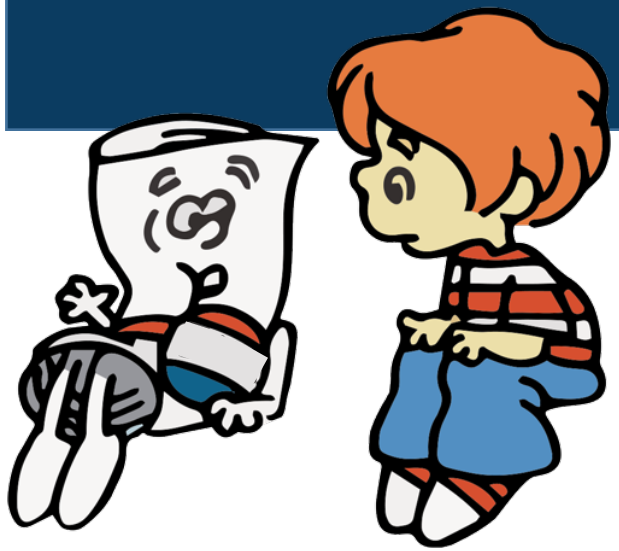
Joe Fitzpatrick: Wake County, Recycling & Compliance Coordinator, joseph.fitzpatrick@wakegov.com

Hurst Renner: Rubicon, Manager of Public Policy & Smart City Partnerships, hurst.renner@rubicon.com

Molly Yeager: Rumpke, Corporate Communications Manager, Molly.Yeager@rumpke.com

Tori Carle: City of Greensboro, Waste Reduction Supervisor, Tori.Carle@greensboro-nc.gov

I’M JUST AN ORDINANCE



Mike Greene
Recycling Business Development Specialist
NC Department of Environmental Quality
North Carolina Recycling Business Assistance Center

DISCLAIMER

- Individual towns/cities/counties may have different rules for establishing ordinances
- This presentation outlines common procedures for establishing ordnances
- I am not a lawyer

WHERE DO WE START

The Direct Route

- Department Head
- City or County Attorney
- Review language or draft ordinance
- City or County Manager
- Mayor or Council Member
- Council Can Approve or Refuse

WHERE DO WE START

Indirect Route

- Ordinance proposals can start in different ways
  - Local Politician
  - Private Citizen
  - Departments / Councils/ Committees

PROPOSAL

- Apply for a spot on council agenda to present draft of ordinance
    - Procedures may vary
- Try to meet with recycling friendly council members before you present
- Have handouts ready
- Make sure you are informed and ready to answer tough questions

IF AT FIRST YOU DON'T SUCCEED…

- You may have to present several times
- Get community support
- Get your message out!
  - TV, Print, Radio and Social Media
- Compromise if needed

RESOURCES

- NC DEACS
  - Access to codes and ordinances that passed in other areas
  - Coming Soon – Enforcement Template

NC DEACS Contacts

Carol Abken (919) 707-8145 carol.abken@ncdenr.gov

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Sandy Skolochenko (919) 707-8147 sandy.skolochenko@ncdenr.gov

Wendy Worley (919) 707-8136 wendy.worley@ncdenr.gov

North Carolina Solid Waste Enforcement Officers Association

Who are we?

North Carolina Solid Waste Enforcement Officers Association

NCSWEOA is a nonprofit organization with the goal of keeping its members abreast of the latest developments in solid waste management, disseminating information concerning solid waste enforcement, and providing a platform for the NCSWEOA members to perform their jobs effectively and safely.

Members include solid waste technicians, specialists and administrators; environmental health technicians and specialists, code enforcement officers; law enforcement personnel; and employees of state and local regulatory agencies with interests in solid waste management.

Any individual who has responding to solid waste complaints and/or enforcement of solid waste rules, ordinances or laws should consider joining.

North Carolina Solid Waste Enforcement Officers Association

- Annual fall conference
- Regional workshops
- Facility tours
- CEUs available

Professional Development & Training Opportunities

Why is solid waste enforcement important?

- Improper disposal of waste is illegal!
- Citizen demand
- Enhances perceptions of the community
- Protects public health and the environment

Enforcement Authority

G.S. 153A-136. Regulation of solid wastes.

(a) A county may by ordinance regulate the storage, collection, transportation, use, disposal, and other disposition of solid wastes. Such an ordinance may:
(1) Regulate the activities of persons, firms, and corporations, both public and private.
(6a) Regulate the illegal disposal of solid waste, including littering on public and private property, provide for enforcement by civil penalties as well as other remedies, and provide that such regulations may be enforced by county employees specially appointed as environmental enforcement officers.

Illegal dumping……

……clean-ups

Roadside litter……

…….illegal burning

How an enforcement program benefits your Community

Environmental education & outreach

How an enforcement program benefits your Community

Encourages proper disposal

How an enforcement program benefits your Community

Reduces litter

How an enforcement program benefits your Community

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

Keep NC Beautiful
All Ways Green

KEEP
North Carolina
CLEAN

NC Big Sweep
Keep North Carolina Clean

Supports clean-up activities

S W A E O

How an enforcement program benefits your Facilities

Secure Load Enforcement

Components of a successful enforcement program:

- **Functional solid waste ordinance**
  - Designed to meet local needs and preferences
  - Enforcement options
  - Meaningful penalties
  - Civil and criminal enforcement actions
- **Dedicated enforcement staff**
- **Comprehensive public outreach program**
- **Political support and funding**

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Caleb Sinclair

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caleb.sinclair@rowancountync.gov

Visit our website: ncsweoa.org

North Carolina Solid Waste Enforcement Officers Association

November 5, 2020

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Rubicon was founded in 2008 with the mission “to end waste”

Rubicon Global is a technology company that:

- provides a suite of **SaaS products** for waste, recycling, and smart city solutions
- gathers **data and insights** for businesses and governments worldwide
- powers a **software platform**

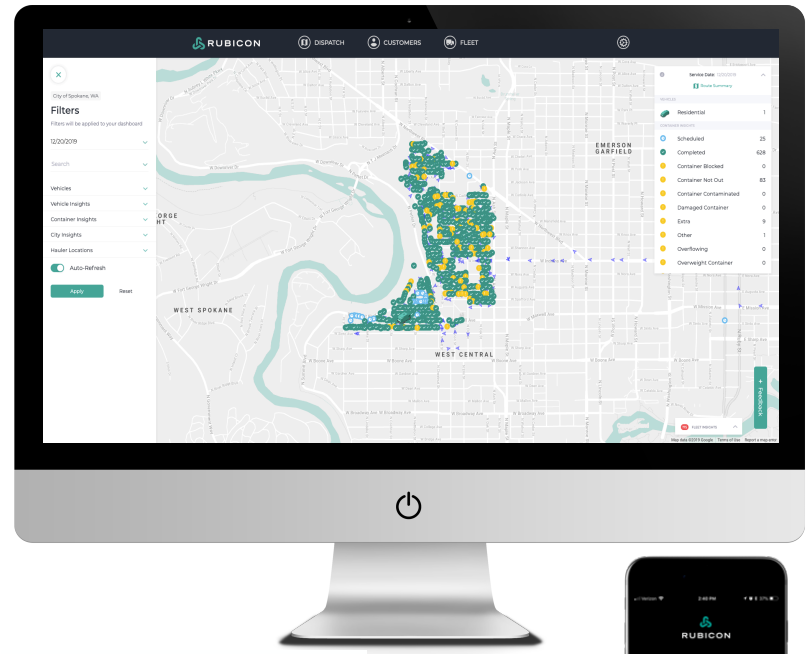
4.9M+ Unique Service Locations	**45+** Patents	**55+** Cities nationwide have adopted RUBICON SmartCity™ software	**50 + 22** All 50 states + 22 countries

Overview of technology

RUBICONSmartCity (x + y): Collect service verifications in real time without RFID

Manager Portal (gated website): Real time reporting and operation insights

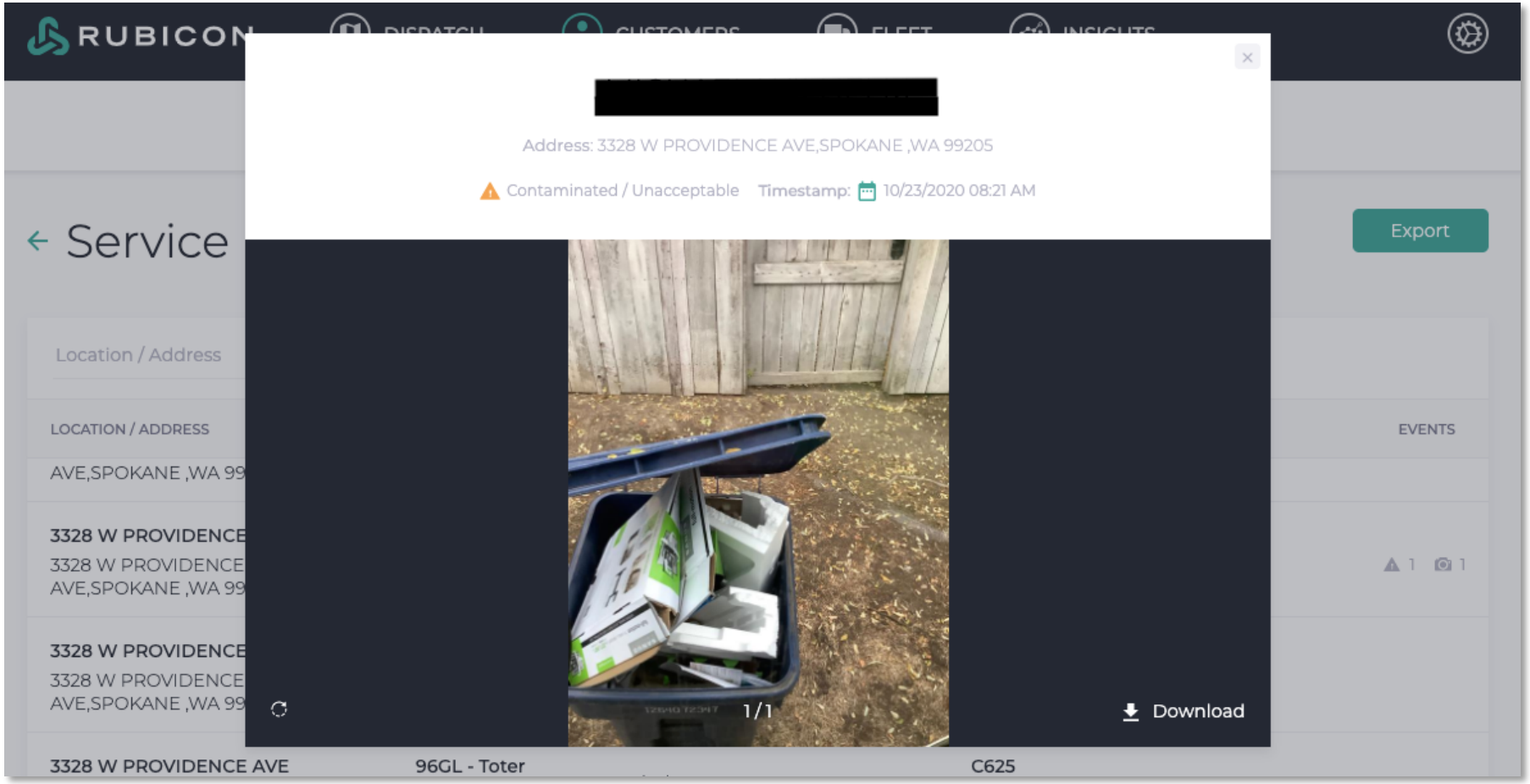
Manager Portal



Geotab GO9 (y)

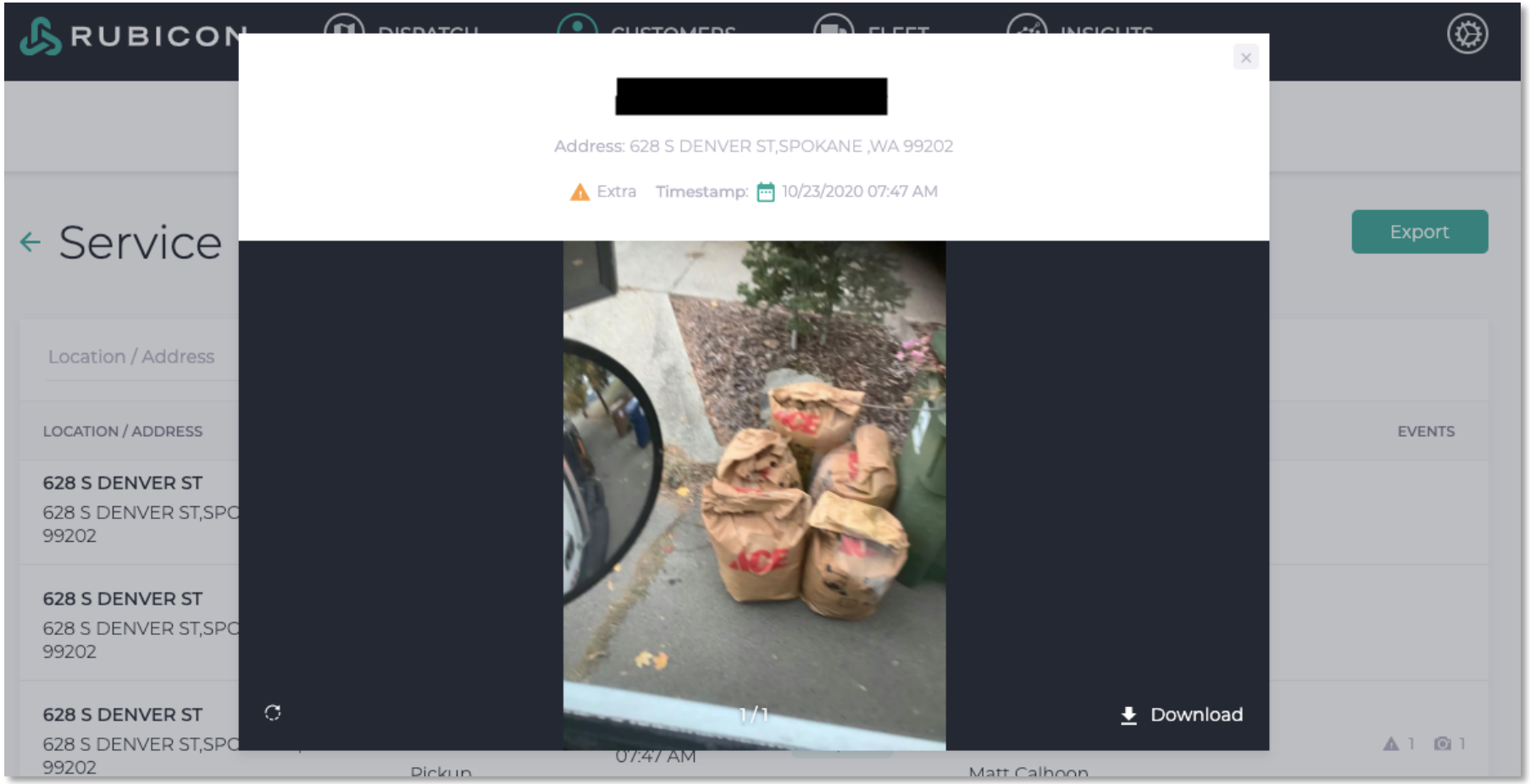
Rubicon x

Driver–Reported Contamination

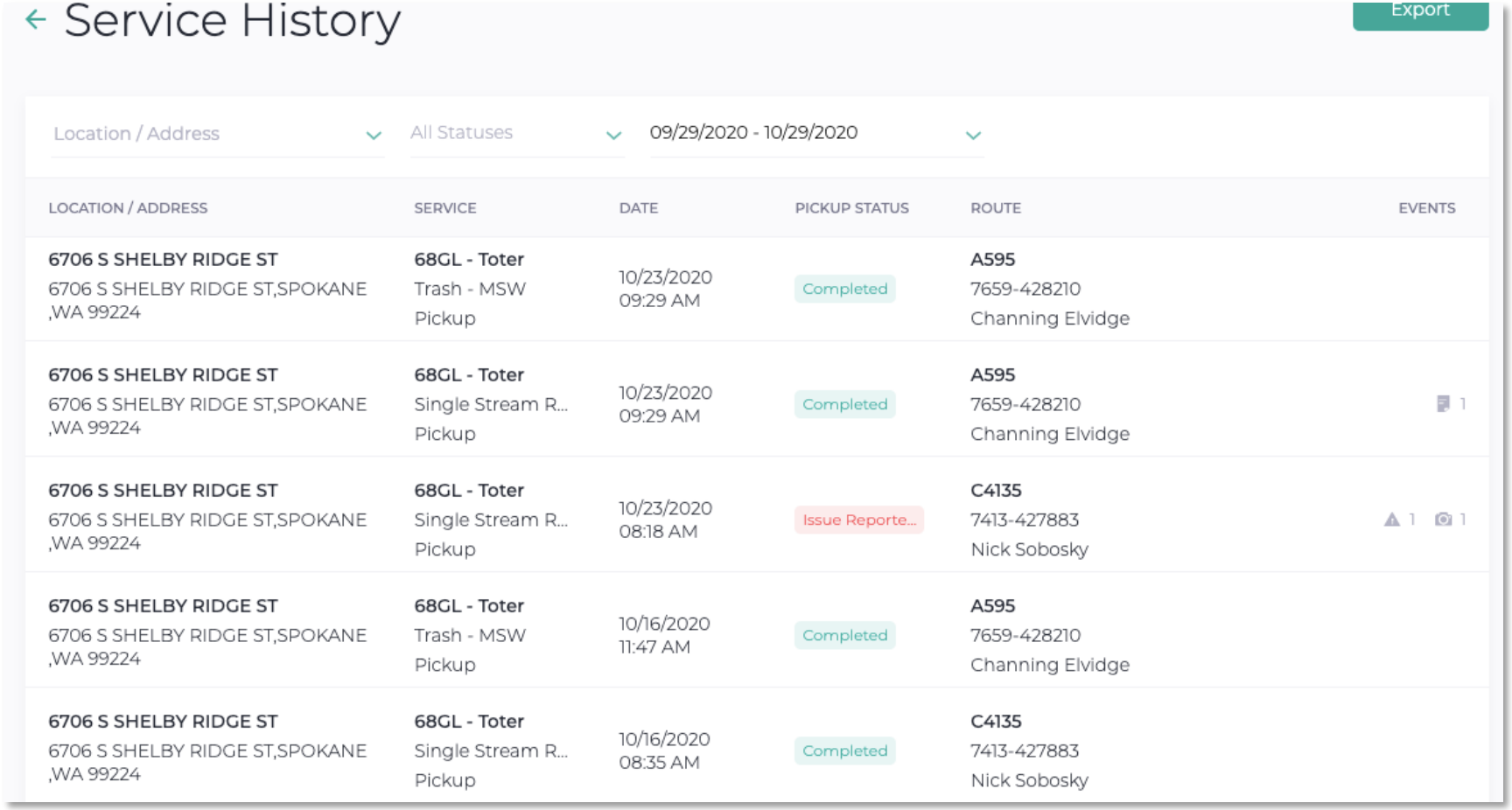


Driver–Reported Contamination

Driver–Reported Extra



Customer History



RUMPKE

Ohio’s Recycling Leader

Rumpke Waste & Recycling

- Rumpke is a private, family owned company
- Headquartered in Cincinnati
- Services portions of Ohio, Kentucky, Indiana and West Virginia
- Operates 11 recycling centers & 14 landfills

RUMPKE

Rumpke Waste & Recycling

Impact of Contamination

April 10, 2012

RUMPKE

Rumpke Waste & Recycling

Impact of Contamination

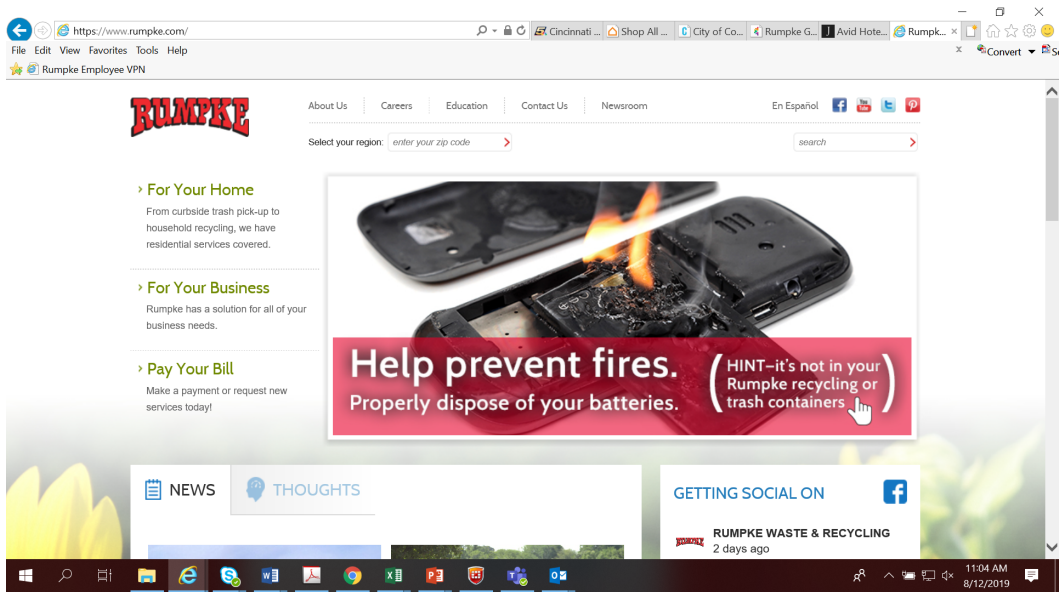
- Fires
- Challenges meeting end users standards
- Increased disposal costs
- Increased maintenance costs

RUMPKE

Rumpke Waste & Recycling

Addressing Contamination

- Annual advertising campaign
- Increased education
- Media relations
- Partnerships with solid waste districts & cities to standardize communication



RUMPKE

Rumpke Waste & Recycling

Rumpke's Role with Recycling Partnership

- Material Audits
  - Fairfield
  - Centerville
  - Cincinnati

RUMPKE

Rumpke Waste & Recycling

Rumpke's Role with Recycling Partnership

- Curbside Checkup Team
  - 5 weeks in Fairfield
  - 10 weeks in Cincinnati

RUMPKE

Rumpke Waste & Recycling

Lessons Learned

- People are generally confused on what they can recycle
- Customers were unaware that there was a list of acceptable items on their cart.
- The curbside communication didn’t generate that many phone calls
- Feet on the street team – need to be passionate
- Leaving the material at the curb works.

The Results

- Fairfield 22% contamination rate – 12% contamination rate
- Centerville 19% contamination rate – 11% contamination rate
- Cincinnati 28% contamination rate – 19% contamination rate

RUMPKE

Greensboro, NC

Contamination Reduction

Tori Carle
Waste Reduction Supervisor

Greensboro, NC
Field Operations Department

Welcome

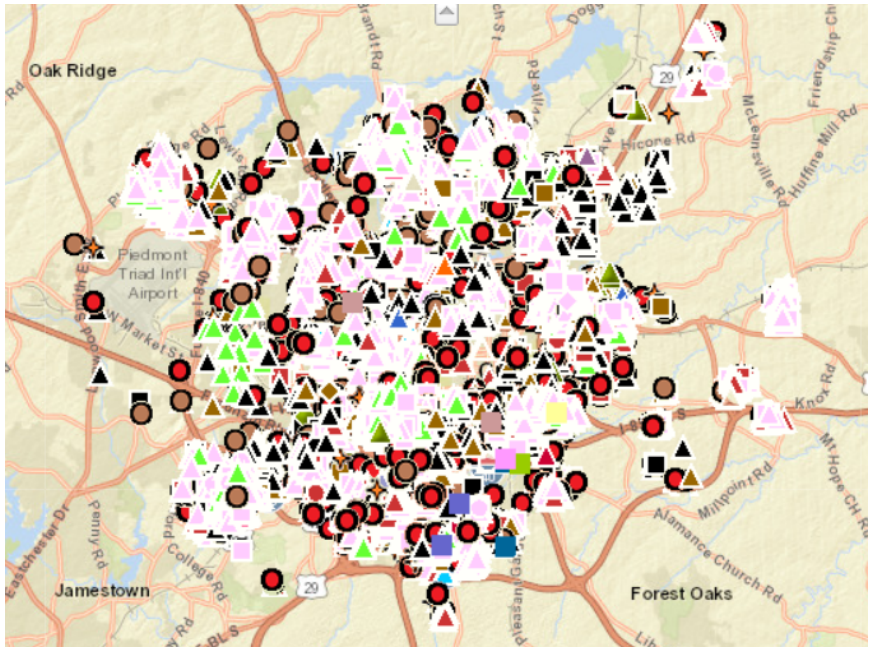
Greensboro, NC

- Part of the Triad Region of North Carolina
- 3rd largest city in NC
- Started the first single stream recycling program on the East Coast in 1992 and still working with the original MRF, despite changes in ownership over the past few years.
  (FYI… recycling carts are brown)

Recycling at a Glance

Overall ♻ Program

- 90,100 households
- Every other week collection
- Municipally operated collection
- ~20-30% contamination rate*
- 25,000 tons annually



Tagging Program

- Tagging program started in July 2018
- 10 Recycling drivers and 1 inspector tag
- Enforcement *with rejection*
- 3 strikes you're out
- 12,000+ interactions with residents to date

*Based on MRF reported contamination. Independent audit coming soon.

Why we started…

Education + Policy

- You cannot have one without the other.
- “Feet on the street” limited to one employee (used to be 4)
- Contamination rates 18% or more since 2015.

- Longstanding program=**well engrained bad behaviors**
  - Bagged recycling
  - Bags/wrap in recycling
  - Using the brown bin as a spare trash cart
  - Confusing colors… brown is recycle, green is trash
  - Textiles, construction waste, yard waste, food, garbage, you name it… it ends up in the brown bin.

Program Mechanics

Drivers vs. Inspectors

Drivers

- See contamination
  - Sticking out of the cart
  - In the hopper (via camera)
- **Don't** have time to physically tag a cart with an oops or skipped sticker.
- Equipped with a tablet to virtually tag a cart.

Inspector

- See contamination
  - Sticking out of the cart
  - When the lid is opened
- **Does** have time to physically tag a cart with an oops or skipped sticker.
- Equipped with a tablet to virtually tag a cart.

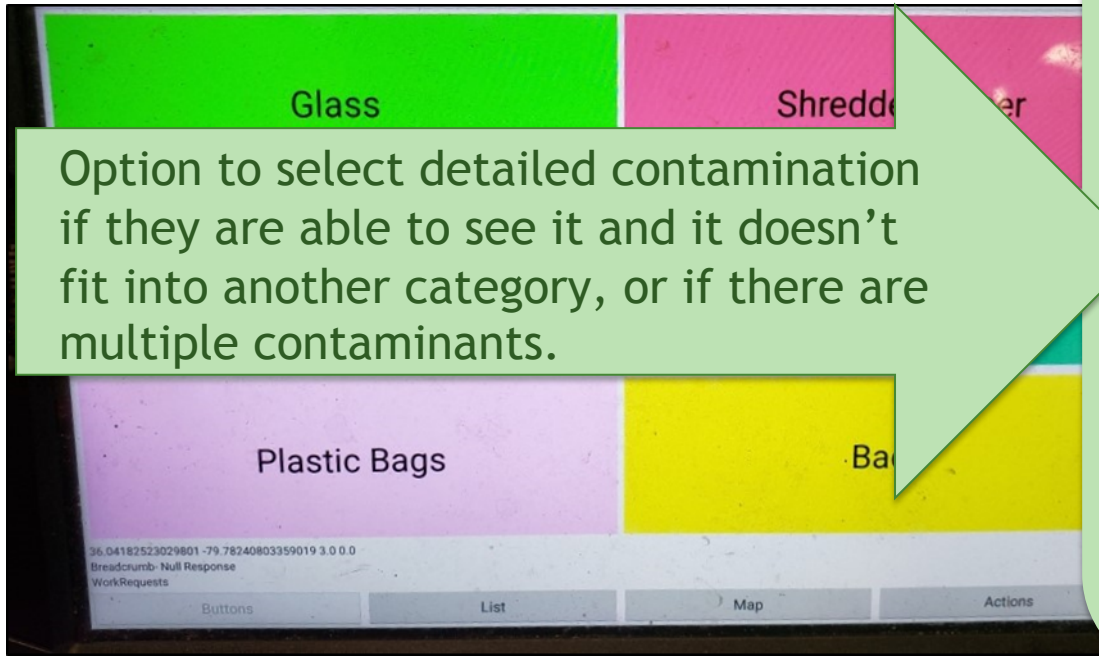
Program Mechanics

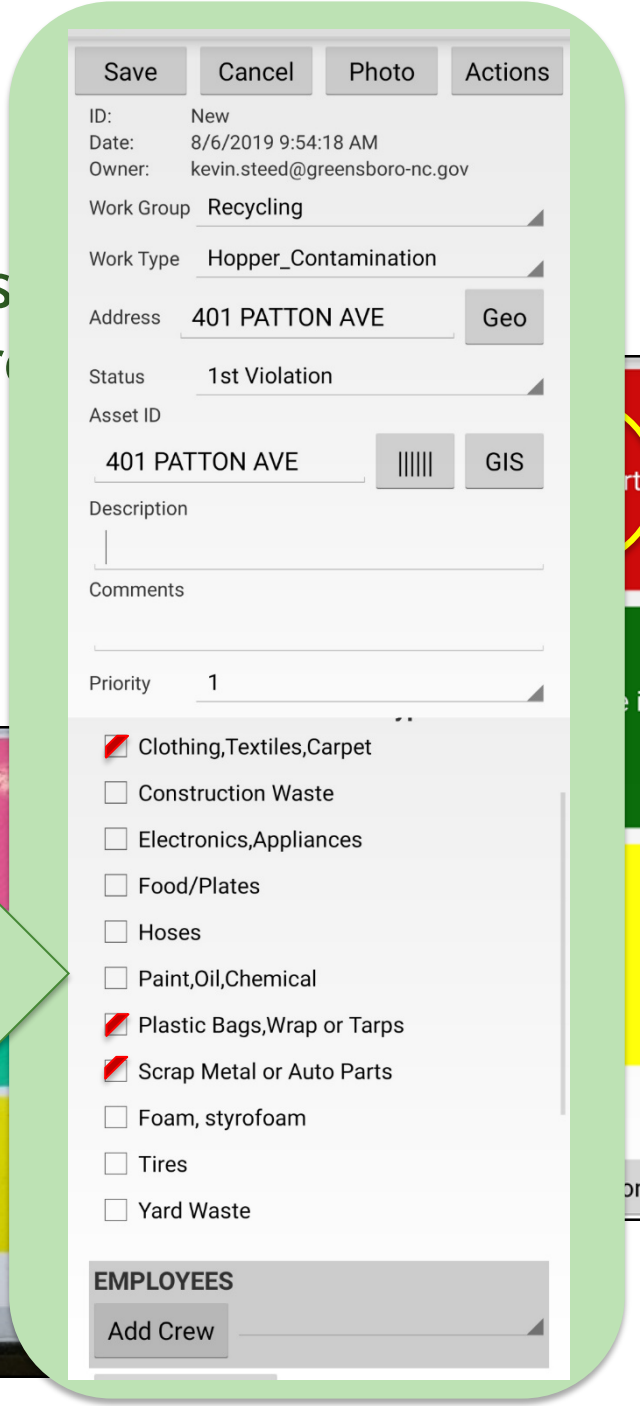
Drivers vs. Inspectors

Program Mechanics

Tracking in the Field

Currently using an app that allows
inspectors to virtually tag an addr





Program Mechanics

Tracking in the Field

Inspector

- Sees contamination
  - Sticking out of the cart
  - When the lid is opened
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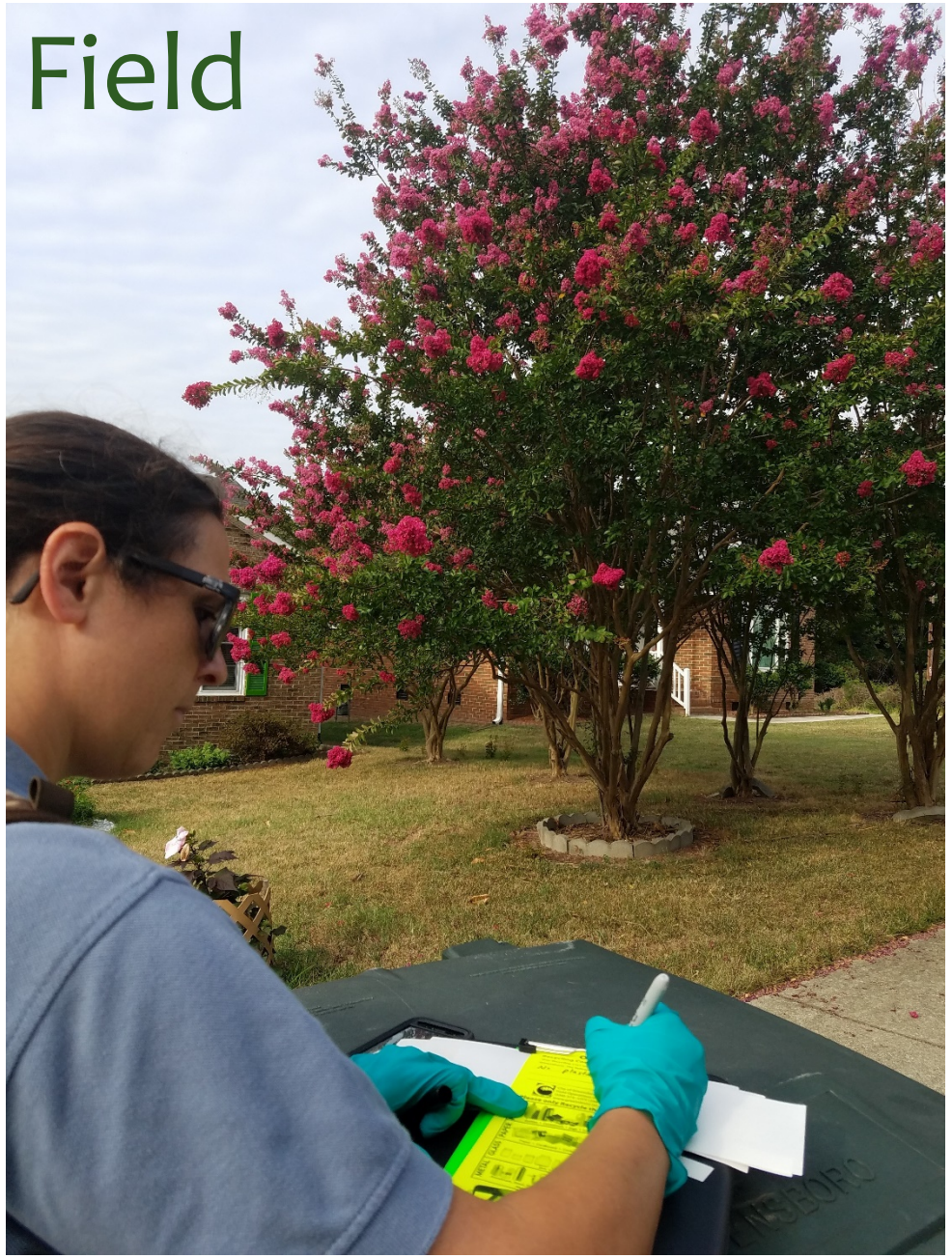
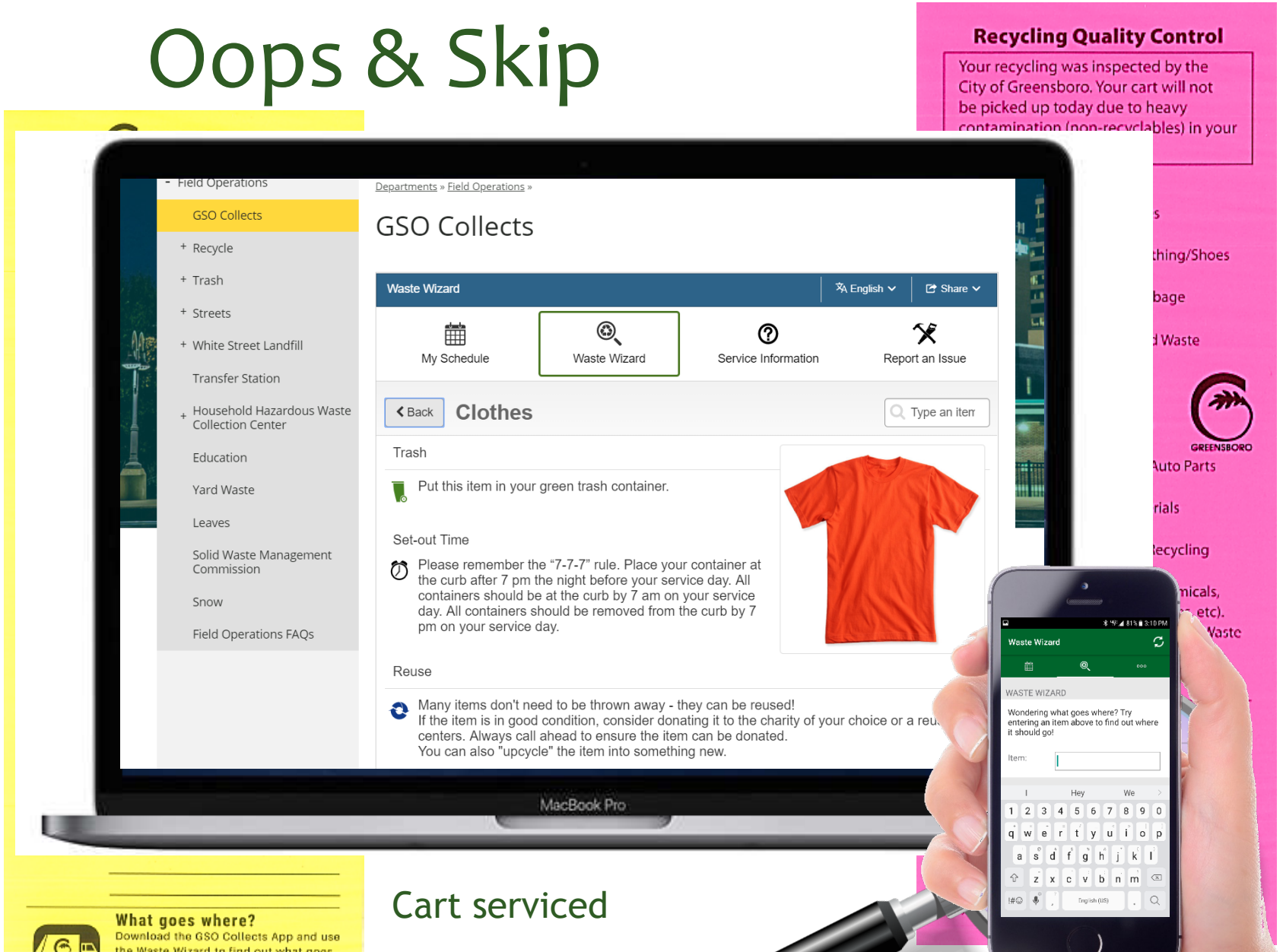
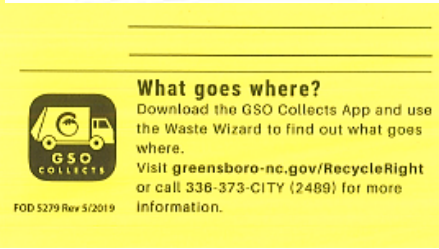


Program Mechanics

Oops & Skip





Cart serviced

Cart not

Data Management

- Not a great workflow at the moment, but we are working with what we have

8581 Work Items

Assign Selected | Mark Selected | 1st Violation | Save Selected Items | Download | Excel (xlsx) | All Uppercase | Download Attachments | Close Report

1 2 3 4 5 6 7 8 9 10 ... ▸ ▸| Page size: 100

Address Street	Address Number	Collected Date	Id	Status	City	Zip	Work Type Name	User Name	Description	Comments
- A E Bessemer Ave	608	4/11/2019 9:33:21 AM	9722314	1st Violation	G	27405	Plastic Bags	smithdv		Plastic bags,
-1 CREEK RIDGE RD	724	5/17/2019 11:12:40 AM	9979145	1st Violation	G	27406	Insp. Skip Cart	smithdv	pillow, wires	
-10 SPRING ST	3200	4/17/2019 1:47:19 PM	9762226	2nd Violation	G		Hopper_Contamination	2329@gmail.com		
-101 CREEK RIDGE RD	724	5/3/2019 11:20:12 AM	9880344	1st Violation	G	27406	Plastic Bags	smithdv		Plastic bags,
-101 GRECADE ST	1108	6/24/2019 8:11:24 AM	10227424	1st Violation	G	27408	Hopper_Contamination	2357@gmail.com		
-104 CREEK RIDGE RD	724	3/8/2019 10:05:05 AM	9495238	1st Violation	G	27406	Plastic Bags	smithdv		Plastic bags,

Program Mechanics

The Follow-up

Postcards:

- Created daily (for the previous days tags)
- Process using an Excel Macro
- Convert into address labels
- Print sheet that includes address, violation, and contamination type
- Create postcards
  - Date stamp
  - File folder labels for common contaminants
  - Plastic bags are #1 by far, so default contaminant.

*this is excellent modified duty work if you have staff available.

Program Mechanics

Enforcement

On the post card, it says: *This is you ___ notice of contamination, if your container is in violation again, it will be removed for non-compliance with recycling guidelines.*

We are not in the business of removing recycling carts—but this message is not sugar coated due to our heavy contamination issues.

6-month roll off rule: After 6 months, a tag rolls off of an address (no longer pulled in the reports run). That allows for this to function as and be branded as an education program so that folks won't get tagged 3 times over 2 years and get their cart removed…

Because we say we will remove their carts, it gets residents' attention! They call us, they talk to us, and we err on the side of the resident.

Program Mechanics

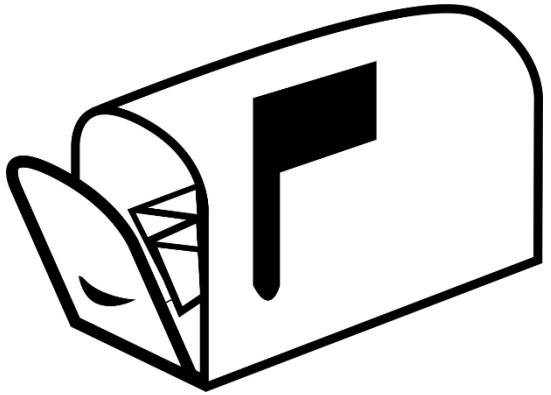
Enforcement

Mistakes happen

Because we say we will remove their carts, it gets residents' attention!

Sometimes we tag the wrong address (the cart wasn't full, resident out of town, they KNOW they didn't have THAT in there, etc…).

We always try to err on the side of the resident. Each situation is different. If they have multiple tags, but are trying to do the right thing, we will remove a tag and tell them about the 6 month roll off rule.



Tracking

Results

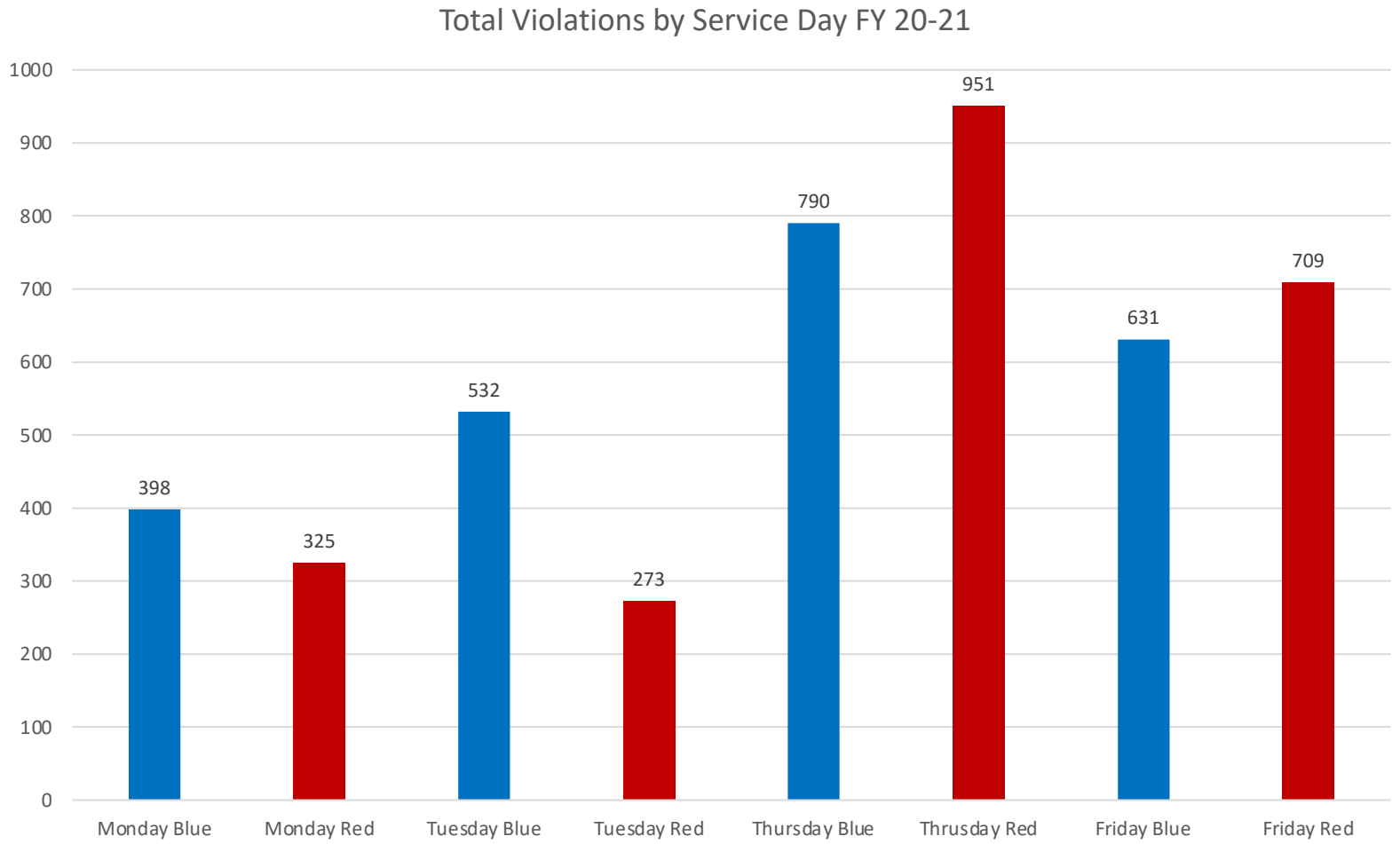
Every day, we input how many tags/postcards for that day into a separate excel sheet.

Track by day, month, and year right now.

19-20 Contamination Tracking--1st Violations			
Day	**Date**	**Number of Notices Sent**	**Completed by:**
M-Red	7/1	97	Tori
T-Red	7/2	140	Tori
R-Red	7/3	140	Tori
F-Red	7/5	93	Laine
M-Blue	7/8	134	Laine
T-Blue	7/9	141	Laine
R-Blue	7/11	210	laine
F-Blue	7/12	126	Tori
M-Red	7/15	20	Tori
T-Red	7/16	44	Tori
R-Red	7/18	100	Tori
F-Red	7/19	84	laine
M-Blue	7/22	81	laine
T-Blue	7/23	54	laine
R-Blue	7/25	41	laine
F-Blue	7/26	71	Tori
M-Red	7/29	81	Tori
T-Red	7/30	17	Tori
July Total/Average per day		**1674**	**93**
R-Red	8/1	86	Tori

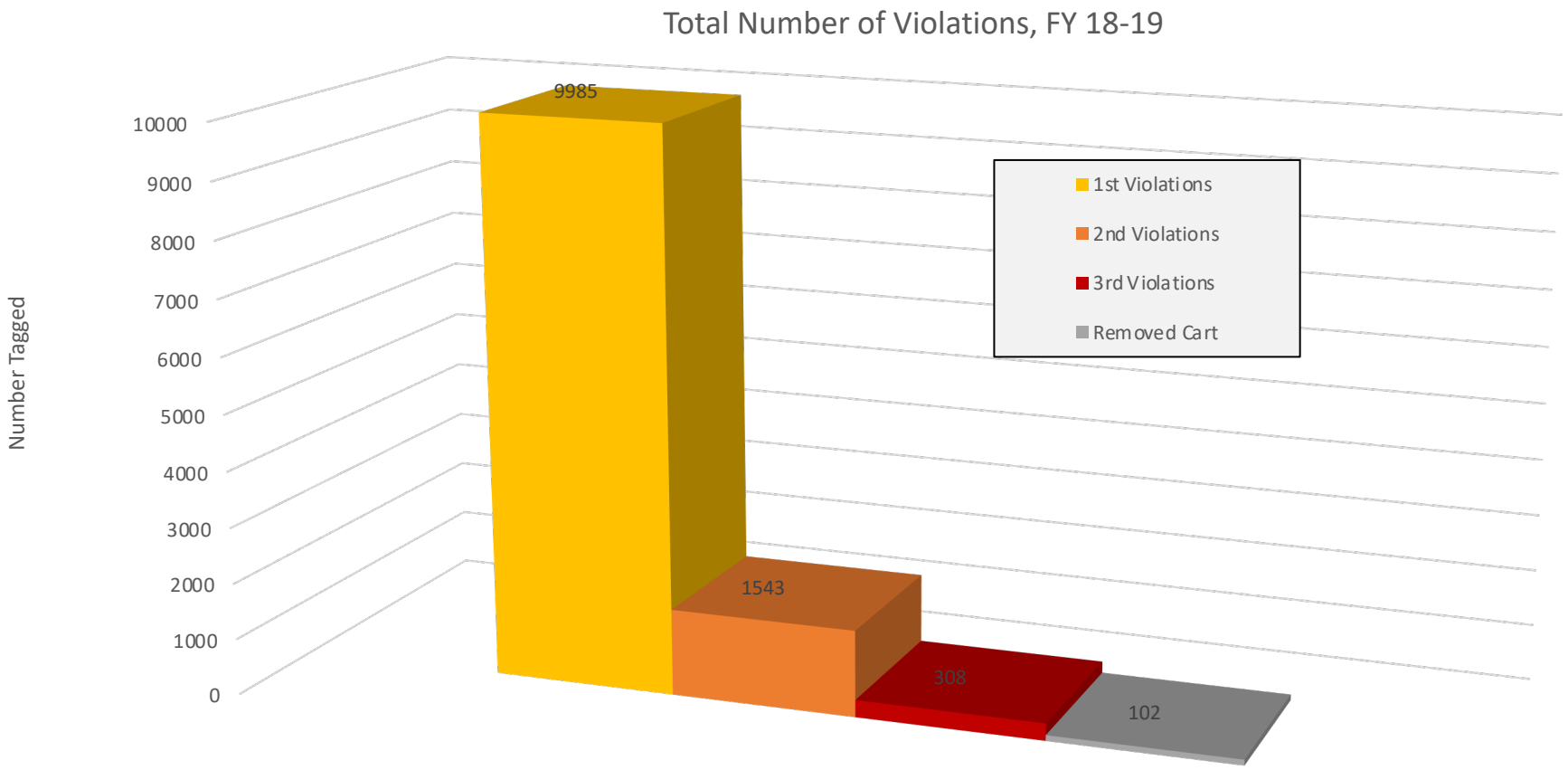
Tracking

Results



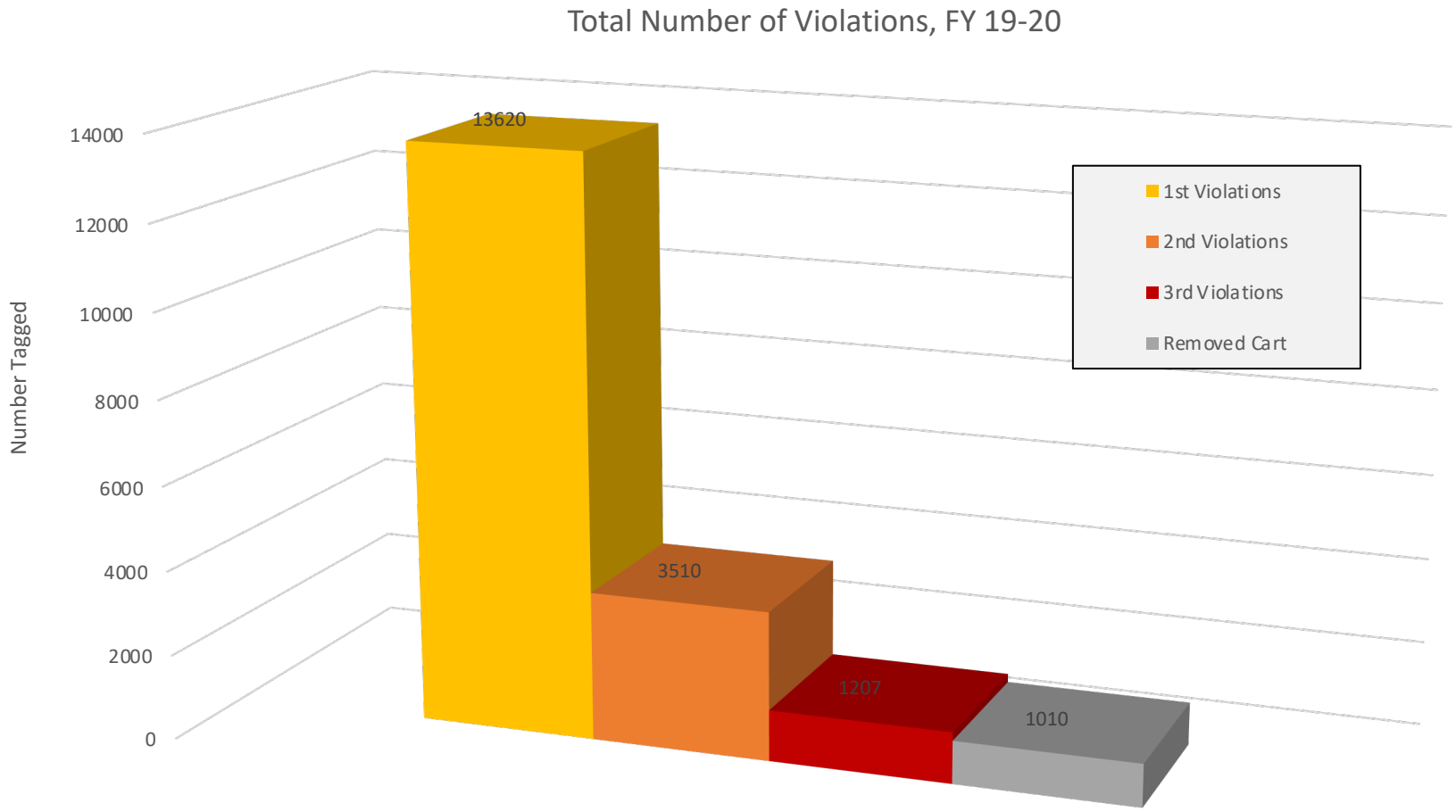
Tracking

Results



Tracking

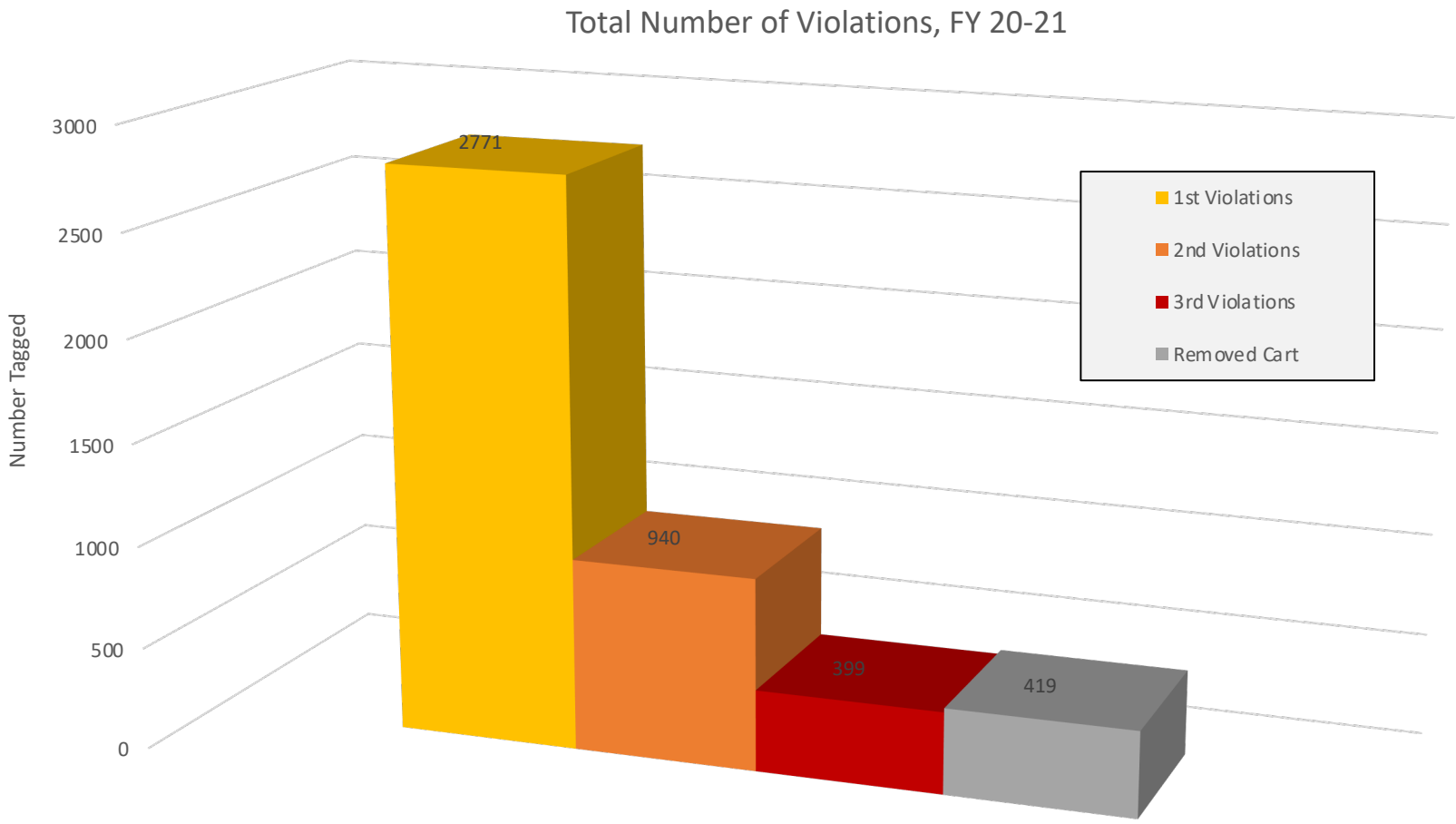
Results



*Number of carts tagged for removal isn't actually the number of carts we physically removed. Due to some staffing changes, we were unable to remove many carts this year. New staff, better results now.

Tracking

Results

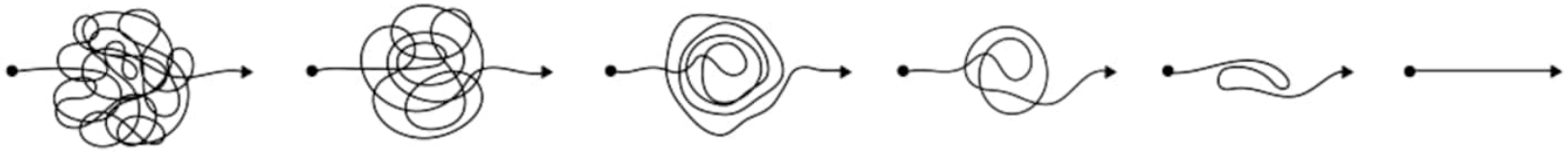


*Number of carts tagged for removal isn't actually the number of carts we physically removed. Due to some staffing changes, we were unable to remove many carts this year. New staff, better results now.

Next Steps

Moving Forward

Improve our current application data management or subscribe to a new app that has better workflow.



Hire another inspector… or several.

AUDIT!

We’re all in this bin together.

Audience Q&A

A recording of this webinar will be available afterwards.

Thank you!

Thank you for attending the webinar.

Be safe and be well!