



SOLID WASTE MANAGEMENT

CITY OF DURHAM

Using Digital Tools to Gain Program Efficiency
Carolina Recycling Association Conference | March 2023

About the City of Durham Solid Waste Management Department



- **Serve 80,000+ Households**
- **Weekly trash and subscription yard waste**
- **Every other week recycling**
- **Growing community: Adding about 100 households every month**



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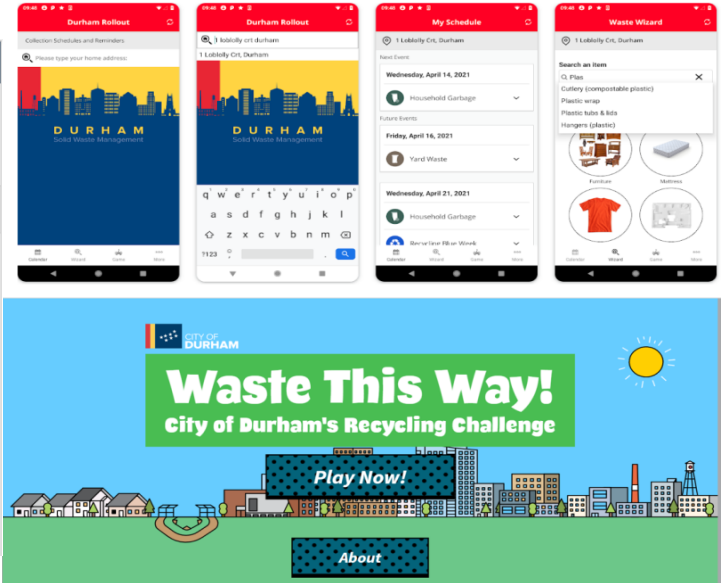
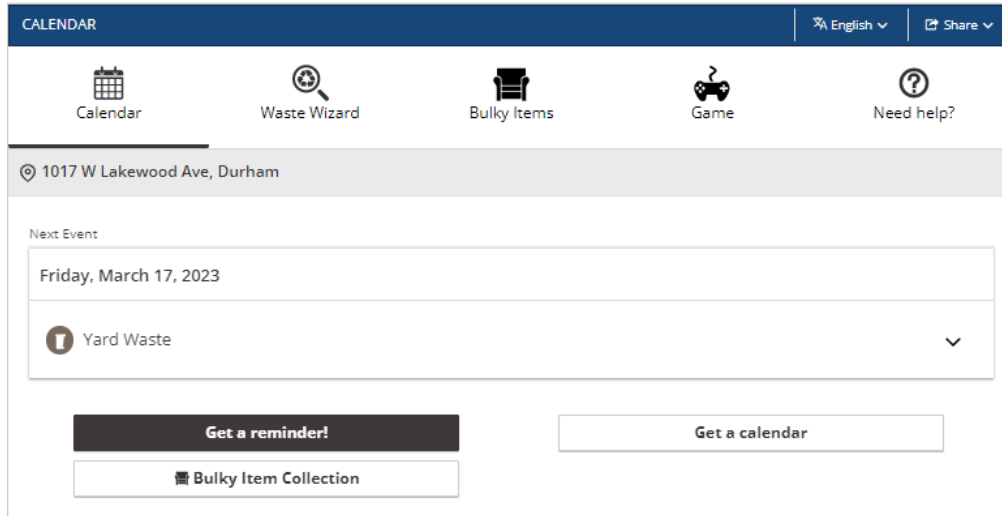
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Digital Tools



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Big Challenges, Silver Linings

- **2009 Great Recession**
 - Lost solid waste positions
 - Elimination of education position
 - Silver lining: Triggered building capacity and resilience with digital
- **2020 COVID-19 Pandemic**
 - Staffing issues around illness and quarantine
 - Collection changes and delays, “information-starved” customers
 - Silver lining: Helped drive adoption of digital communication tools



Calendar and Reminders

June 2023							Today	<	>
Sun	Mon	Tue	Wed	Thu	Fri	Sat			
28	29 ● Memorial Day	30	31	1	2 ● Garbage	3			
4	5 ● Yard Waste	6	7	8 ● Garbage ● Recycling Red W...	9 ● Yard Waste	10			
11	12	13	14	15 ● Garbage	16 ● Yard Waste	17			
18	19 ● Juneteenth	20	21	22	23 ● Garbage ● Recycling Red W...	24			



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Calendar and Reminders

- **Solid Waste implemented in 2017**
- **Replaced 'one size fits all' website calendars**
- **Features for residents include:**
 - Customized by address
 - Printable calendars
 - Sign up for reminders and service alerts
- **Features for SWM include:**
 - Make changes to collection days when necessary
 - Send out service alerts
 - Point residents to the tool to self-serve
 - Collect metrics easily





Calendar and Reminders


[←](#) **Get a reminder!**


How should we notify you?


Pick the reminder you'd like to receive. You can sign up for multiple reminders.


 Email [➤](#)

 Android or iOS App [➤](#)

 Phone Call [➤](#)




 Embed in Outlook, Google Calendar, iCal [➤](#)

 Print a Calendar [➤](#)








 Service alerts only [➤](#)

Reminder Stats

[About Analytics Data](#)

	223	<input checked="" type="checkbox"/>
Reminders created		
	28,073	<input checked="" type="checkbox"/>
Total reminders @ 2023-02-28		
	18,442	<input checked="" type="checkbox"/>
Addresses with reminders		
	23.1%	

Reminders Created

 3,715 Email	 0 Twitter	 144 Voice
 15,261 Mobile	 2,695 iCal	 5,000 Text Message
 1,383 Alert Only		



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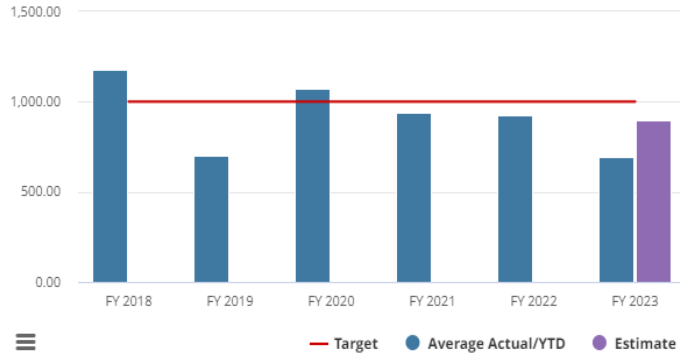
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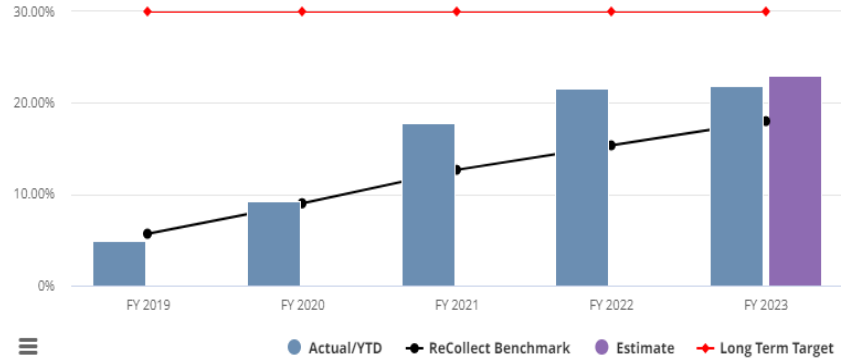
Calendar and Reminders

Annual: Average Monthly SW Calls Presented (Received)



Average Monthly Solid Waste Phone Calls

Percent of Households with ReCollect Reminders (Annual)



Households With Collection Reminders



Service Alerts

Current / Past Alerts

Show entries

Status	Delivery Date	Creator	Recipient	Message
 Sent	Jan 4, 2023 4:54pm	jim.reingruber	1 Zone  <ul style="list-style-type: none">yw206	We were unable to complete yard waste collections on your route today, but we will return Thursday to complete collections. View more 
 Sent	Dec 31, 2022 10:01am	jim.reingruber	2 Zones 	Good morning! This is just a reminder that garbage, recycling and yard waste are all happening on their normal schedules View more 
 Sent	Dec 27, 2022 10:27am	jim.reingruber	2 Zones 	Good morning! This is just a reminder that garbage, recycling and yard waste collections are all happening on their regular View more 
 Sent	Nov 28, 2022 5:08pm	jim.reingruber	2 Zones 	We were unable to complete yard waste collections on your route today, but we will return Tuesday to complete collections. View more 
 Sent	Nov 28, 2022 5:04pm	jim.reingruber	1 Zone 	We were unable to complete recycling collections on your route today, but we will return Tuesday to complete collections. View more 



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Waste Wizard


WASTE WIZARD


English


Share

Calendar

Waste Wizard

Bulky Items

Game


Need help?


1017 W Lakewood Ave, Durham


Type the name of a waste item and we'll tell you how to recycle or dispose of it.


Search

Popular Searches

Furniture

Textiles

Mattress

Battery (disposable)



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Waste Wizard

- **Solid Waste implemented in 2018**
- **Features for residents include:**
 - Ability to search for disposal instructions for specific materials
 - Suggest materials they are unable to locate in the wizard
- **Features for SWM include:**
 - Add or change disposal instructions for materials based on actual options and abilities
 - Customize messaging on specific items
 - Create consistency with 'answers' to questions
 - Point residents to the tool to self-serve
 - Collect metrics on most searched items



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Waste Wizard

Type the name of a waste item and we'll tell you how to recycle or dispose of it.

Search

Shredded paper

shredded plastic bottles

P paper to be shredded

paper shredder

Textiles



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Waste Wizard

← Textiles

Type an item



Residents can now bring their clothing and other textiles for free drop off at the **City's Waste Disposal and Recycling Center**, located at 2115 E Club Blvd., Monday through Friday from 7:30 am to 4 pm and Saturday from 7:30 am to 12 pm.

Best Option

Reuse



Many items don't need to be thrown away - they can be reused!

Donate items to reuse centres. Always call ahead to ensure the item can be donated. You can also "upcycle" the item into something new.

GCF Global (Garrett Road)

🚗 4.8 mi · 11 minutes

4318 Garrett Road, Durham, NC · 919-493-1182



Directions

GCF Global (Roxboro Road)

🚗 6.8 mi · 17 minutes

5267 North Roxboro Road, Duham, NC



Directions



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Waste Wizard

Suggested Materials	
	
<input type="checkbox"/>	Suggestion
<input type="checkbox"/>	paper with staples
<input type="checkbox"/>	plastic mailers
Showing 1 to 2 of 2 entries	

Views	Title
35628	beer bottle cap
23794	Furniture
19626	Mattress
12793	Christmas tree (natural)
11744	Textiles
11280	Styrofoam
7102	Television
6982	Corrugated cardboard
5982	Battery (disposable)
5595	Paint - latex (full or partially full)

Metrics




459,861

Material views




287,440

User sessions 



196,117

First-time visitors 



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Waste This Way Game



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Waste This Way Game

- **Solid Waste implemented in 2019**
- **Features for residents include:**
 - Fun way to test your knowledge
 - Earn little in-game prizes and a certificate
- **Features for SWM include:**
 - Fully customizable (that's Durham's skyline)
 - Fun little education for groups / schools
 - Collect metrics on items residents struggle with



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Waste This Way Game

▶ Material	▶ Total Guesses	▶ Correct Stream	▶ Incorrect Streams
Paper Coffee Cup	3064	Garbage: 1,483 (48%)	Incorrect: 1,581 (52%) Recycling - Commingled: 1,059 (35%) Backyard Compost: 395 (13%) Yard Waste: 111 (4%) Drop off - Waste Disposal and Recycling Center: 16 (1%)
Shredded Paper	2178	Garbage: 875 (40%)	Incorrect: 1,303 (60%) Recycling - Commingled: 678 (32%) Backyard Compost: 308 (15%) Yard Waste: 164 (8%) Drop off - Waste Disposal and Recycling Center: 153 (8%)
Motor Oil	2575	Drop off - Waste Disposal and Recycling Center: 1,442 (56%)	Incorrect: 1,133 (44%) Garbage: 434 (17%) Recycling - Commingled: 286 (12%) Yard Waste: 208 (9%) Backyard Compost: 205 (8%)
Clothes	2019	Drop off - Waste Disposal and Recycling Center: 902 (44%)	Incorrect: 1,117 (56%) Garbage: 513 (26%) Recycling - Commingled: 308 (16%) Backyard Compost: 176 (9%) Yard Waste: 120 (6%)



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Bulky Item Scheduling



Bulky Item Collection

What would you like collected?

One collection per week of up to 3 bulky items is free of charge. Requests for more than 3 items at a time will incur charges. If you request more than 3 items, we will contact you to discuss payment. **Items must be set out at the curb and well clear of any obstructions** (mailboxes, parked cars, fences, poles, trees, and anything else of value). We are not able to collect in alleys. If you have questions, please email: bulkyservices@durhamnc.gov or visit durhamnc.gov/OneCall to place other types of service requests.

► Furniture

▼ Appliances



Dishwasher
Dishwasher appliance

− 0 +



Dryer
Dryer appliance

− 0 +



Microwave Oven

− 0 +



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Bulky Item Scheduling

- **Solid Waste implemented in 2022**
- **Features for residents include:**
 - Self-serve to schedule a bulky item pickup
 - Receive reminders and instructions for upcoming service
- **Features for SWM include:**
 - Schedule availability based on resources and set customer expectations
 - More easily communicate with residents
 - Greater accountability from residents for following rules
 - Point residents to the tool to self-serve
 - Collect better data and information about items from residents
 - Integrated with service request system (CityWorks)
 - Residents will more readily cancel if warranted saving empty trips



Bulky Item Scheduling

BULKY ITEM COLLECTION

English

Calendar

Waste Wizard

Bulky Items

Game

Need help?

3025 Hope Valley Rd, Durham

←

Bulky Item Collection

What would you like collected?

One collection per week of up to 3 bulky items is free of charge. Requests for more than 3 items at a time will incur charges. If you request more than 3 items, we will contact you to discuss payment. Items must be set out at the curb and well clear of any obstructions (mailboxes, parked cars, fences, poles, trees, and anything else of value). If you have questions, please email: bulkyservices@durhamnc.gov or visit durhamnc.gov/OneCall to place other types of service requests.

▼ Furniture

Bed Frame

Bed frame

− 0 +

Bookcase/shelves

Bookcase or bookshelves

− 0 +

Box Spring

Box Spring for Mattress

− 0 +

3025 Hope Valley Rd, Durham

←

Choose date

Select a date

Wednesday, August 31, 2022 >

Thursday, September 1, 2022 >

Friday, September 2, 2022 >

Thursday, September 8, 2022 >

Friday, September 9, 2022 >

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Bulky Item Scheduling

Metrics

 **20,590**
Requests Created

 **19,932**
Confirmed Requests

 **909**
Cancelled Requests

 **39,123**
Requested Items


 **12,982**
Addresses With Requests

Top Requested Items

Top Ca

1. Other (6147)
2. Chair (5827)
3. Mattress (4497)
4. Sofa / Loveseat (3649)
5. Table / Desk (2969)
6. Box Spring (2399)
7. Bed Frame (1872)
8. Dresser / Armoire (1812)
9. Other Furniture (1754)
10. Bookcase/shelves (1295)

List of Requests

 Dispatch Report

When	Where / Who	What
Created: 2023-03-17, 4:34 PM Scheduled slot: Tue, Mar 21, 2023	[REDACTED] [REDACTED] [REDACTED]	<ul style="list-style-type: none">• Vacuum Cleaner (2)
Created: 2023-03-17, 4:18 PM Scheduled slot: Wed, Mar 22, 2023	[REDACTED] [REDACTED] [REDACTED]	<ul style="list-style-type: none">• Dresser / Armoire (2)• Mattress
Created: 2023-03-17, 4:18 PM Scheduled slot: Tue, Mar 21, 2023	[REDACTED] [REDACTED] [REDACTED]	<ul style="list-style-type: none">• Table / Desk• Box Spring• Dresser / Armoire



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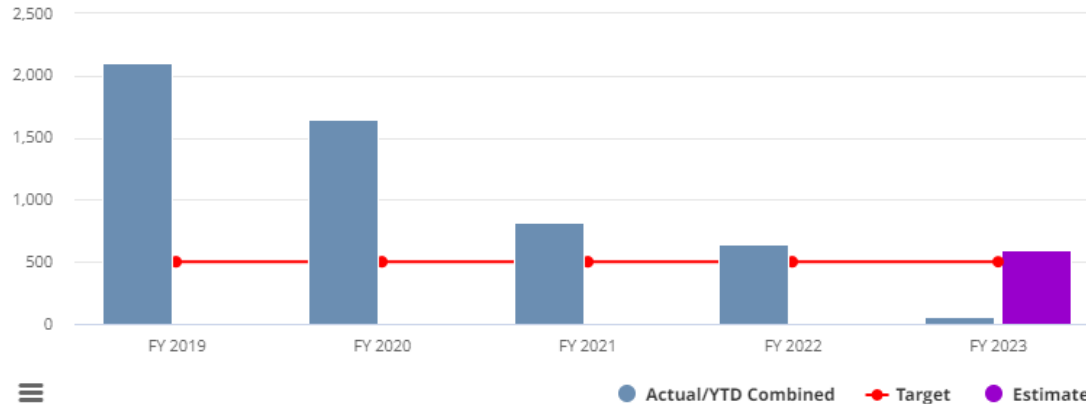
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Bulky Item Scheduling

Reopened Plus Missed Bulky Requests Annual



Reopened/Missed Bulky Collections



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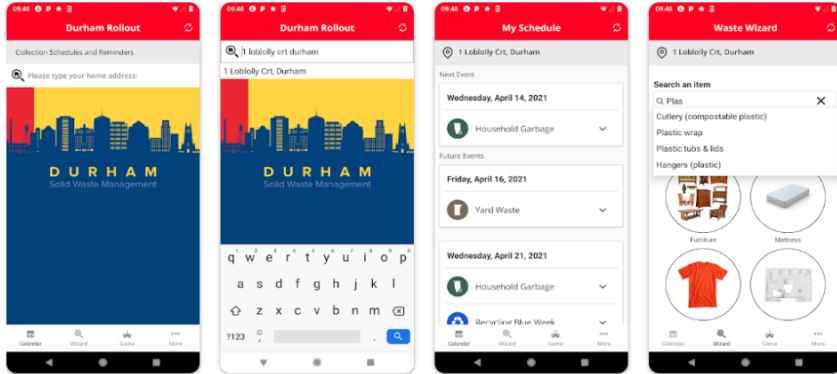
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Mobile App (Durham Rollout)



4.9



446 reviews



Maureen Kurtz

★★★★★ June 14, 2022

I like the reminders to put out trash. Also have received special notices of early pickups (during heat wave to protect workers) and delayed pickups due to holidays. There are also helpful sections on how to dispose of unusual items.



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Mobile App (Durham Rollout)

- **Solid Waste implemented in 2018**
- **Features for residents include:**
 - Can do everything that the web tool can including:
 - Check calendar and sign up for reminders and alerts (including push)
 - Schedule a bulky item pickup
 - Lookup items in the Waste Wizard
 - Play the Waste This Way game
 - Works with IOS and Android
- **Features for SWM include:**
 - Offer residents opportunity to use technology they want to use
 - Cut down on phone calls / staff resources



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Questions?



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