

# Chatham County Grant Proposal

## Pilot Project for Construction & Demolition Waste at Convenience Sites

2019 Community Waste Reduction and Recycling Grants

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North Carolina Department of Environmental Quality  
Division of Environmental Assistance and Customer Service

DATE OF PROPSOAL SUBMITTAL

Submitted By:

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## General Requirements

**Usage of N.C. Solid Waste Disposal Tax Proceeds:** All Solid Waste Disposal Tax proceeds received by Chatham County are used solely for solid waste and recycling services. The tax proceeds are received in our enterprise operating fund and contribute to operation costs of Chatham County convenience sites, household hazardous waste facility, and solid waste and recycling services and programs. The tax proceeds will not be utilized for the required matching funds.

**Public Building Recycling Services:** Chatham County employees in key government buildings have access to recycling services and are able, and encouraged, to recycle materials generated in the course of business. Recycling services are provided for aluminum cans, steel cans, cartons, plastic bottles, glass bottles and jars, mixed paper, and cardboard.

**Mercury Product Recycling:** Chatham County has a program to collect and recycle all fluorescent lights and mercury containing devices from county buildings.

## Project Description

The Chatham County Solid Waste & Recycling Division (the County) is requesting funds to help with a pilot program to collect construction and demolition (C&D) waste at our convenience sites.

**Background:** The County operates 12 staffed convenience sites open to residents in the unincorporated areas of the County. All 12 convenience sites accept solid waste from residents only. Businesses are not allowed to use the convenience sites. We have recycling for household recyclables (aluminum cans, steel cans, cardboard, mixed paper, newspaper, plastic, and glass), along with scrap metal recycling. We also have a Swap Shop where people can place items that others can pick up for free.

Untreated pallets must be brought to our Main Facility, as they are banned from the landfill. They are disposed of in our yard debris area where they are mulched up. We do not currently have a program to collect C&D waste separately though. Residents can also bring clean lumber, but do not have to since it is not banned from the landfill.

The County conducts a waste composition study (WCS) every three years. The most recent WCS was completed in June 2017. A representative sample is taken from the municipal solid waste (MSW) compactor we have at each site, along with the pre-crushers we have at our two busiest sites. The samples are sorted and weighed to determine the composition of the waste.

Figure 1 shows the composition of the pre-crusher waste. "All C&D Debris" includes carpet, treated/painted wood waste, and C&D debris. The results show that 26.7% of the waste is C&D debris which could be recycled.

Figure 1: Composition of Pre-Crusher Waste

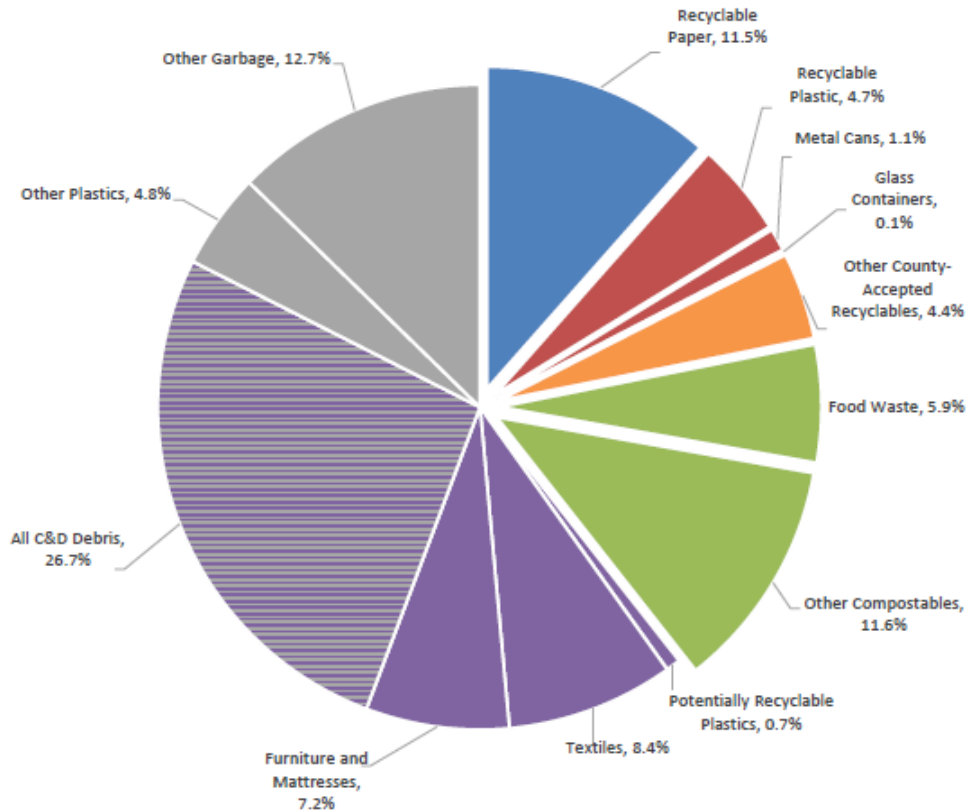


Figure 2 shows the composition of the MSW compactors. The results show that 4.5% is C&D debris.

A visual survey is also completed for one bulky bin of MSW per site, the results of which are shown in Figure 3. The treated and untreated wood, drywall, shingles, and other C&D totals 31.6% of the waste.

The results of the WCS from 2017 shows that there is a substantial portion of the waste being disposed of in the landfill that is categorized as C&D and could be recycled through a C&D program at the convenience sites.

**C&D Recycling Ordinance:** Chatham County has a C&D recycling ordinance, the purpose of which is,

“... (i) to require persons who generate mixed construction and/or demolition debris from a project involving the construction, remodeling or demolition of a building or structure 1,000 square feet or greater to provide for the transportation of such debris off site by a licensed C&D hauler who is required to take such debris to a licensed C&D facility that is able to process and divert from a landfill at least 30% of C&D debris annually, and (ii) to require persons who choose to separate recyclables on site to complete a pre-project waste estimate and a post-project waste estimate.”

The C&D waste at the convenience sites it likely coming from homeowner self-repairs or projects under 1000 square feet since the C&D ordinance does not apply to those types of projects.

Figure 2: Composition of Compactor Municipal Solid Waste

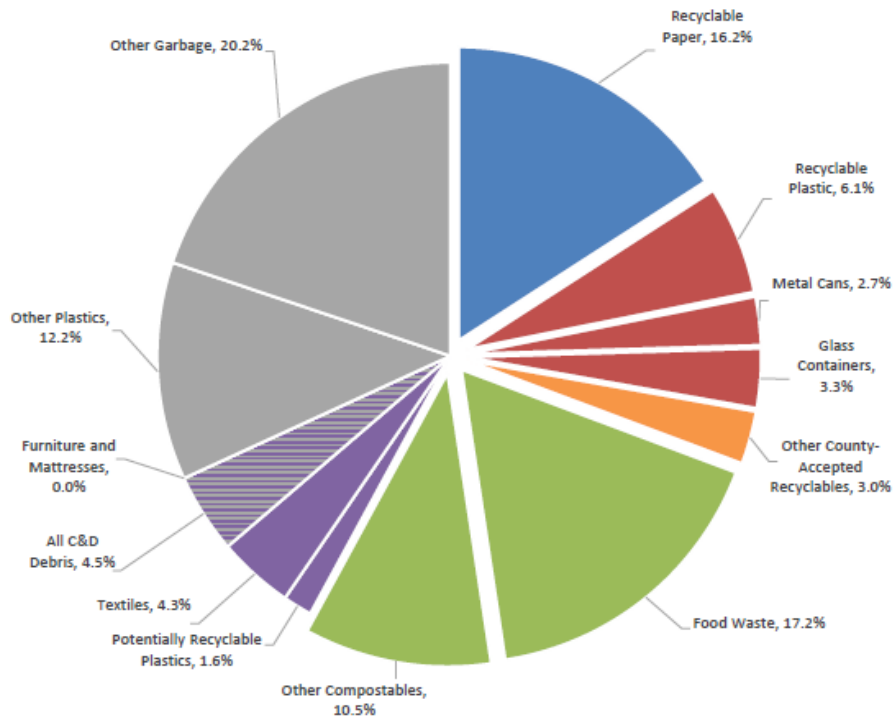
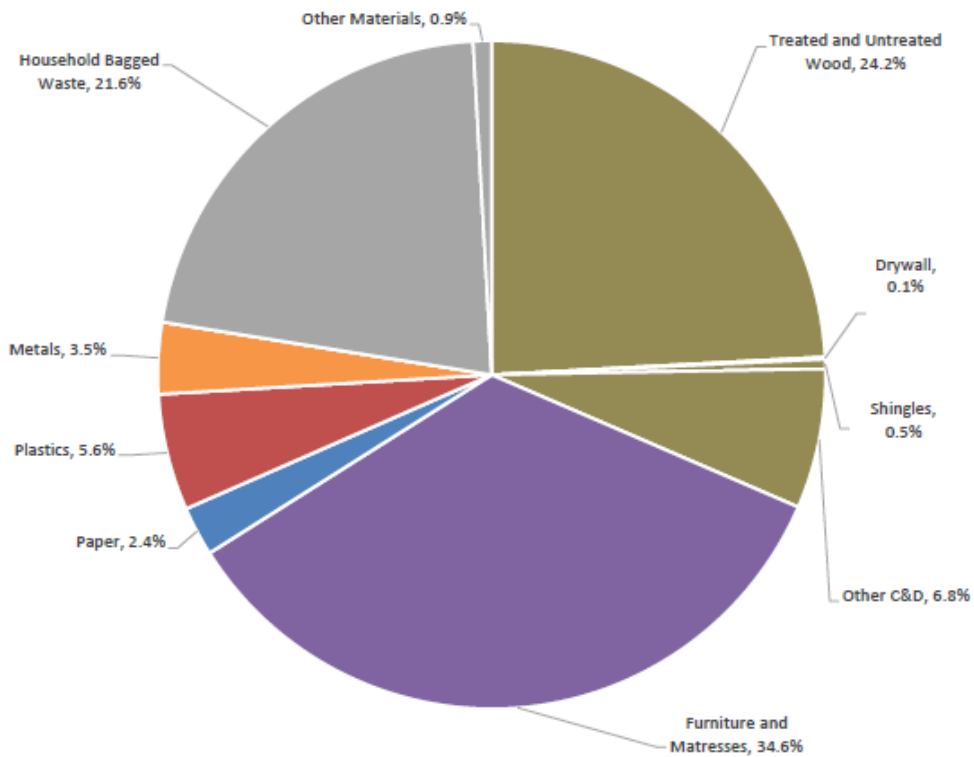


Figure 3: Composition of Bulky Waste (percent by volume)



**Pilot Project:** We would conduct the pilot project by collecting C&D at two of our convenience sites- one on the east side of the county and one on the west side. We would collect mixed C&D in a 30-yard roll off container.

There are no C&D facilities in Chatham County, but as a part of our C&D ordinance we permit four facilities in the region. This is the County's way of assuring they are recycling a minimum of 30% as our ordinance requires. We would take the C&D to one of the following facilities:

- Gold Hill Road- 385 Gold Hill Road, Asheboro
- Coble's Sandrock, Inc.- 5833 Foster Store Road, Liberty
- Raleigh C&D Processing Facility- 421 Raleigh View Road, Raleigh
- Shotwell Transfer Station II- 1506 ½ N. Salem Street, Apex

We would conduct this pilot project for a minimum of six months. If, after the initial six months, we feel more data is needed we will extend the pilot for an additional six months.

This pilot project will also help us to determine which C&D facility/facilities to use. Taking into account transportation and disposal costs, we may find that different convenience sites go to different C&D facilities depending on location.

We also need to determine if we will be able to collect this material separately. Without an incentive of a lower disposal fee, how can we get residents to separate out their C&D waste from their regular trash?

If the pilot is successful, we may roll out C&D collection to a few convenience sites or all twelve. Therefore, Chatham County's approximately 27,000 households would have the ability to recycle C&D from their home.

**Equipment to Purchase:** We would purchase four 30-yard roll off containers for the pilot program, similar to the one pictured below. There would be one container placed at each of the two sites and two spares, so when we need to pull the container we can leave an empty one. Each container is about \$5100.



We would purchase one sign for each of the containers. The pilot project would involve notifying residents, which may include newspaper ads, flyers, posters, updates to our website, and social media announcements.

If the pilot project is successful, residents would be able to recycle C&D material at the centers as long as the County is able to provide the service.

With proper care the containers themselves should last 15-20 years. If the pilot project is not successful, the roll-off containers would be used for only recyclable materials, such as scrap metal and electronics.

## Project Timeline

- July 30, 2019                      Create signs and outreach materials.
- August 15, 2019                Purchase containers.
- September 15, 2019          Implement pilot at two sites.
- March 30, 2020                Evaluate success of pilot program. Determine next steps.
- June 30, 2020                 Submit final report to DEACs.

## Project Budget

<b>Project Budget</b>	<b>State Grant Award</b>	<b>Applicant Cash Match</b>	<b>Project Total</b>
30 yard roll off containers (4 @ \$5100 each)	\$16,320	\$4,080	\$20,400
Signage for containers and outreach materials	\$320	\$80	\$400
<b>Total</b>	<b>\$16,640</b>	<b>\$4,160</b>	<b>\$20,800</b>