



Unlocking Non-Bottle PET Recycling in North Carolina's Largest City

Mecklenburg County, North Carolina: Case Study

With a growing population and aging equipment, leaders in Mecklenburg County, North Carolina had pushed its MRF as far as it could go. In 2022, the county approved a \$25.7 million retrofit to its existing MRF, a project set to begin in 2025 which includes a major expansion of the facility's plastic sorting capabilities.

A grant by the Coalition is supporting a new optical sorter, conveyors, and other equipment, which will enable the facility to capture nearly five million more pounds of PET bottles each year and introduce non-bottle PET recycling to the county for the first time. The Coalition is also supporting an education and outreach campaign so that residents know about the new types of PET the MRF will recycle.



Data from The Recycling Partnership shows most non-bottles in the residential PET recycling stream are clamshell containers for produce such as berries.



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EDUCATION IS THE HARDEST THING WE DO. I'M REALLY LOOKING FORWARD TO SOME OF THE OUTREACH WE'RE PLANNING WITH THE PARTNERSHIP.

JOE HACK

Senior Project Manager, Mecklenburg County

Mecklenburg, which includes the city of Charlotte, [ranks no. 11](#) among 100 North Carolina counties in household recycling recovery per capita and no. 3 among the largest communities in the county that do not accept non-bottle PET for recycling. In 2022, the city's MRF was serving a growing base of more than one million people with equipment that was more than 15 years old and failing.

The county has been relying on two optical sorters—with human support—to recycle PET and other plastics. The [curbside recycling guidance](#) for residents specify “plastic containers with necks,” a limitation imposed mostly by old technology and human sorters.



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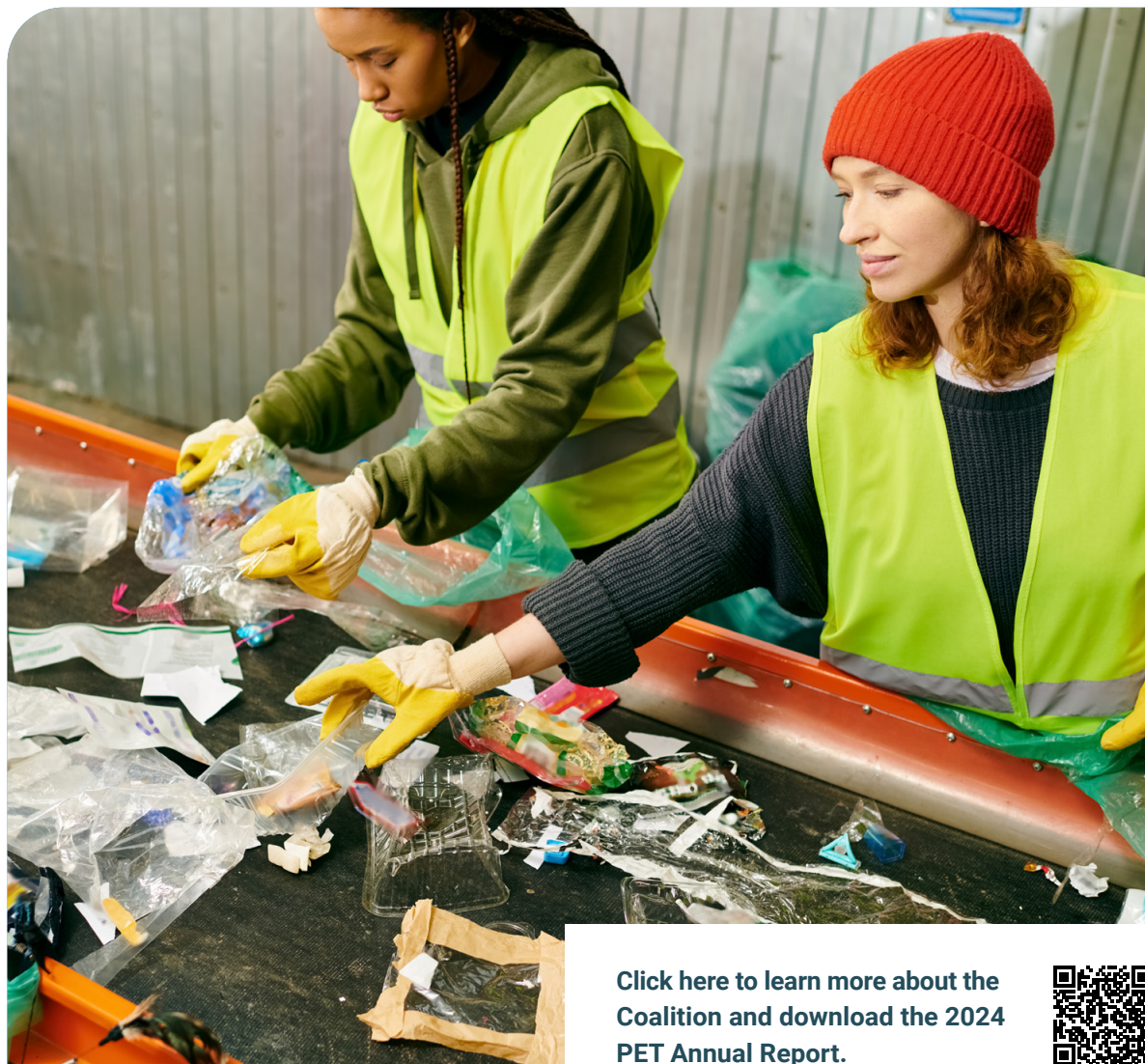
“With our old equipment, people had to visually qualify if something was recyclable or not, and that can result in errors and contaminated recycling. We’ve been limited to food and beverage containers where the mouth is smaller than the bottle,” said Joe Hack, Senior Project Manager for the county. “Optical sorters do not care as much about the shape of the container as humans do. By going with optical sorters, we’re hoping to add containers of different sizes and shapes so we can capture more PET.”

The new MRF will have 16 optical sorters, including two entirely dedicated to PET. The upgraded facility will be able to capture 5.6 million pounds more PET per year than the existing one. Aside from more efficient operations, the equipment will also separate PET by type: bottles will be sorted into one stream, and non-bottle PET will be sorted together with pigmented and opaque PET in a second stream, providing specialized feedstocks for reclaimers in the region.

“What every MRF wants is to maintain a certain level of recovery of recyclable materials and a certain level of purity in the bales they send out to market so they can get the highest value. The optical sorter funded by the Coalition will assist in both of those aspects.”

Martin Sanford

Mecklenburg County Project Manager



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