Chinese import restrictions led to more recycled materials staying in the U.S. This market shift has illuminated longstanding issues and much-needed improvements to our recycling programs.

- Recycling bins contain too much trash.
- The public is confused by conflicting and changing recycling rules and the lack of consistent messaging.
- Sustained education and enforcement campaigns are effective and necessary for people to recycle right and decrease contamination.
- Domestic markets for recycling are a necessity and must be further developed.

The COVID-19 pandemic has created new challenges for solid waste management.

- Operations must be modified to prioritize worker safety.
- Recycling volume has moved from the commercial to the residential stream and includes more contamination.
- Economic and consumer spending changes lead to shifts in recycling markets.
- Local governments are facing budget shortfalls due to decreased tax revenue.

**Important Recycling Truths**

- Single-stream recycling is here to stay. It yields the highest participation, reduces worker safety hazards and delivers efficiency in the most expensive part of the recycling system: collection. The Recycling Partnership found that 84% of Americans view recycling as a valuable public service.

- Recycling:
  - Creates jobs.
  - Returns valuable resources (and their embodied energy) to beneficial use.
  - Supplies manufacturers with feedstock they rely on. Your cardboard box = toilet paper.
  - Preserves virgin materials.
  - Saves energy and water, and reduces greenhouse gas emissions.
  - Conserves landfill space.

- Recycling is an essential part of a comprehensive municipal solid waste strategy. Aluminum cans and plastic bottles are banned from landfill disposal. All materials, whether recycled or landfilled, have a cost to manage.

**Current Stressors on the Recycling Industry**

- The COVID-19 pandemic has created new challenges for solid waste management.
  - Operations must be modified to prioritize worker safety.
  - Recycling volume has moved from the commercial to the residential stream and includes more contamination.
  - Economic and consumer spending changes lead to shifts in recycling markets.
  - Local governments are facing budget shortfalls due to decreased tax revenue.

**Actions Needed NOW**

- Modify operations to protect workers by enabling social distancing, supplying appropriate PPE, ensuring sick employees stay home, and regularly cleaning vehicles, equipment and facilities. COVID-19 is thought mainly to spread from person to person.
- Review funding mechanisms for recycling programs and evaluate options to maintain services. Consider increasing recycling fees or modifying the level of services provided or a combination of both.
- Reduce the amount of trash and non-recyclables (contamination) in the recycling stream. Contamination decreases the quality and value; plus, removing and sending contaminants to the landfill adds cost. On average, contamination makes up 14 percent of collected recycling loads in North Carolina.
- Use education paired with enforcement to reduce contamination. The Recycling Partnership executed educational and enforcement (cart tagging) campaigns to achieve 57 percent contamination reduction in Atlanta and 47 percent contamination reduction in Chicago. We can do the same here in North Carolina.
- Align messaging with others in your region who use the same material recovery facility (MRF).
- Reduce single use. Many single-use products (disposable cups, straws, to-go containers) are not recyclable.
- Buy products with recycled content to help build demand.
- Keep moving forward. The current system of collecting mixed recyclables is the most cost-effective way of hauling and transporting materials, yields the most participation and allows residents to comply with the state’s ban on landfills aluminum cans and plastic bottles. Americans love to recycle; removing the service comes with considerable and extended public relations challenges.
True Costs of Recycling

- A local government recycling program is a service provided to residents and customers. That service has an associated cost, just like other services (trash pickup, utilities).
- There has always been a cost to process recyclables, but it used to be offset by the revenue generated from the sales of recyclables. With current market conditions, the average value of one ton of mixed recyclables is $43 and the cost to process ranges from $70 to $100. Recycling now comes at a cost, just like landfiling and all other solid waste management options. Reducing levels of contamination lowers the cost of recycling.
- Quotes from Will Sagar, Southeast Recycling Development Council:
  - “Recycling is not free. Rather it’s an investment in significant job creation. Materials lost to disposal will never add to the state’s economic strength. Recycling in communities should be considered a valuable public service, just like schools, highways and utilities.”
  - “The immediate cost of capturing recycling may not be as cheap as just sending it to a landfill, but the long-term economic benefits of the material to the economy far outweigh the costs to collect and process. The benefits are clear.”

Recycling: By the Numbers

- In FY2018-19, North Carolina recycled 508,350 tons of traditional recyclables (bottles, cans, cardboard, paper) through local government programs. That equates to 98 pounds recycled per person.
- As of March 2020, one ton of single-stream (mixed) recycling is worth $42.88. The average landfill disposal tipping fee costs $42.60 per ton.
- North Carolina is home to more than 670 recycling companies employing more than 16,700 people with an average hourly wage of $19.64 and estimated annual payroll of $664 million.
- North Carolina is home to more than 60 manufacturers that rely on recycled material to make essential products like toilet paper, shipping boxes and packaging for food, cleaning, personal hygiene and medical supplies. These companies employ more than 14,000 workers with total annual sales of more than $4 billion.
- Recycling businesses in North Carolina are making investments and upgrades. Twenty companies were awarded recycling grant funding in 2020, creating 61 jobs and adding 243,000 tons of recycling capacity.
- Domestic demand for recycled material is growing. Investments are being made by American, Chinese and other international companies, but building new facilities takes time. Recent developments include:
  - Polywood, a manufacturer that recycles plastic milk jugs into durable outdoor furniture, began operations at a new production campus in Roxboro in 2019. The company will consume up to 40 million pounds of recycled plastic each year and expects to employ 384 people within 5 years.
  - Nationwide, 19 paper mills have announced plans for construction, expansion or conversion to use recycled cardboard and mixed paper. These announcements include a new mill in Kentucky and two new mills in Virginia, all scheduled to open in 2021.