
SUSTAINABILITY & RESILIENCY UPDATE

FEBRUARY 24, 2020

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- **Overview of City's Sustainability and Resiliency Efforts**
- **Explain How Circular Charlotte and the Strategic Energy Action Plan Work Together to Support our Goals of Becoming a Low Carbon City**
- **Highlight Related Items on Tonight's Agenda**
- **Receive a Circular Charlotte Update from Envision Charlotte**

On Tonight's Council Agenda:

1) Duke Energy Green Source Advantage Program

Duke Energy's GSA program is a renewable energy program for large North Carolina customers who want to support the development of renewable resources and lower their carbon emissions

2) Grant for Solar Powered Electric Vehicle Charging Stations

Purchase of four solar-powered, transportable, electric vehicle (EV) charging stations

3) Lease for Statesville Avenue Landfill for Circular Wood Waste Program

Circular Wood Waste will incentivize the diversion of large wood waste from landfills and private dumps



Our Mission:

Charlotte will become a global leader in environmental sustainability, balancing economic growth with preserving our natural resources.

Our Values:

- Becoming a model environmental community in how it manages energy, air, water and waste;
- Leading by example by practicing environmental stewardship in City operations and facilities as guided through the Strategic Energy Action Plan (SEAP);
- Seeking and supporting collaborative and regional solutions to environmental problems; and
- Analyzing data and applying technologies to reach our environmental goals.



BY THE NUMBERS

60+ policies, programs or initiatives currently underway or in the planning/funding phase

10,500+ tons of greenhouse gas emissions eliminated through methane renewable energy program

34 diesel trucks converted to biofuel which reduced greenhouse gas emission by 75 tons in three months

3 Energy-star certified city buildings and **7** city buildings with solar panel roofs

13 city electric vehicles and **48** electric charging stations at city's facilities



KEY PROGRAMS, PLANS & INITIATIVES

- ✓ **LED Street Lighting Conversion**
- ✓ **Concrete Recycling Program**
- ✓ **Innovation Barn**
- ✓ **Send Me On My Way**
- ✓ **Combined Heat & Power Facility**
- ✓ **Strategic Energy Action Plan**
- ✓ **Tree Reclamation**
- ✓ **Green Workforce**
- ✓ **Green Crown Program**
- ✓ **Zero Carbon Municipal Buildings**
- ✓ **Zero Carbon Fleet**
- ✓ **Biosolids Master Plan**
- ✓ **Circular CLT**

The Sustainable and Resilient Charlotte by 2050 Resolution's Goals:

1. Strive to become a low carbon city by 2050, with each person emitting less than 2 tons of CO₂e per year
2. Strive to source 100% of energy use in municipal buildings and fleet from zero carbon sources by 2030





SUSTAINABLE + RESILIENT CHARLOTTE



- Carbon emissions reduction is critical to becoming a low carbon city.
- Circular Charlotte and the SEAP both focus on carbon emissions reduction to support this goal.
- Carbon emissions reduction generated by circular economy efforts include landfill diversion and recycling, while the SEAP's include energy efficiency, renewable energy generation, and increasing fleet alternative fuel use.



SEAP

STRATEGIC ENERGY ACTION PLAN

 CITY *of* CHARLOTTE

By 2030, we will strive to source 100% of City's energy use in our buildings and fleet from zero carbon sources.

* SEAP discussion is slated for Budget workshop on Wednesday, March 4



charlottenc.gov

LEED FOR CITIES GRANT

- Rating system to help cities and communities manage resources sustainably and provide a better quality of life for residents and visitors.
- Framework tracks progress toward overall sustainability objectives and allows for benchmarking among communities globally

Charlotte submitted a very competitive application in February



Bank of America 
Charitable Foundation



CIRCULAR CHARLOTTE

Towards a zero waste and inclusive city

FULL REPORT

2018 Metabolic Study

- Analyzed Charlotte's waste stream
- Provided a short term and long term strategy for Charlotte's Transition to Circular Economy

Key Findings

- 88% of waste going to the landfill – national average is 65%
- Diversion of 15% could have CO2e savings of 379,000 tons/year ((75,000 cars per year)

Circular Business Case

- Focus on four areas: plastics, organics, concrete, textiles

SEND ME ON MY WAY

Program Goals:

- Educate Charlotte citizens via employers about plastics
- Collect pure materials to be returned to Coca Cola Consolidated and Sealed Air

Some collection partners:

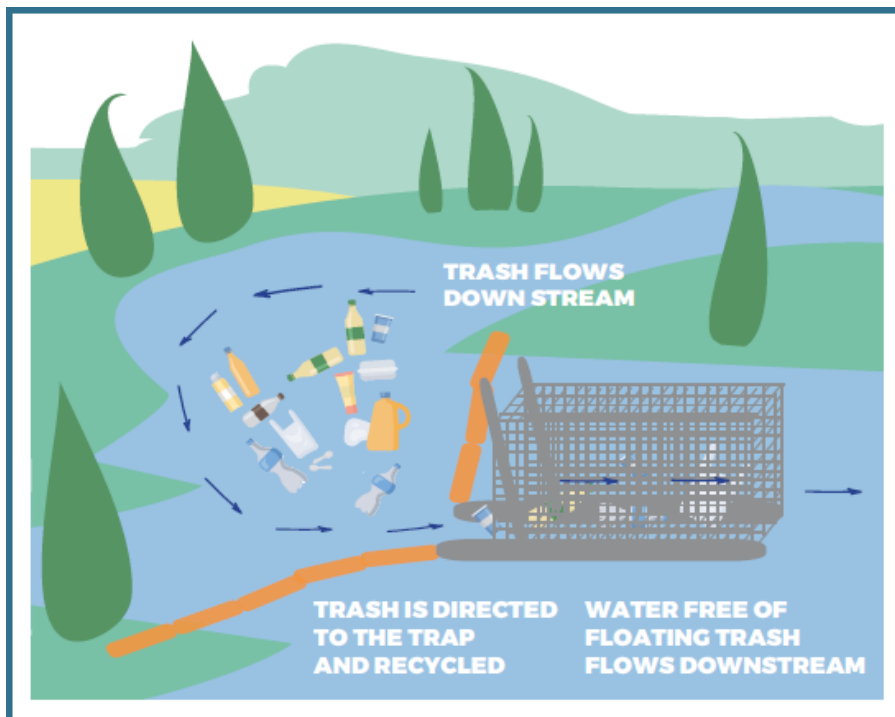
- Government Center
- Charlotte Motor Speedway
- Compass Group
- Whitewater Middle School
- Belmont Neighborhood
- Microsoft



LITTER GITTERS

Program Goals:

- Collect debris from 3 waterways
- Analyze waste for source
- Reduce waterway waste
- Upcycle/recycle materials



Charlotte-Mecklenburg Litter Gitter Press Announcement



FEBRUARY
25
TUESDAY

Time: 10:00am

**Location: Alexander Street Park
918 N. Alexander Street, Charlotte, NC 28206**

Please join the City of Charlotte, Coca-Cola Consolidated, Envision Charlotte, Mecklenburg County and Osprey Initiative as we announce a Litter Gitter pilot program that will focus on collecting recyclable materials from waterways, gathering data and finding sustainable solutions for the future.



REFRESH • RECYCLE • RENEW

WOOD WASTE CENTER

80,000 lbs of wood waste per day
(figure are on a yearly basis)

- Lumber – 1,000 tons
- Firewood – 3,000 tons
- Other – 2,000 tons

11,700 metric tons
of avoided CO₂e
emissions

2,525 cars taken
off road



INNOVATION BARN

Goals of project:

- Job Creation – both directly at the barn also through incubator lab and entrepreneurship
- Innovation – creating innovations around materials destined for the landfill
- Education and Awareness – creating opportunities for public engagement both through demonstration projects, classes and our partnership with CMS

Small Businesses/Start Ups

- Crown Town Composting
- 100 Gardens
- Queen City Teaching Farm

Large Businesses

- Electrolux
- Philips
- Cisco
- National Gypsum
- Lowes



Thank You

