



Charlotte City Council
Environment Committee
Summary Minutes
April 30, 2018

COMMITTEE AGENDA TOPICS

- I. Clean Energy Resolution
- II. Litter Collection Overview

COMMITTEE INFORMATION

Committee Members Present: Dimple Ajmera (Chair), Larken Egleston (Vice Chair), Matt Newton, Greg Phipps, Braxton Winston

Guest(s): Tariq Bokhari

Staff Resources: Kim Eagle, City Manager's Office

Meeting Duration: 12:03 PM – 1:35 PM

ATTACHMENTS

1. Agenda – April 30, 2018
2. Presentation – Energy Resolution and Strategic Energy Action Plan (SEAP)
3. Document – Energy Efficiency and Low Carbon Short Term Project List
4. Document – Energy/Low Carbon Future Resolution Draft
5. Presentation – War on Litter Overview

DISCUSSION HIGHLIGHTS

Council member Ajmera called the meeting to order at 12:03pm and asked everyone in the room to introduce themselves.

Energy Resolution and Strategic Energy Action Plan

Kim Eagle discussed the Clean Energy Resolution history and the charge to the committee based on the Council discussions in November 2017. Rob Phocas and Emily Yates (Envision Charlotte) presented information on the Clean Energy Resolution work completed to date including a review of baseline data. Staff described how Council asked for data to develop a City baseline of energy consumption and a comprehensive strategy to meet future greenhouse gas (GHG) reduction targets during the November 2017 Council meeting as well.

The Committee asked questions about the initial target goals of reducing from 12 tons of CO² per person per year to 7 tons by 2030 and less than 2 tons by 2050. Vice Chairman Egleston questioned how much of the strategy is under City control. Dr. Sebastian Carney (CDP) replied how Council can directly influence policies (such as fleet and building management) while indirectly affecting development through land-use policies. Council member Newton also asked if the City is still seeking 100% renewable energy by 2050 to which Chairwoman Ajmera responded saying how SEAP established broader and realistic goals in comparison to the initial Clean Energy Resolution. Council member Winston also questioned how the Charlotte compares with other cities in terms of pioneering this initiative and competing globally. Staff discussed the City would join other major cities if the resolution passes, but would lead the way in developing a strategy on how to attain target goals. Council member Phipps asked about Mayor Lyle's perspective on the Resolution and if anyone pursued collaborating with Mecklenburg County on this effort. Chairwoman Ajmera spoke of the Mayor's desire for an action plan. Staff also shared they discussed this topic with certain County departments, but want to involve the County more.

When staff discussed the SEAP draft framework, Council member Newton asked about where circular economy comes into play in this conversation. Mrs. Yates shared how each of the four SEAP pillars provides opportunities to incorporate the circular economy. Council member Bokhari wanted information on what changes would transform the City in a substantial way. Dr. Carney explained how the SEAP pillars highlight the significant areas of opportunity for the City to transform its policies and procedures.

Committee also raised questions on how the current City projects aligned with a low carbon future, specifically with streetlight energy usage, electric vehicle charging station availability, methane capturing, biosolids negotiations and replicating other nation's circular economy practices (such as China). Staff agreed to return with this information at a later Committee meeting. Staff then highlighted the current short-term City projects and discussed the next steps in the process. Committee also discussed how to involve other government entities in this initiative given this topic affects the County and region. Council member Bokhari stated the need for quantifiable measures of impact on staff resources and energy consumption to make progress towards a low carbon future. Staff also read the draft Low Carbon Future Resolution to conclude the presentation, asking Council to share their suggestions and thoughts between Committee meetings.

Litter Collection Overview

Kim Eagle introduced the topic and referenced that this topic was referred to the Committee from a previous Council strategy session. Nicole Storey provided a detailed overview of current practices and offerings. Staff discussed the importance of litter collection, stating how it related to the City's safety, beautification and economic development. Mrs. Storey then highlighted staff responsibilities throughout the City as well as the volunteer efforts and contributions.

The Committee was concerned about policies on animal waste, staff restraints and limitations in addition to the Adopt-a-Street program in areas where City employees clean the streets. Staff offered to research the topics and provide updates at a future meeting. The Committee expressed the desire for Council to adopt a city street, under the existing program.

The Committee then invited Angela Lee (Charlotte Water) to share about the recent sewer line breach/spill and the progress made in addressing the issue.

Meeting adjourned at 1:35 p.m.

Environment Committee

Monday, April 30, 2018; 12:00 – 1:30 p.m.
Charlotte-Mecklenburg Government Center
Room 280

Committee Members: Dimple Ajmera, Chair
Larken Egleston, Vice Chair
Matt Newton
Gregg Phipps
Braxton Winston

Staff Resource: Kim Eagle, City Manager's Office

AGENDA

I. Clean Energy Resolution

Staff Resource: Rob Phocas, Sustainability Office

Staff will provide an update on the Clean Energy Resolution including information on the work completed to date and a draft resolution for the Committee to consider.

Action: None at this time.

II. Litter Collection Overview

Staff Resource: Nicole Storey, Housing & Neighborhood Services

At the February 5, 2018 Council Strategy Session, Council member Phipps referred the "War on Litter" to the Committee for review. The Committee will receive a presentation providing an overview of staff responsibilities and staff supported volunteer efforts to reduce litter citywide.

Action: None, for information only.

Next Meeting: Monday, May 14 at Noon in Room 280

Distribution: City Council
Bob Hagemann

Marcus Jones, City Manager
Stephanie Kelly

Executive Team
Environmental Cabinet



Energy Resolution and Strategic Energy
Action Plan

Environment Committee

April 30, 2018



Agenda

- History and Alignment Work
- Why a Low Carbon Future
- Sustainable Energy Action Plan
- Draft Resolution
- Next Steps



History

- 2015 – Mayor Clodfelter signed Global Covenant of Mayors commitment
- As part of this commitment, Charlotte agreed to accomplish the following:
 - Register commitment
 - Complete greenhouse gas emissions inventory and report to CDP (formerly Carbon Disclosure Project)
 - Create targets and establish a system of measurement
 - Establish a Sustainable Energy Action Plan (SEAP)
- Summer of 2017, City and Envision Charlotte start to collect data to develop baseline and report out to CDP



History

- In November 2017, Charlotte City Council was presented with a Clean Energy resolution that would commit the City to 100% renewable energy by 2050
- Council voted to send the resolution back to the Environment Committee for further discussion
- Environment Committee charge includes:
 - Draft a resolution appropriate and tailored for Charlotte
 - Develop an action plan for how goal would be achieved

 Alignment Work

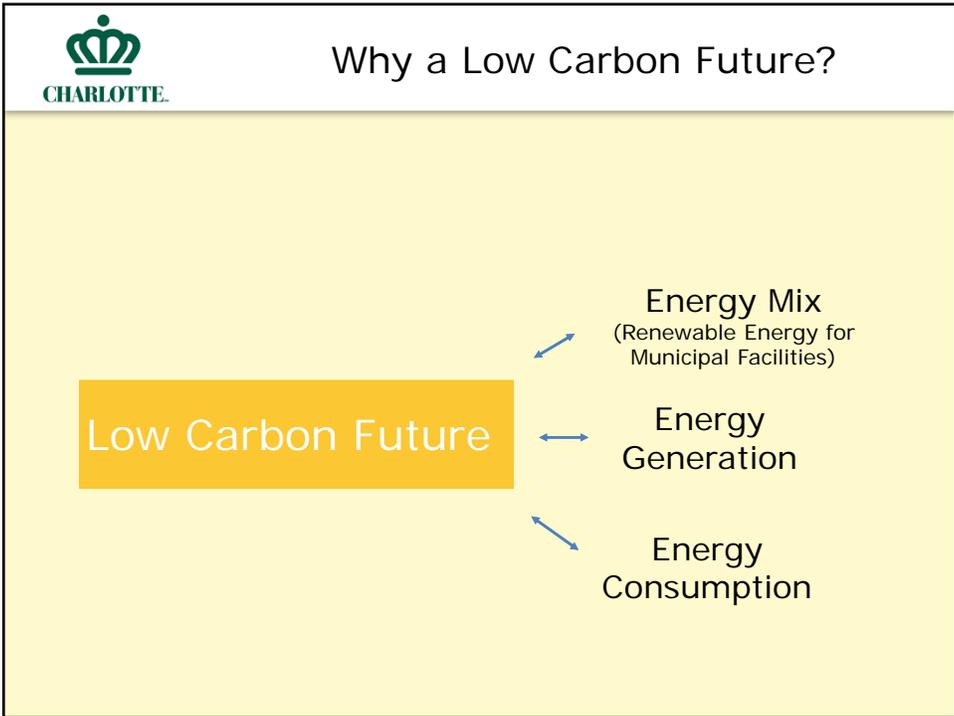
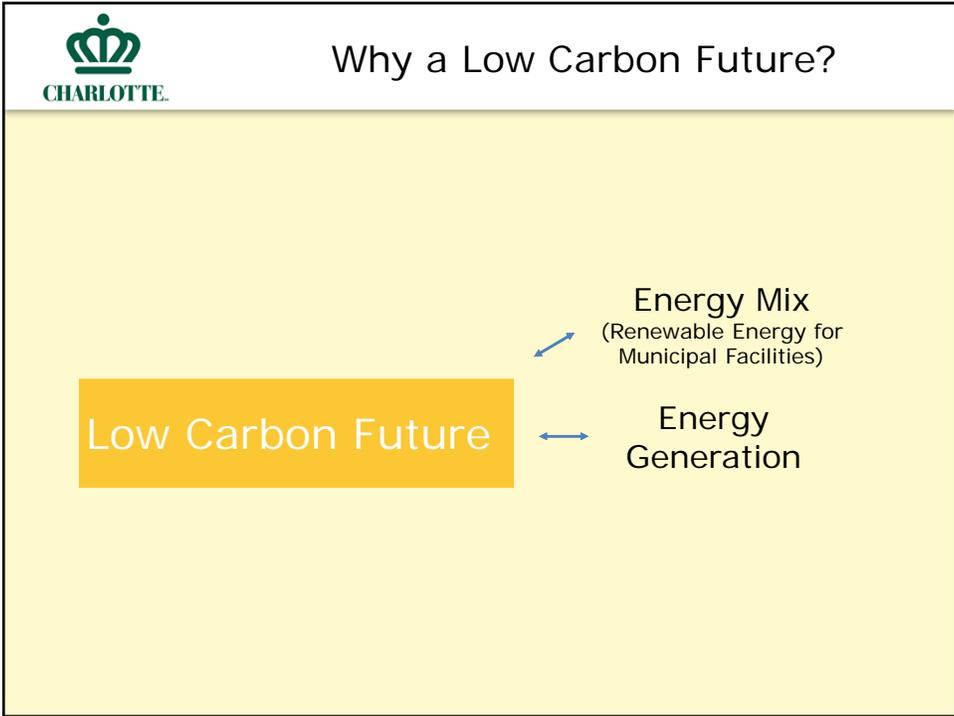
Strategy: Connect requirements for the global Covenant of Mayors Commitment with the Clean Energy Resolution

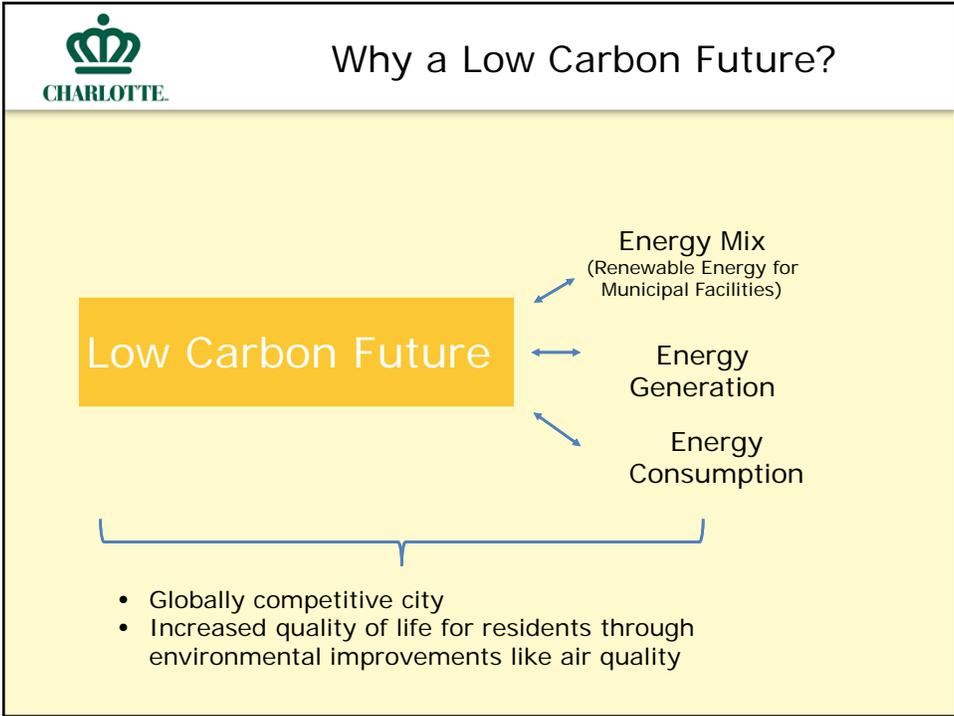
Blueprint: Create Low Carbon Future via the implementation of the Strategic Energy Action Plan

 Why a Low Carbon Future?

Energy Mix
(Renewable Energy for Municipal Facilities)

Low Carbon Future





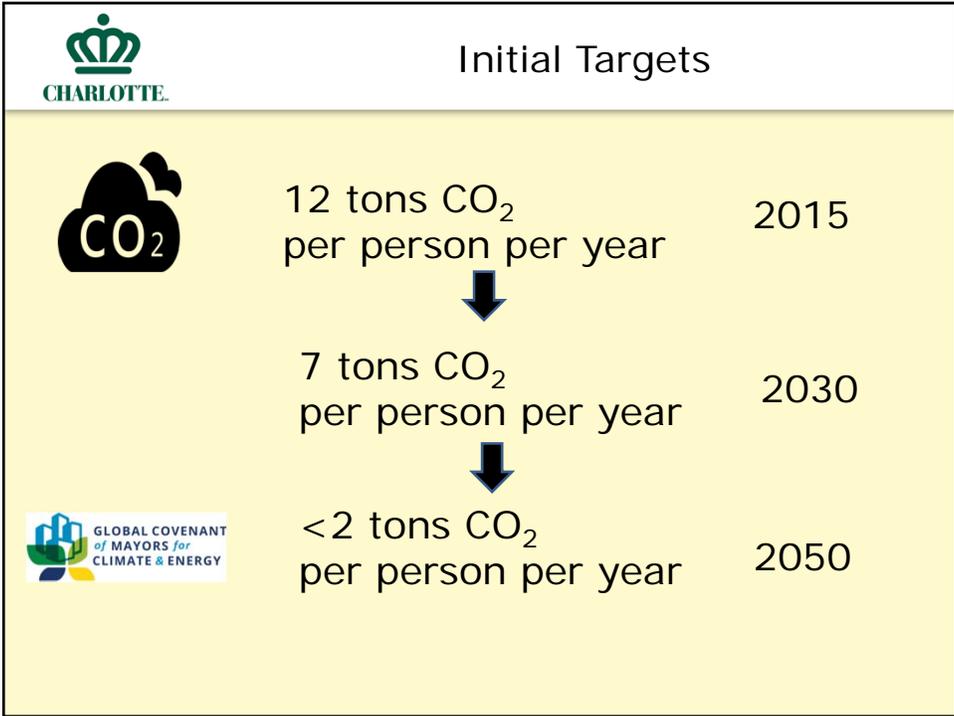
CHARLOTTE.

Step One: Develop a Greenhouse Gas Baseline

- Data collection included data from earlier inventory efforts as well as data defined as needed beginning in November
- Duke Energy provided much more detailed energy consumption and generation data that created a more informed baseline
 - Utilized CDP spreadsheet to input numbers and calculate
 - Determined 2015 as baseline year

 12 tons CO₂ per person per year

National figure is 16 tons CO₂ per person per year



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- The diagram, titled "Process for Developing Strategic Energy Action Plan", features the Charlotte logo at the top left. It contains a bulleted list of key steps in the process:
- Key document that shows how the City will achieve its 2030 and 2050 targets
 - Envision Charlotte hired Dr. Sebastian Carney of Carbon Captured, Ltd.
 - International expert on GHG reduction strategies with over 15 years of experience
 - Hosted future scenario workshops with City stakeholders and Duke Energy, utilizing the GRIP (Greenhouse Gas Reduction Inventory Protocol) tool – results will inform SEAP recommendations
 - Hosted, and will continue to host, individual meetings with Community Stakeholders



Outcomes of Process

- Through consistent engagement with Duke
 - The City Manager and Executive Director of Envision Charlotte were able to present on City Vision for a Low Carbon Future to Duke Energy CEO and leadership
 - Duke Energy has been more open about sharing data with the City
 - Actively working with Duke Energy to explore ways to formalize partnership to achieve low carbon future
- Development of a Low Carbon Future resolution which aligns with the goals of the 100% Clean Energy Resolution from November 2017



Draft Framework For SEAP

- SEAP will focus on Four Pillars:
 - Buildings
 - Transportation
 - Energy Generation
 - Innovation
- Work will continue to build the specific strategies and actions and will be presented this fall to Committee



Current City Projects Aligned with Work

- A new vaporization humidification system installed at the Mint Museum Uptown
 - Energy usage declined by approximately 25% in the first 5 months of operation with greenhouse gas avoidance of 654,207lbs of CO₂.
- City Electricians are upgrading lighting daily from old fluorescents to energy-efficient LEDs
 - Greenhouse Gas Avoidance of 215,133lbs of CO₂ this year
- Combined Heat and Power Project at McAlpine Creek WWTP
- Solar feasibility studies at various City facilities
- Continued investments in electric vehicles and electric vehicle infrastructure



Draft Resolution Summary

- Encompasses City's commitment to the Global Covenant of Mayors
- Broadens to a Low Carbon Future umbrella
 - 100% Clean Energy falls under this broader approach
- Specifies that the SEAP will be completed to provide the action plan for the work
- Calls for continued work to reduce energy consumption in city facilities as an immediate short-term action



Next Steps

- Review Draft Resolution and provide input to staff
- May 14 Environment Committee consider recommendation to full Council
- Full Council consideration in June
- SEAP finalized and presented Fall 2018

DRAFT

RESOLUTION OF THE CITY OF CHARLOTTE CITY COUNCIL IN SUPPORT OF A LOW CARBON FUTURE BY THE YEAR 2050

WHEREAS, the Charlotte City Council committed in the FY 2018-2019 Environment Focus Area Plan to “become a global leader in environmental sustainability, balancing economic growth with preserving our natural resources;” and,

WHEREAS, Charlotte will strive to become a low carbon city by 2050, working to reduce contributed CO₂ from an estimated twelve tons per person annually to approximately 2 tons per person annually within the city; and,

WHEREAS, Charlotte is currently developing a Strategic Energy Action Plan (SEAP), which will contain short, medium and long terms actions to deliver deep reductions in carbon emissions spanning all sectors in order to reach the CO₂ targets; and,

WHEREAS, a low carbon city is delivered through processes, strategies, practices, tools, and institutional structures that promote collaboration between city, public, private, academic, and nonprofit constituencies to develop and implement long-term, deep reductions in carbon emissions, and,

WHEREAS, these processes, strategies, and collaborations will balance economic considerations with advancement towards the 2050 goal, and

WHEREAS, low carbon cities improve their environmental sustainability, social capital and economic mobility through growth in clean energy industries and workforce development opportunities; and,

NOW, THEREFORE, BE IT RESOLVED that the City of Charlotte will strive to become a low carbon city by 2050 and will develop a Strategic Energy Action Plan to be presented to City Council.

NOW, THEREFORE, BE IT FURTHER RESOLVED that the City of Charlotte will continue the work currently under way to advance short term goals for reductions in energy consumption in city operations as a first step on the path towards a low carbon future.

Adopted on this ___^h day of ___, 2018.

Energy Efficiency and Low Carbon Short Term Project List

Electric Vehicle Infrastructure

Install EV charging stations at existing city facilities

Expand Public access to EV charging stations by adding at 11 sites identified

Fleet Investments

Purchase additional hybrid and electric sedans for City motorpool

Add auxiliary power units to Fire Trucks to reduce idling and lower fuel consumption

Add seven CNG pick-up trucks for Landscape Management

Continue investing in CNG for Solid Waste trucks

CATS Van Pool conversion to plug-in hybrids

Transition from gas powered to electric vehicles at water and wastewater plants

Facilities Investments

Solar Photovoltaic Feasibility Studies

- NorthEast Vehicle Maintenance Shop

- CATS South Tryon

- CMPD Providence, Hickory Grove and Westover Stations

- Spratt Street Facility

- Charlotte-Mecklenburg Government Center

- Future Fire Station 43

LED Lighting Upgrades

HVAC Upgrades

Concourse A Chiller to be replaced with more efficient unit

Installation of View Glass in Concourse A Expansion will reduce the amount of solar heat gain while enhancing passenger comfort. Initial calculations suggest that the energy savings are equivalent to 16.1 metric tons of GHG emissions every year.

Energy Efficiency and Low Carbon Short Term Project List

Circular Economy Initiatives

Composting pilot project will enable Solid Waste Services to provide curbside collection of organic materials and food waste to 100 households in the city's NESD. Residents who choose to participate will receive weekly curbside collection from Solid Waste every Friday, from August 2018 to December 2018.

Industrial Plant and Process Upgrades (Charlotte Water)

Aeration System improvements at Sugar Creek WWTP and Irwin Creek WWTP. This includes upgrading the air blower equipment with higher efficiency equipment

Disinfection upgrades at the Mallard Water Reclamation Facility to implement new Ultra Violet Disinfection that utilizes significantly less power than the existing system (25%) (2019). Plan is to upgrade Ultra Violet Disinfection at Irwin, Sugar and McDowell in future years.

Rehabilitation and upgrade program provides for replacement or upgrades of existing equipment that is no longer efficient. Replacements and upgrades provide more efficiency reducing our energy use overall. This includes replacement of pumps, motors, major mechanical and electrical equipment. (on going)

Catawba River Pump Station – Major upgrade to Cell 3 (1950s) to include new electric motors for pumping

Eliminate a sub-station at Catawba River Pump Station and switch to more efficient voltage of 4160



Litter Collection Overview

Nicole R. Storey, AICP
Neighborhood & Community Partnerships Manager

April 30, 2018



Presentation Outline

1. Background
2. Staff Responsibilities
3. Staff Supported Volunteer Efforts
4. Recent Enhancement
5. Q & A



Background

Litter has been observed along select public streets and private properties within the City

What is litter?

- Any discarded materials that accumulate on a premise in an untidy manner
- The City is tasked with litter collection within city maintained public ROW and litter abatement through civil penalties under City Code Chapter 10, Health and Sanitation



Litter Control Ordinance

City Code Chapter 10, Article III – PUBLIC HEALTH NUISANCES,
DIVISION 3. – MAINTENANCE OF PREMISES AND LITTER CONTROL,
Section 10-135 – Unauthorized accumulations

- It shall be unlawful for any Person to scatter, cast, throw, blow, place, sweep or deposit anywhere within the city any litter in such a manner that it may be carried or deposited upon any Roadway, sidewalk, alley, body of water, sewer, parkway, lot, or Premise.
- Any unauthorized accumulation of litter is hereby declared to be a public nuisance and is prohibited. A civil penalty in the amount of \$150.00 may be issued to any Person in violation of this section.



Staff Responsibilities

Rights of Way Cleaning (SWS)

- Citywide litter pick-up
 - 11 two-person crews and community service workers service the city's 4,952 curb miles (2,476 street miles)
 - Routes and frequency determined by trash patterns, service requests calls and field staff observations
 - 2x's daily collection: Tryon Street Mall, other uptown streets as needed, 5 Points & CATS Blue Line
- Citywide street sweeping
 - 12 one-person crews average 120,000 curb miles (60,000 street miles) annually
 - Frequency: uptown daily, outside Uptown quarterly and other areas as-needed based on service calls and staff field observations
- NO service on private property, property owner responsibility
- NO service on state-maintained streets - budget & staff eliminated FY 2006



Staff Responsibilities

Landscape Maintenance Litter Removal Activities (EPM)

- Contracted service, frequency ranges
 - 3x's per week:
 - landscaped areas at 5 Points & W Trade/Wesley Heights Way intersections
 - Settlers Cemetery
 - 2x's per week:
 - CATS Blue Line Extension, N Tryon St medians
 - 1x per week:
 - Uptown medians, city building properties, Cemeteries
 - Every 2 weeks:
 - South Corridor Infrastructure Project (SCIP) intersections, medians and road shoulders
 - The following when landscaping is city installed
 - areas along connectivity paths between neighborhood streets
 - landscaped dead ends
 - landscaped medians along city & state roads outside uptown



Staff Supported Volunteer Efforts

Neighborhood Matching Grants Program (HNS)

- Supports eligible neighborhood organizations to
 - Implement self-determined improvement projects
 - Build organizational capacity
 - Develop partnerships
- Awards grants of up to \$10k or \$25k
- At least 50% volunteer match req'd, remaining match is volunteer hours, in-kind donation and/or cash
- Many neighborhoods pledge community clean-up event(s), can fund clean-up and beautification projects
- FY17 – 64 grants awarded, 13,842 volunteer hours contributed



Staff Supported Volunteer Efforts

Keep Charlotte Beautiful (KCB)

- Keep America Beautiful (KAB) affiliate established in 1974, administered by HNS
- 20-person Council and Mayoral appointed board created to:
 - Make recommendations to City Council and private sector for containerization of man-made trash
 - Implement Adopt-a-City Street Program (AACS):
 - 1 mile min, 2 years, 3+ clean-ups/year
 - 206+ active orgs, 418+ miles adopted
 - Bags, litter sticks, gloves & vests provided
 - FY17 – 1,306 volunteers collected 22.43 tons of litter 66% increase over FY16
- Annual Community Appearance Index (Litter Index)
 - 70 defined locations, rates roadside litter
 - Reflected in SWS Balanced Scorecard
 - FY17 results indicate 7-year low in visible litter
- Annual Great American Clean-Up Campaign





Staff Supported Volunteer Efforts

Charlotte-Mecklenburg Stormwater Services (CMSWS)

- The Big Spring Clean (CMSWS)
 - Annual one-day clean-up event, replaced "Big Sweep"
 - FY18 event - 336 volunteers, 22 stream miles cleaned & 9 tons of trash and recycling collected
- Adopt A Stream Program
 - Engages residents to remove trash & visually inspect stream miles for pollution
 - Streams cleaned at least 2x per year
 - FY17 - 1928 volunteers, 155 clean-ups, 13.8 tons of trash/debris removed
- Second Saturday Cleanups
 - CMSWS hosted, different location 2nd Saturday of each month
 - Activity may include tree planting, stream cleanup or storm drain marking
 - FY17 - 342 volunteers



Recent Enhancement

Neighborhood Garbage Collection Program (SWS & CDOT)

- Pilot program to support additional collection bins for neighborhood and merchant organizations
- Developed in response to neighborhood request
- \$250/year for weekly SWS collection
- NoDa pilot program is underway



Questions?