

Mill + Phoenix Partnership



Executive Summary

To advance Phoenix's zero waste goals, the City partnered with Mill and local composter R.City to pilot an innovative, resident-friendly food recycling model across municipal buildings and homes. Launched in 2025, the program addressed key barriers to traditional organics collection while delivering strong participation and impact, exceeding all programmatic goals.

The residential pilot enrolled over 2,900 households and diverted over 440 tons of food waste, avoiding over 950 tons of CO₂ emissions. In municipal buildings, the City doubled food recovery as compared to the prior year. Together this data demonstrates a scalable, cost-effective pathway to significantly increase food waste diversion citywide.

The Challenge

With an ambitious goal of achieving fifty percent waste diversion by 2030 and zero waste by 2050, the City of Phoenix is constantly seeking new solutions to turn waste into resources. The City's Solid Waste utility provides curbside solid waste, recycling, and yard waste services for Phoenix residents; however, there is no resident curbside program for food scraps.



Key Results

- With nearly 3,000 participants, Mill x R.City surpassed the pilot's participation goal, proving Phoenix residents, community orgs, and city government are ready and eager to tackle food waste head-on.
- With food recyclers, the program is capturing nearly all participating household food scraps (0.92 lbs p/hh) maximizing impact.
- The Mill x R.City service delivered outsized environmental impact, keeping 441 tons of food from landfill and helping the city avoid 957 tons of CO₂ emissions.

In Phoenix, wasted food makes up an estimated 14% of material going to landfill, where it decomposes and produces methane, a greenhouse gas 80x more potent than carbon dioxide. In addition to the environmental implications, food waste represents a major economic issue. At a household level, ReFED estimates Americans nationwide throw out more than \$3,000 worth of groceries each year. Zooming out, in the state of Arizona an estimated \$9.5 billion in wasted food ends up in the landfill.

Phoenix's challenge in establishing a curbside food waste collection program is tied to the costly expansion and operations required to launch this offering for residents within the 517 square miles the city services. This is a common barrier other U.S. cities of varying sizes face, alongside struggles with low participation and contamination as well as failure to address the 'ick factor' that impacts consistent resident engagement.

The Partnership

In partnership with a Phoenix-based community composter R.City, Mill offers an innovative local loop service which includes Mill's food recycler, monthly R.City Food Grounds pick-ups, and seasonal Farm Boxes delivered by R.City to residents from its local farm. The service addresses the traditional participation barriers to food waste separation including the 'ick factor' while also connecting participants directly to the impact, including local farms & food systems.

In 2025, the City of Phoenix's Zero Waste team formally announced a collaboration with Mill x R.City for a food recycling program in both city buildings and residential homes. For city buildings, Mill won an RFQ for collecting food scraps for city buildings. Twenty seven Mill food recyclers were installed across two city buildings, including City Hall, where food scrap collection was already offered. The goal was to evaluate the impact on participation. All Food Grounds were picked up by R.City to enrich local soil and grow fresh, seasonal produce for the Phoenix community.

For Phoenix residents, Mill x R.City entered into a Memorandum of Understanding with Phoenix's Zero Waste team to deliver and assess the impact of an innovative food recycling program. Mill registered as a Phoenix Zero Waste Business and the Zero Waste team co-promoted the service to residents through various channels including newsletters, social media, and bill inserts. Throughout the year, Mill provided aggregated, anonymized participation and diversion data. Specifically the pilot sought to:

1. Assess resident interest & satisfaction with the food recycling service with a goal of 2,500 households participating by EOY
2. Measure the environmental impact, especially on a household basis with a goal of 0.75 lbs of food scraps diverted per participating household
3. Evaluate the potential for a broader program

Mill utilized two main data sets for evaluating impact: Mill's built in scale and sensors which provide real-time insights around engagement and impact and resident surveys.



Results and Impact

In 2025, the City diverted over 5,860 pounds of food scraps from City Hall and a neighboring building. On average, 0.61 lbs of food scraps were added daily to each device in line with Mill's national data on Mill's use in office settings. This represents a notable doubling in food scraps recovered when compared to data from the previous year, highlighting how Mill helps expand participation and engagement in office settings.

On the residential side, the City and Mill exceeded the pilot goals, enrolling over 2,900 households across Phoenix by the end of 2025. Collectively, Phoenix residents diverted over 440 tons of food waste in 2025 with participating households adding an average of 0.92 pounds of food scraps to their Mill per day. This household diversion metric aligns with Mill's national benchmark. From an environmental perspective, the City avoided 957 tons of CO₂ emissions: equivalent to 2.4 million miles driven by a gasoline-powered passenger vehicle or one million pounds of burned coal.

The service also enabled efficient collection. With a monthly pickup of pre-processed food grounds, R.City was able to service up to four times more customers with their existing vehicle fleet, reducing the number of heavy duty trucks on the road and associated wear and tear and emissions. As part of the local loop, nearly 2,000 farm boxes were delivered to Phoenix residents, directly connecting households to local agriculture and reinforcing food as a valuable resource.

2,906

household
participants

0.92 lbs

diverted per
household per day

441

tons of food scraps
diverted in 2025

957

tons of CO₂
emissions avoided

Resident engagement was exceptionally strong: 98% of surveyed participants reported that all or most of their food scraps went into the Mill. Survey participants also reported tangible quality-of-life benefits, including fewer kitchen odors (82%) and less frequent trips to take out the trash (87%). Residents rated the service exceedingly positively and noted that they were interested in the City providing more programs to keep food from landfill (97%).

98% of surveyed respondents reported all or most of their food scraps went into the Mill.

“We love Mill, it’s such an easy way to make a difference to the amount of waste our family sends to landfills and as an extra bonus we have to take out the trash WAY less often.”

“I have used weekly curbside compost pickup in another city before moving to Phoenix. It was really tough. It smelled terrible in the curbside can all summer and it was slimy and moldy in the bottom of the can. The Mill solved all of these problems!”

“We love the mill, it is so great to turn all our food scraps into something productive for the sustainability of our Phoenix community. I wish everyone had a mill!”



Conclusion

The results of this year-long pilot demonstrate the scalability and potential impact of a food recycling service in both residential and municipal office settings. Benefits of this unique model include:

- Addressing key behavioral barriers to participation
- Increasing capture rate of food waste at a household and office level
- High resident satisfaction with service
- Reducing heavy duty trucks on the road
- Connecting residents with local food systems
- Enabling flexible output pathways given Food Grounds shelf-stable, dehydrated state
- Capturing both quantitative and qualitative data to measure program success

Expanding Mill-powered food recycling to approximately 25% of single-family households could divert over 18,000 additional tons of food annually—closing more than one-third of the City’s remaining diversion gap toward its 2030 goals. Compared to traditional collection operations, the Mill x R.City model offers meaningful cost savings while delivering environmental, operational, and community-wide benefits. The City of Phoenix and Mill see significant opportunities to scale this model in residential, school, and city building settings.

¹ Cascadia Consulting Group, City of Phoenix 2017–2018 Residential Waste Characterization Study (2018). [phoenix.gov](https://www.phoenix.gov)

² UN Environment Programme, "Methane Emissions Are Driving Climate Change" (2021). [unep.org](https://www.unep.org)

³ ReFED, "Looking Ahead: Our 2025 Food Waste Forecast" (Jan. 2025). [refed.org](https://www.refed.org)

⁴ Waste Not AZ, "Impact." [wastenotaz.org](https://www.wastenotaz.org)