

IMPACT STORY

KALAMAZOO, MICHIGAN

Catalyzing Recycling System Change Data-Driven Action, Community-Wide Results

Kalamazoo runs an opt-in, every-other-week curbside recycling program with 96-gallon carts. In 2022, the city partnered with The Recycling Partnership, national leaders in transforming local recycling systems, with grant funding from the Michigan Department of Environment, Great Lakes, and Energy (MI EGLE) of over \$379,000 through three years of collaboration.

The initial goal: reduce contamination.

A Feet on the Street cart tagging project revealed the scale of the participation challenge. **Only 33% of enrolled households set out their cart at least once in 30 days.** It confirmed what The Partnership sees nationwide: recycling access alone isn't enough to ensure high participation. Building a better recycling system requires data, design, and targeted education and outreach.

From there, the work evolved. Each phase brought new insights, and with every dataset, Kalamazoo and The Partnership adapted, broadening efforts to cut contamination, standardize infrastructure, and engage residents across both single-family and multi-family households.

What began as a participation challenge grew into a system-wide transformation, designed not just to recycle more, but to build a stronger, scalable model for the future.

Strengthening Infrastructure

In 2024, the city replaced 161 non-standard carts with official ones, delivered welcome packets with clear education, and, through a 2025 opt-in campaign, **added 198 new households to the program.**

Boosting Participation

In 2024, smart cameras tracked recycling set-outs and contamination over eight weeks. Paired with in-home bins and behavior-based feedback mailers, the effort re-engaged “no-set-out” households. The city saw **40.8% of previously inactive households began recycling.** A follow-up in 2025 delivered additional bins to households participating less than 50% of the time.

Cutting Contamination

Smart cameras captured images of contaminants, and households received direct feedback mailers with those images. This real-time communication proved to be a powerful tool to improve recycling habits. And **47% of households contaminated less often.**

Expanding Multifamily Recycling

By 2025, **57 properties and nearly 4,900 households were engaged, adding 100 tons of recyclables in 2024 alone.** Property managers, residents, and city staff worked together to expand capacity and improve access.

What began as a push to clean up the recycling stream became a citywide transformation. Guided by data and grounded in community needs, Kalamazoo and The Recycling Partnership expanded access, clarified the rules, and equipped residents with the tools to recycle right, all while reaching a wider audience across the city.

This isn't just more recycling.

It's a smarter, scalable system delivering measurable impact. Cleaner streams, stronger infrastructure, and a community empowered to keep pushing forward: proof of what's possible when local commitment and national expertise move as one.



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Catalyzing Recycling System Change Improving Infrastructure in Single-Family Curbside

Access and clarity are key to a sustainable, equitable recycling system. When all households participate, communities reduce landfill waste, conserve resources, and support a circular economy. That's why Kalamazoo, with funding from [MI EGLE](#) and support from The Recycling Partnership, launched multiple projects over two years aimed at strengthening the infrastructure of its single-family curbside recycling program.

From late 2023 through the summer of 2025, the efforts addressed two core challenges: **recycler confidence** and **program opt-in**. This is where data, design, and behavior-based messaging come together. The infrastructure improvements included three interconnected strategies:

- 1 Cart color standardization
- 2 Educational welcome packets
- 3 Business reply opt-in mailer campaign

Cart Color Standardization

While gathering baseline data for a participation project, smart cameras on the trucks also flagged addresses with recycling carts that didn't conform to the city's standard colors - dark blue carts with light blue lids. But carts in various colors had been distributed, likely causing confusion on collection days. These mismatched carts were replaced.

Educational Welcome Packets

Early, consistent education is key to successful recycling. When residents begin recycling, they should immediately receive clear, accessible information to help them recycle correctly and confidently. To support this, The Recycling Partnership helped Kalamazoo create a welcome packet for all future cart deliveries, including:

Info Card

These fridge clings include imagery and descriptions of the accepted materials and top contaminants in the recycling program.

Welcome Letter and FAQ

A welcome letter with a list of frequently asked questions provides new recyclers with education about how to successfully participate in the program.

Business Reply Opt-In Mailer Campaign

The Recycling Partnership assisted Kalamazoo with the design of a business reply mailer (BRM) encouraging households (HHs) without recycling service to opt in. The mailer included several ways to enroll, including by phone, website, QR code scan, or the return mailer. In seven weeks, 198 responses were received, representing 3.4% of households who were not yet opted in. While BRMs are more effective than other tested methods, the low response rate highlights the difficulty of increasing opt in subscription.



Key Impacts

- 161 non-standard recycling carts replaced
- New educational **welcome packet** created
- 198 new recycling HHs after mailing campaign

Conclusion

This initiative marks a strategic shift from recycling as a stand-alone task to building scalable systems designed for measurable impact. By integrating technology, outreach, and education, Kalamazoo strengthened its program infrastructure, expanding access and clarifying how residents can take part.

These coordinated efforts streamlined recycling operations while equipping residents with the knowledge and tools to participate confidently and correctly, creating a stronger, more sustainable system for the community.

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KALAMAZOO, MICHIGAN

Catalyzing Recycling System Change Boosting Participation in Single-Family Curbside

Household participation is essential to the success of local recycling programs. That's why Kalamazoo, with funding from MI EGLE and support from The Recycling Partnership, launched a multifaceted education and engagement campaign to strengthen participation in the single-family curbside recycling program.

In 2022, Kalamazoo partnered with The Recycling Partnership for a Feet on the Street cart tagging initiative, which revealed that only 33% of households enrolled in the city's opt-in recycling program were actively participating—much lower than expected. To address this, beginning late 2023 through 2025, the city launched projects aimed at **re-engaging households** that had stopped setting out their recycling carts (“no set out”) and motivating current participants to **recycle more consistently**.



Chris Broadbent, City Solid Waste Coordinator for Kalamazoo

Measurement

Smart cameras installed on the recycling truck collected data over an initial eight-week period to understand how often households put out their recycling carts and how frequently those carts were contaminated. After new strategies were introduced, another eight weeks of data were gathered to track any changes in household recycling habits.

Education & Outreach

Utilizing the baseline data gathered, The Recycling Partnership helped Kalamazoo implement a behavior change project modeled after a promising pilot in Cincinnati, Ohio, based on how often households set out for recycling.

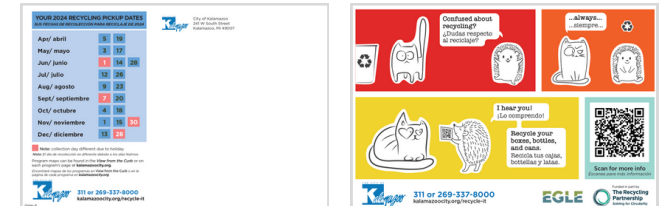
Group 1: No Set Out Households

Households with a cart that did not set out for recycling in the baseline period received an in-home bin containing educational materials.

Groups 1 & 2: All Households with Cart

All households with a cart, regardless of set out group, received four mailers one month apart.

- Mailers 1 and 2 - accepted materials, top contaminants, and the household's collection dates
- Mailer 3 - empathetic, motivational message featuring the character, Bertie
- Mailer 4 - empathetic, motivational message featuring the characters Confused Cat and Helpful Hedgehog



Key Impacts

- **40.8%** of “non-set out” households who received an in-home bin **started recycling again**. A big behavior shift!
- **63.8%** of “low set-out” households and **59.4%** of “high set-out” **started recycling more often**.

Conclusion

After successful results from this Jan. - Sept. 2024 project, additional in-home bins were delivered to households who set out less than 50% of the time in a second project in 2025. Stay tuned for results!

This initiative represents a strategic shift from recycling as an isolated activity to the development of scalable systems that generate measurable impact. Through the integration of technology, behavioral research, and community insights, Kalamazoo is establishing a strategic and effective framework for recycling improvements.

IMPACT STORY

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Catalyzing Recycling System Change Cutting Contamination in Single-Family Curbside

Delivering access to recycling is only the beginning. For the recycling system to work, residents need to actively and correctly participate. That's why Kalamazoo, with funding from [MI EGLE](#) and support from The Recycling Partnership, launched a contamination reduction project aimed at cleaning up the recycling stream.

Non-recyclable items placed in recycling carts can drive up program costs and create safety concerns at the processing facility. This is where data, design, and behavior-based messaging come together.

Measurement

This 2025 contamination reduction project followed a participation project in 2024, where smart cameras installed on the recycling truck collected data over eight-week periods to understand how often households put out their recycling carts and how frequently those carts are contaminated before and after the project. Upon reviewing the post-project data collected in late 2024, the team determined a contamination-specific feedback mailer effort could help to further drive down non-accepted materials placed in recycling carts.

After the mailing campaign was completed, another eight weeks of data was gathered to track the changes in household recycling habits.

Education and Outreach

Using baseline data and lessons from an [East Lansing, Michigan](#) pilot, The Recycling Partnership helped Kalamazoo implement a contamination-focused behavior change project. Supported by a press release and mailers to all single-family households that provided information about accepted materials, top contaminants, and future feedback mailer campaign.

Feedback Mailers

Smart cameras mounted on trucks photograph cart contents as they are emptied, tagging each image to a household address. If contaminants are detected, the system flags the photo and sends it to a printer, which generates a feedback mailer sent to the resident. Each mailer shows the photo with contaminants outlined in red with a title of what contaminant was spotted, while the rest of the photo is blurred for privacy.

The feedback mailers combine two interconnected messaging strategies:

- ① Direct feedback
- ② Empathetic messaging

Direct feedback, showing residents exactly what they placed in their carts, builds on proven cart tagging strategies. Paired with empathetic messaging that acknowledges their effort and offers support, creating a balanced approach that educates and builds trust.



Key Impact

- 54% decrease in contamination occurrence rate
- 20% set out rate increase

Conclusion

This project yielded valuable insights into resident behavior—showing that feedback mailers with real-time images of contamination, taken from cameras in trucks, can be an effective method of providing direct feedback.

This initiative marks a transition from viewing recycling as a standalone effort to building scalable systems that deliver measurable results. By combining advanced technology, behavioral research, and household insights, Kalamazoo is creating a smarter, more efficient recycling system.

IMPACT STORY

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Catalyzing Recycling System Change Expanding Access and Education in Multi-Family

Access and clarity are key to a sustainable, equitable recycling system. When all residents participate, communities reduce landfill waste, conserve resources, and support a circular economy. With funding from [MI EGLE](#) and support from The Recycling Partnership, Kalamazoo launched a multi-year multifamily project to expand participation and capacity.

Funded through a solid waste millage, the city provides many container sizes and collection schedules for multifamily properties that opt in. To bolster equitable service, the program focused on enlisting new properties and improving recycling capacity. Properties with new and existing services received two forms of education and outreach.

Education: Recycling Area Signs

Three sign formats highlighting accepted materials and top contaminants were placed inside properties, on containers as stickers, and near exterior collection zones as free-standing signs.

🔍 Access & Reach Impacts

- 57 properties benefited
- 4,888 households reached
- 11 properties with **new recycling services**
- 5 properties with **increased capacity**

Education: Door-to-Door Engagement

The Recycling Partnership assisted Kalamazoo with the design and procurement of in-home educational kits that including the following materials:

♻️ Tote Bags with Educational Materials

Tote bags were delivered to each household that included accepted materials, top contaminants, and directions on how to use the bag to collect recyclables and then empty them into the shared container on site. The bags were designed with contact information and a handle on the bottom of the bag for easy emptying of recyclables into the shared container. Inside each bag was an FAQ document with information about what and how to recycle, and a fridge cling info card showing accepted materials and top contaminants.

💡 Door Hangers

Three door hangers were then delivered in two-week intervals to provide educational nudges. All door hangers included accepted material imagery on the front side with three different messages on the back:

- FAQ imagery of how to use the tote bag
- a top issue message to keep recyclables loose in the container, and
- an empathetic, motivational message featuring the Confused Cat and Helpful Hedgehog pointing to resources for questions.



🔍 Education Impacts

- 4,883 households received education
- 10+ properties with new recycling signs
- 100 new recycling tons from 2023 to 2024

Conclusion

Multifamily recycling takes teamwork with municipalities, property managers, and residents working together. By combining access, capacity, and education, Kalamazoo is building a more effective, inclusive program.