



Written Statement for the Record

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Chairman Carper, Ranking Member Capito, and members of the Committee, I appreciate the opportunity to speak with you today about the circular economy in North Carolina and, specifically, about how we've utilized funding from the Infrastructure Investment and Jobs Act (IIJA) to further our recycling efforts.

These investments represent the most significant federal funding for recycling to states in decades. Investing in recycling is a universal issue, evidenced by the fact that all states, territories, and the District opted into the Solid Waste Infrastructure for Recycling (SWIFR) grant program authorized by the Save Our Seas 2.0 Act and funded through IIJA.¹ As the president of the Environmental Council of the States, I can tell you that sustainable materials management is on the minds of many of my colleagues— in fact, advancing the circular economy is one of our organizational priorities for this year.

It is critical that all states are at the table. This is an issue that is increasingly complex, as we are all grappling with challenging waste streams, such as lithium-ion batteries, and aging— and sometimes insufficient— recycling infrastructure.

Today, I'll explore how North Carolina is using the investments from IIJA to advance our circular economy and how building state capacity is critical to addressing needs in our infrastructure, developing end markets, and furthering resident education.

In North Carolina, we often say that a healthy economy and a healthy environment go hand in hand. In order to make this a reality, we need a foundation of good data on which to make smart and strategic investments. Recycling data is difficult to come by, due to the complexity of tracking the waste stream, the inherently local nature of recycling, and a lack of state resources to track and compile necessary information.

While we are excited to see direct infrastructure investments through SWIFR in cities such as Durham, North Carolina, which received funding to renovate and re-design a drop-off station serving historically disadvantaged neighborhoods, the majority of funding to states is going to data collection efforts and the development — in some cases for the first time ever — of solid waste management plans.

At the North Carolina Department of Environmental Quality (NCDEQ), we are using the approximately \$600,000 we received in SWIFR funding to conduct a statewide materials management optimization study. Currently, we rely on an annual survey of local governments to gather statewide data on recycling. The study we are conducting will include a statewide waste characterization study, market assessments for key commodities, a gap analysis of material

¹ *Solid Waste Infrastructure for Recycling Grant Program*, US Environmental Protection Agency, 2023, <https://www.epa.gov/infrastructure/solid-waste-infrastructure-recycling-grant-program>.

recovery facility (MRF) capacity and effectiveness, and a recycling hub-and-spoke infrastructure assessment to address capacity in rural areas of our state.

This data will enable us to make smart, strategic decisions about where to invest resources in order to maximize the return on investment for the circular economy.

This is critical because the conversation around recycling is different today than it was when I was here in 2021 to discuss our efforts to advance the circular economy. Traditionally, we tend to see policy initiatives and investment efforts to divert materials from landfills in Northeastern states, where land is scarcer and there are fewer options for cost-effective landfill disposal. States like mine have traditionally not been worried about running out of landfill capacity, and therefore the discussion around the circular economy has been more about creating jobs and economic investment than the cost of landfill disposal or space constraints.

Now, we're seeing the conversation begin to shift. While job creation is still a focus, the need to extend the lifespan of existing landfills is also becoming a bigger focus. In North Carolina, our two largest, regional landfills – which, together, accept approximately 25 percent of our state's waste – are approaching capacity within the next decade.²

This comes at a time when our state is growing. North Carolina is now the ninth-most populous state in the country, and we are proud to have been named the number one state in the country for doing business by CNBC for the second year in a row.³ We're beginning to talk about solid waste capacity in the same way we talk about water infrastructure – in order to continue to support the level of growth we're experiencing, we need to think proactively about our solid waste infrastructure.

That conversation can't just be about finding more landfill space. Boosting our recycling efforts will ensure that end-of-life materials feed our economy, creating jobs and economic investment, and creating manufacturing feedstock for local industries. In fact, 15,700 North Carolinians are directly employed by the over 550 recycling businesses in our state.⁴ As we continue to make strategic, data-driven investments in recycling, these numbers will continue to grow.

In order to support this growth, we need strong state recycling programs. Recycling is an inherently local activity. It depends on individual residents making decisions about where to put

² *Capacity of North Carolina Landfills – NCDEQ's Annual Report*. (2023). North Carolina Department of Environmental Quality for the Environmental Review Commission. <https://webservices.ncleg.gov/ViewDocSiteFile/83470>.

³ *With a world-class workforce and a booming economy, North Carolina repeats as America's Top State for Business in 2023*. (2023). CNBC. <https://www.cnbc.com/2023/07/11/north-carolina-is-top-state-for-business-led-by-workforce-economy-.html>.

⁴ *Employment Trends in North Carolina's Recycling Industry – 2020*. (2020). North Carolina Department of Environmental Quality. <https://www.deq.nc.gov/energy-mineral-and-land-resources/land-resources/publications/2020-recycling-employment-study-final/download>.

materials– the trash can or the recycling bin. It depends on local governments and/or private haulers operating curbside or drop-off programs. Local governments have limited resources to invest in recycling education, and they depend on the state recycling program for technical assistance and investments in end markets and infrastructure.

Investments from the IJJA are enabling state programs to build capacity through data gathering efforts that will help inform future infrastructure investments and increase educational outreach.

Education

In addition to the data-gathering efforts that SWIFR is enabling in my state, we are also making investments in education and outreach. We know that a significant amount of contamination in the recycling stream is due to “wish-cycling,” or residents putting non-recyclable items in their recycling bins. This results in contamination, which increases costs for local governments and makes the sortation and processing of recyclables more difficult.

North Carolina is using SWIFR funding to advance our RecycleRight and Use the Food NC materials management campaigns. These educational campaigns utilize radio, television, billboards, advertisements, and print media to advance two goals: reducing contamination in the recycling stream and reducing the amount of wasted food. We are also providing grant funding to local governments to improve education and outreach efforts at the local level.

These SWIFR-funded efforts will bolster ongoing programs, such as our MRFshed mapping program. Through this program, we work with the MRFs in our state to map out the list of materials that each one accepts and create localized recycling educational materials for communities in each MRF’s coverage area. This effort provides local governments with informed, standardized education campaigns that they can use to educate their residents at no cost to them.

Infrastructure

One method to reduce resident confusion about what they can recycle where is to invest in consistent modernization of MRF infrastructure. The reason that accepted materials lists vary from jurisdiction to jurisdiction is because MRFs vary in their ability to accept certain materials, based on the infrastructure of the MRF. The information that we gather from our SWIFR-funded materials management optimization study will help us understand where there are gaps in MRF processing and identify “MRF deserts.” It will also help us analyze where modernization efforts could improve the quantity and quality of materials recycled by increasing utilization of robotics and artificial intelligence at MRFs.

While we tend to think about recycling bottles, cans, and cardboard, we also need to think about the infrastructure gaps in the handling of wasted food. There are several reasons to focus on food waste in addition to traditional recyclables. Wasted food comprises nearly a quarter of landfilled waste in municipal solid waste landfills, taking up valuable landfill space.⁵ The climate footprint of wasted food is large—ranging from the resources that went into growing, packaging, transporting, and storing the food to the methane emissions released at landfills. In fact, a recent study by the Environmental Protection Agency (EPA) found that wasted food is responsible for 58% of methane emissions from solid waste landfills.⁶ Lastly, there are 44.2 million Americans who are food-insecure who could very much benefit from the still-usable food that ends up in landfills.⁷

One way by which the federal government could help advance this issue is to take action on food labeling. The only product with a federally required expiration date is infant formula.⁸ The purpose of many dates found on food products is to preserve brand quality but is not actually related to the safety of the food—meaning that a lot of food gets thrown away while it is still perfectly safe to eat. Clear, accurate labeling is critical to preventing unnecessary food waste. One option to provide this clarity would be to include both “best by” and “expires on” dates for food packaging, thereby accounting for both brand quality and safety.

When food cannot be diverted to human consumption, there are methods of diversion that allow it to be turned into a commodity rather than tossed in a landfill: EPA’s Wasted Food Scale prioritizes animal feed, compost, and anaerobic digestion as better options for disposing food that can no longer be safely consumed.

From an infrastructure standpoint, investing in composting infrastructure can both generate jobs and mitigate food waste by turning it into a commodity. A 2022 study by NCDEQ found that while North Carolina generates nearly 2.5 million tons of food waste per year, permitted commercial composters in our state can only handle 350,000 tons of waste annually. This leaves a 2.1-million-ton gap.⁹

⁵ *From Farm to Kitchen: The Environmental Impacts of U.S. Food Waste*. (2023). US Environmental Protection Agency. <https://www.epa.gov/land-research/farm-kitchen-environmental-impacts-us-food-waste>.

⁶ *Quantifying Methane Emissions from Landfilled Food Waste*. (2023). US Environmental Protection Agency. <https://www.epa.gov/land-research/quantifying-methane-emissions-landfilled-food-waste>.

⁷ *Food Security in the US*. (2022). US Department of Agriculture. <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/key-statistics-graphics/>.

⁸ *Food Product Dating*. (2023). US Department of Agriculture. <https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation/food-safety-basics/food-product-dating>.

⁹ *North Carolina’s Food Waste Compost Capacity Gap*. (2022). North Carolina Department of Environmental Quality. <https://www.deq.nc.gov/environmental-assistance-and-customer-service/composting/north-carolina-2022-compost-capacity-report/download?attachment=>.

With additional, sustained investment in recycling and the circular economy, we can begin to address this gap and other infrastructure needs. We know that grant funding for local governments, MRFs, and end markets is effective. At NCDEQ, we provide about \$1.1 million per year, leveraging private investments, to grow our circular economy infrastructure. For example, Clear Path Recycling in Fayetteville, North Carolina, received \$140,000 over three grants to install equipment to improve its efficiency and increase its yield, adding over 6,500 tons to its annual recycling capacity. It also leveraged \$1.7 million in private investment and created 90 local jobs.

Sustained investment in the SWIFR program is crucial to helping bridge these gaps and provide a more consistent recycling infrastructure across the country.

End Markets

When China's National Sword policy went into effect in 2018, it had a significant impact on recycled material markets, especially for plastic and paper. The silver lining of this event, however, is that it led to the development of stronger domestic end markets for some recycled materials, bringing jobs and economic investment stateside in the process and ensuring that the value chain remains within our communities.

States have an ongoing role to play in encouraging the development of end markets. Providing data and information to manufacturers who are considering locating in our state can help them make strategic investments that protect the environment and strengthen the local economy. For example, NCDEQ provided information on the regional generation of recycled plastic bottles, which led to an industry expanding in our state. In addition to favorable tax treatment for recycling-related industries, we work with our partners across state agencies and across government to offer technical assistance and invest in supporting infrastructure to produce benefits for our residents, communities, and businesses.

I'll emphasize again that we cannot pursue these actions without sufficient state capacity and resources. We need investment and engagement at all levels, including from the federal government, to create a truly circular economy.

Other State Efforts

In April 2023, I convened the North Carolina Circular Economy Council to bring together representatives from various stages of the supply chain and recycling industry to identify ways to expand and accelerate beneficial impacts of recycling in the state. We have conducted tours and held discussions that allow Council members, as well as local and state officials, to gain a deeper understanding of how all parts of the circular economy support one another. From the resident who recycles their plastic bottle, to the MRFs that sort the bottle and send it to be

processed into flake, to the manufacturer who receives a clean feedstock and turns it into a new bottle or yarn— each of these steps becomes more efficient when one is made better.

We have made great progress over the past several years, but there is plenty of work still to be done. We have heard that the announcement for Round 2 of the SWIFR and Recycling Education and Outreach grant programs may come by the end of this year. I encourage Congress and this Committee to continue investing in recycling, to build state capacity, and to support the infrastructure, education, and end markets needed to move towards a truly circular economy.

Everyone, in North Carolina and across the country, is thinking about how we can more sustainably manage our materials. It will take collaborative policy and funding solutions, with everyone at the table, to meet our goals. There is no better example of a healthy environment and a healthy economy going hand in hand.

I am grateful for the opportunity today to share my state's perspective and appreciation for this Committee's support of recycling and the circular economy. Thank you.