# Receive Update on FY22&23 Climate Action Implementation Plan

Feb. 23, 2022
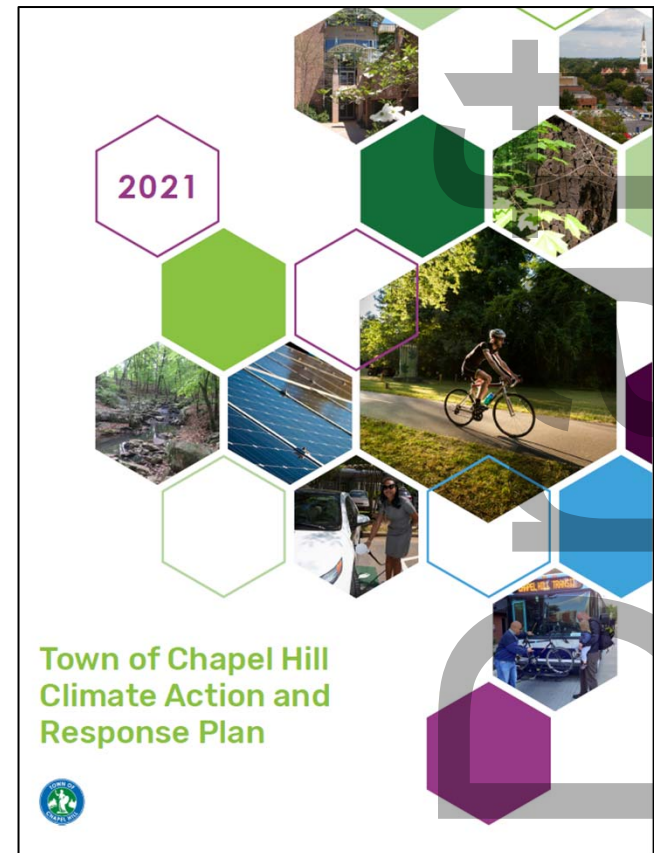
2021

**Town of Chapel Hill Climate Action and Response Plan**

# Recommendation

That the Council receive the information and provide guidance to staff, as needed.

# Overview
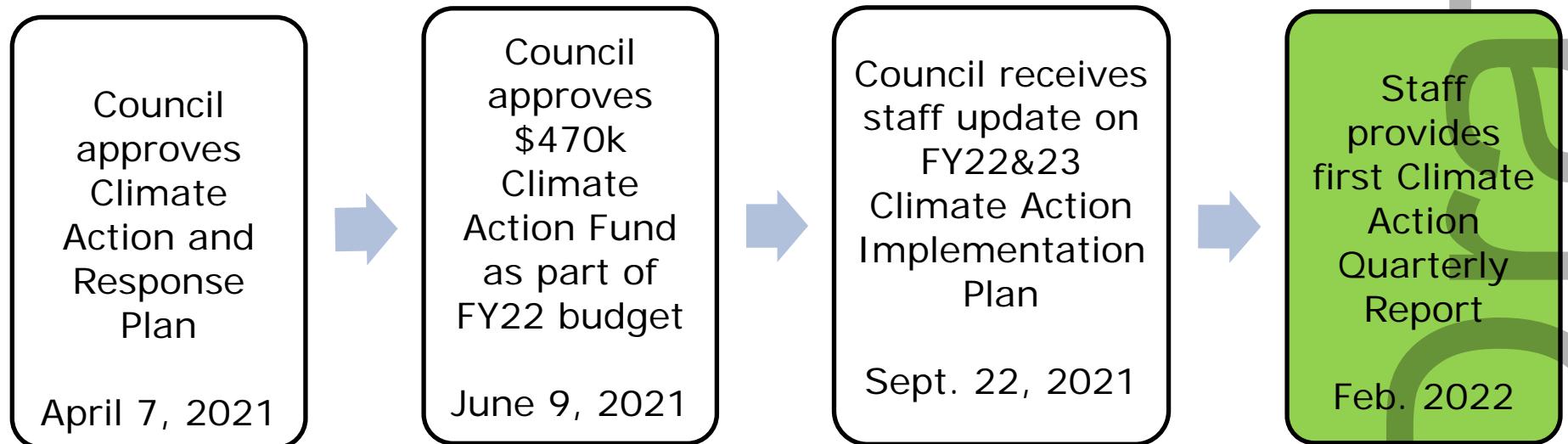
1. Brief Recap

2. Implementation Plan Metrics

   1. Available Data

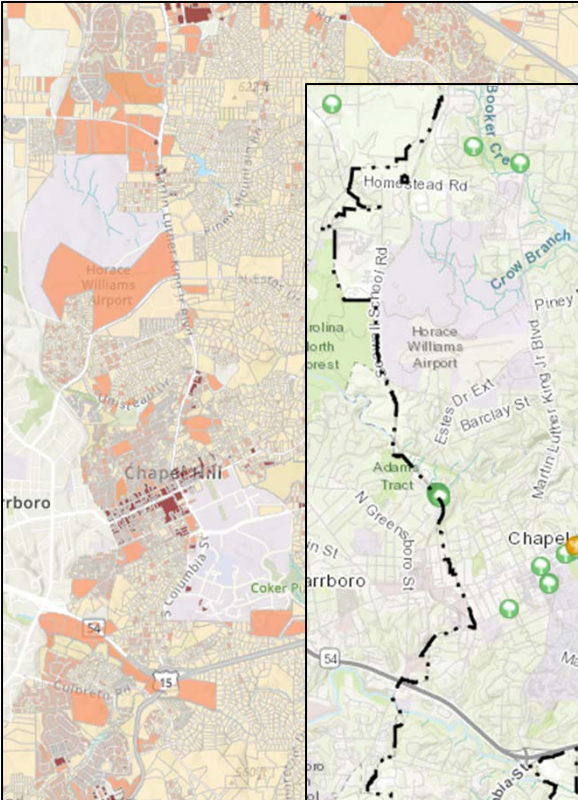   2. Progress to date

3. Online Hub

4. Recommendation

# 1. Brief Recap

# Timeline

Council approves Climate Action and Response Plan

April 7, 2021

→

Council approves $470k Climate Action Fund as part of FY22 budget

June 9, 2021

→

Council receives staff update on FY22&23 Climate Action Implementation Plan

Sept. 22, 2021

→

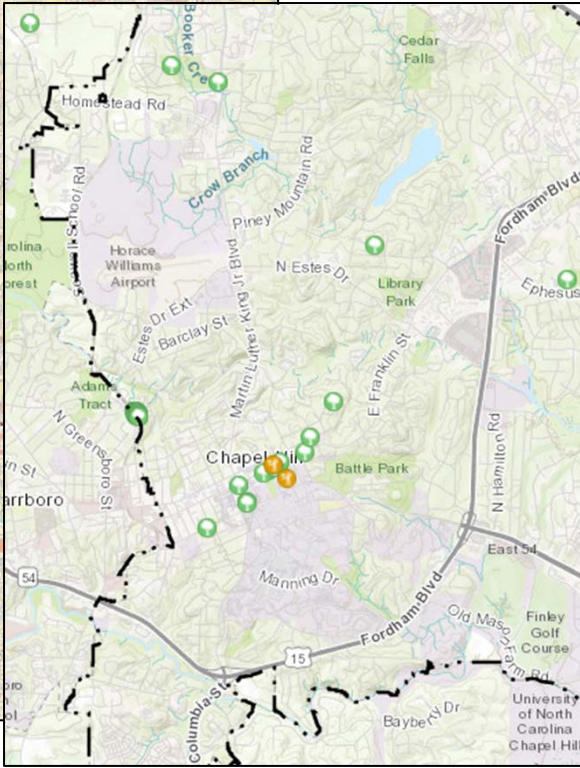Staff provides first Climate Action Quarterly Report

Feb. 2022

# Climate Equity


Extreme Heat
Parcel Analysis


Community Tree Planting Suggestions

Tree Planting and Survey
- Goal
- Resources
- Engagement
- Action

EV Charging Stations
- Priority Locations

Equity Lab

# Urgency

| 2022 Baseline | Annual Actions to meet 2030 targets | 2030 Total | 2050 Total |
|---|---|---|---|
| 26 | **15**<br>Town Vehicles to be replaced with electric | 140 | 280 |
| 1,259 | **6,472**<br>Number of new vehicles to be electric in Orange County | 53,034 | 106,068 |
| TBD | **None - 938**<br>Number of all-electric buildings (new or converted) | 7,500 | 15,000 |

# 2. Implementation Plan Metrics

# Indicators

- 15 Key Indicators in the adopted plan
    1. External data often updated annually
    2. Program performance indicators continuous

- Several ways to measure each indicator
    1. Reliable,   Current,   Specific,   Automatic

Draft

# Program Indicators

| Programmatic Performance | Total Actions | Priority Actions |
|---|:---:|:---:|
| Implementation Plan Actions Identified to Date | 97 | 34 |
| % Actions Completed | 8% | 9% |
| % Actions Advanced | 65% | 68% |
| Additional Resources Applied For | $391,450 | |

# Action Areas

**Buildings & Energy**

**Transportation & Land Use**

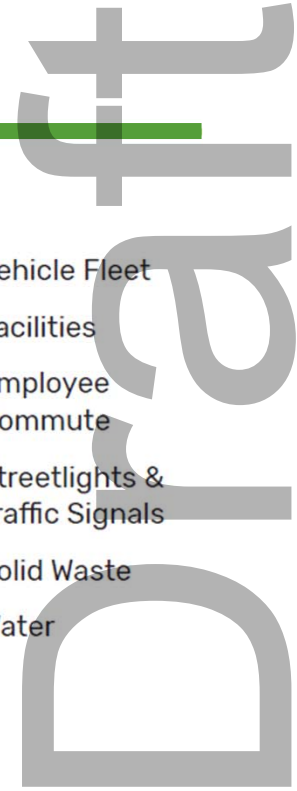**Waste, Water & Natural Resources**
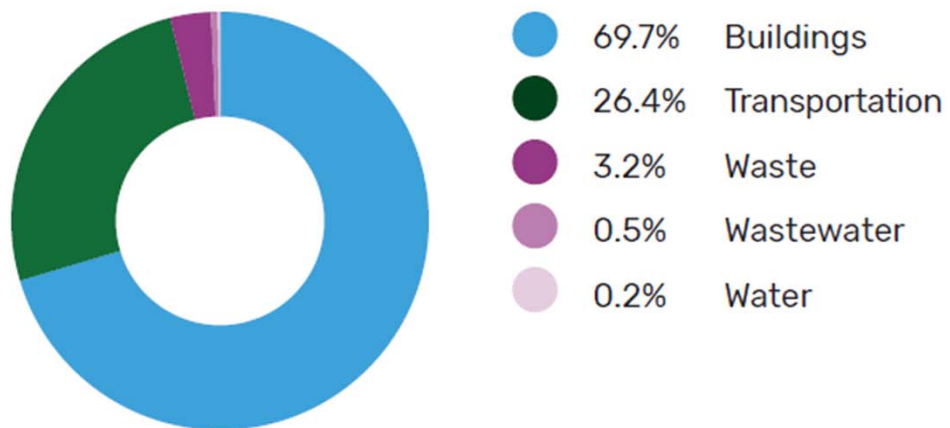
**Resiliency**

# Key Indicators

1. Reduction in GHGs for buildings and energy sector

2. Percent of energy from clean, renewable sources

3. Number of buildings meeting LEED or similar standards

Buildings
& Energy

## Community GHG Emissions by Sector

| | | |
|---|---|---|
| 🔵 | 69.7% | Buildings |
| 🟢 | 26.4% | Transportation |
| 🟣 | 3.2% | Waste |
| 🟣 | 0.5% | Wastewater |
| 🟣 | 0.2% | Water |

## Municipal GHG Emissions by Sector

| | | |
|---|---|---|
| 🔵 | 52.5% | Vehicle Fleet |
| 🔵 | 21.2% | Facilities |
| 🟢 | 15.8% | Employee Commute |
| 🟢 | 7.1% | Streetlights & Traffic Signals |
| 🟣 | 3.3% | Solid Waste |
| 🟣 | 0.1% | Water |

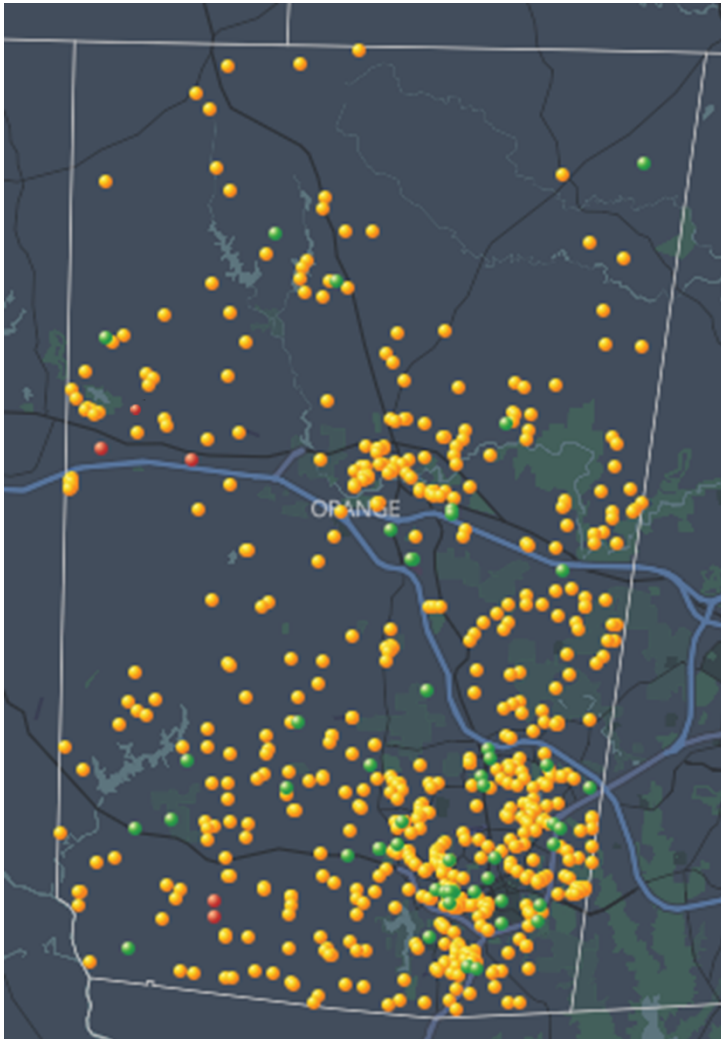| 2005 | 2017 | 2025 | 2030 | 2040 | 2050 |
|---|---|---|---|---|---|
| 1,047,516 | 914,825 | 926,211 | 1,032,121 | 1,123,766 | 1,203,836 |
| 1,047,516 | 914,825 | 865,410 | 780,384 | 615,956 | 462,154 |
| 1,047,516 | 914,825 | 796,044 | 667,664 | 416,528 | 176,018 |
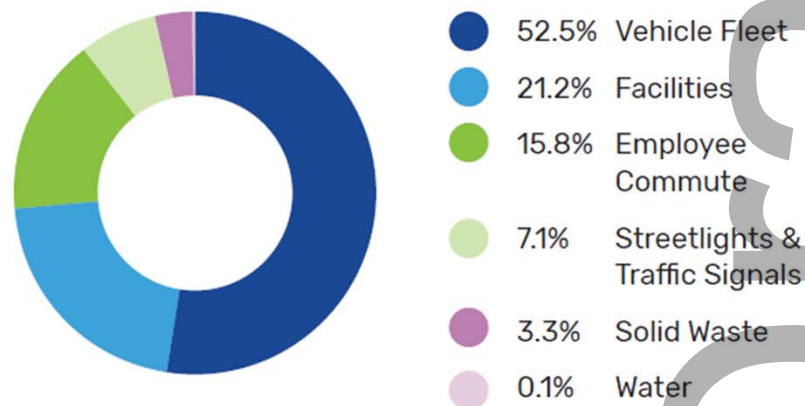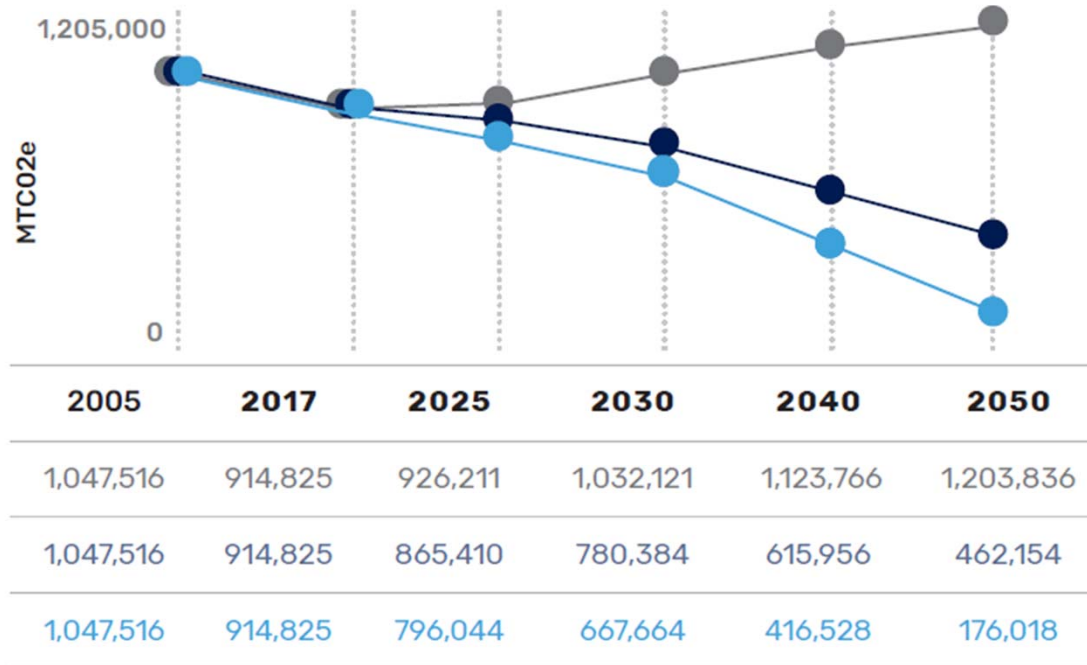
- Business as Usual
- Climate Action & Response Plan (CARP) Implementation
- CARP + UNC Climate Actions

*2005 GHG estimates are based on Orange County data, apportioned based on population.

**Buildings & Energy**

| | Orange County (all to date) | Chapel Hill (by March 2021) |
|---|---|---|
| # of solar installations | 662 | 151 |
| Total solar capacity | 25.6 MW | 1.15 MW |
| Total Utility Scale Solar Capacity | 20 MW | 0 MW |

**4%** Total clean renewable energy

**3,104** Certified green buildings
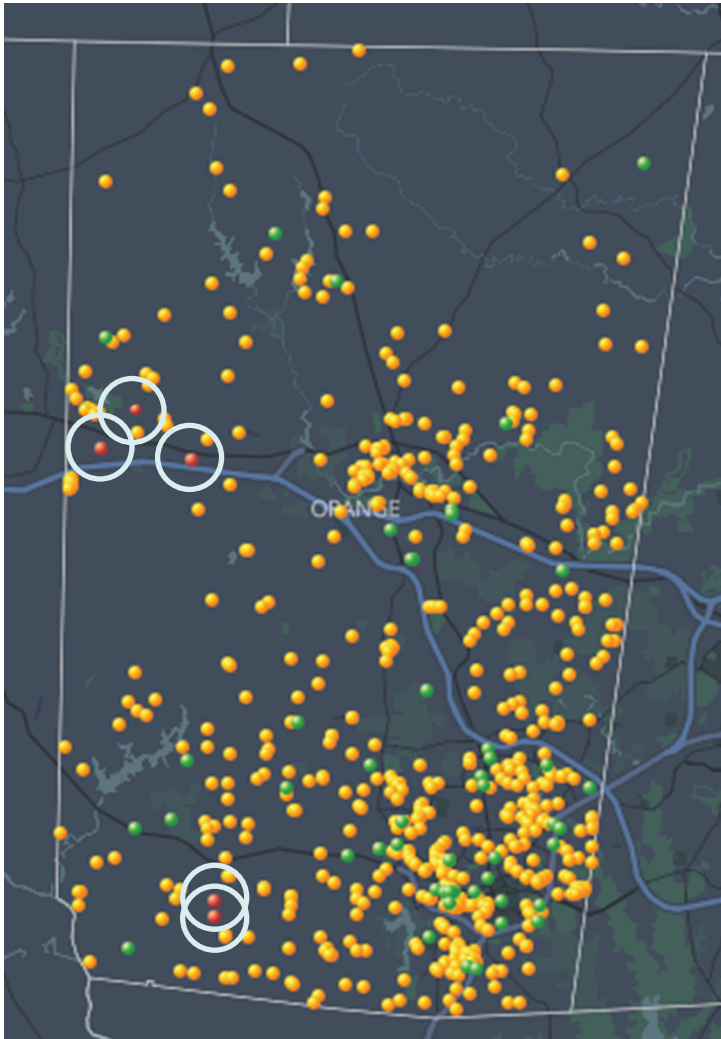
| | Orange County (all to date) | Chapel Hill (by March 2021) |
|---|---|---|
| # of solar installations | 662 | 151 |
| Total solar capacity | 25.6 MW | 1.15 MW |
| Total Utility Scale Solar Capacity | 20 MW | 0 MW |

**4%** Total clean renewable energy

**3,104** Certified green buildings

# FY22 Climate Action Fund



**Buildings & Energy**

| Action | Fund Cost | Other Funds | Total Cost | ROI (yrs) |
|---|---|---|---|---|
| LED Lighting Conversion at Library | $30,104 | $68,068 | $98,172 | 1 |
| LED Lighting Conversion at Town Hall | $14,326 | $7,873 | $22,199 | 6 |
| LED Lighting Upgrade at Cedar Falls Park | $91,943 | $128,057 | $220,000 | 12 |
| Green Building Policy Update | $51,985 | $0 | $51,985 | N/A |

FY23 Preview: Home Energy Upgrade Program (LMI, HMC)

# Key Indicators

1. Vehicle travel
2. Pedestrian and bicycle travel
3. Pedestrian and bicycle facilities
4. Walkability

Transportation
& Land Use

CAROLINA TRACKER
A Resource For Recovery

HOME    STORIES

Vehicle miles traveled (VMT) in North Carolina
Daily volume (gray) and 7-day moving average (red)

Percent change since January (blue)

2020
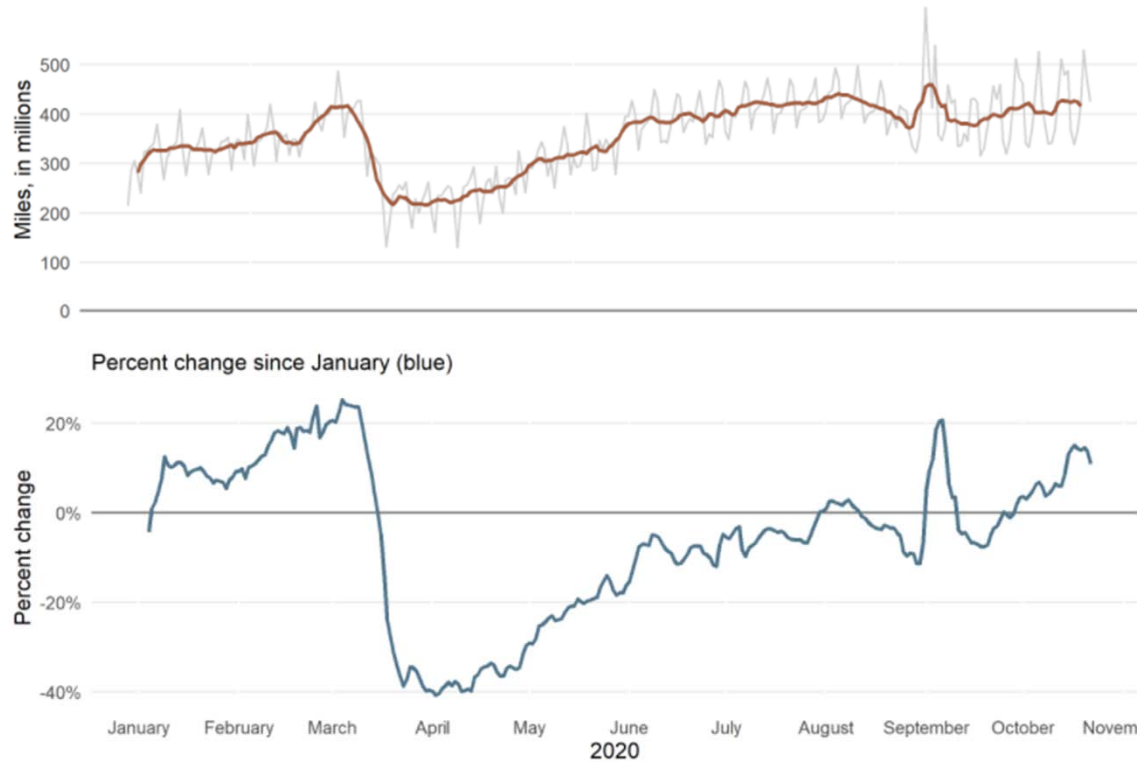
Draft

| Infrastructure Type | Miles |
|---|---|
| **Bike Lane** | **32** |
| Buffered Bike Lane | 5.5 |
| Paved Greenway | 18.25 |
| Sharrows | 4.3 |
| Sidepath | 2.4 |
| Unpaved Greenway | 6.8 |
| Grand Total | 69.25 |

# Bolin Creek Trail

## Bicycle Counts Semi-Annual Summary
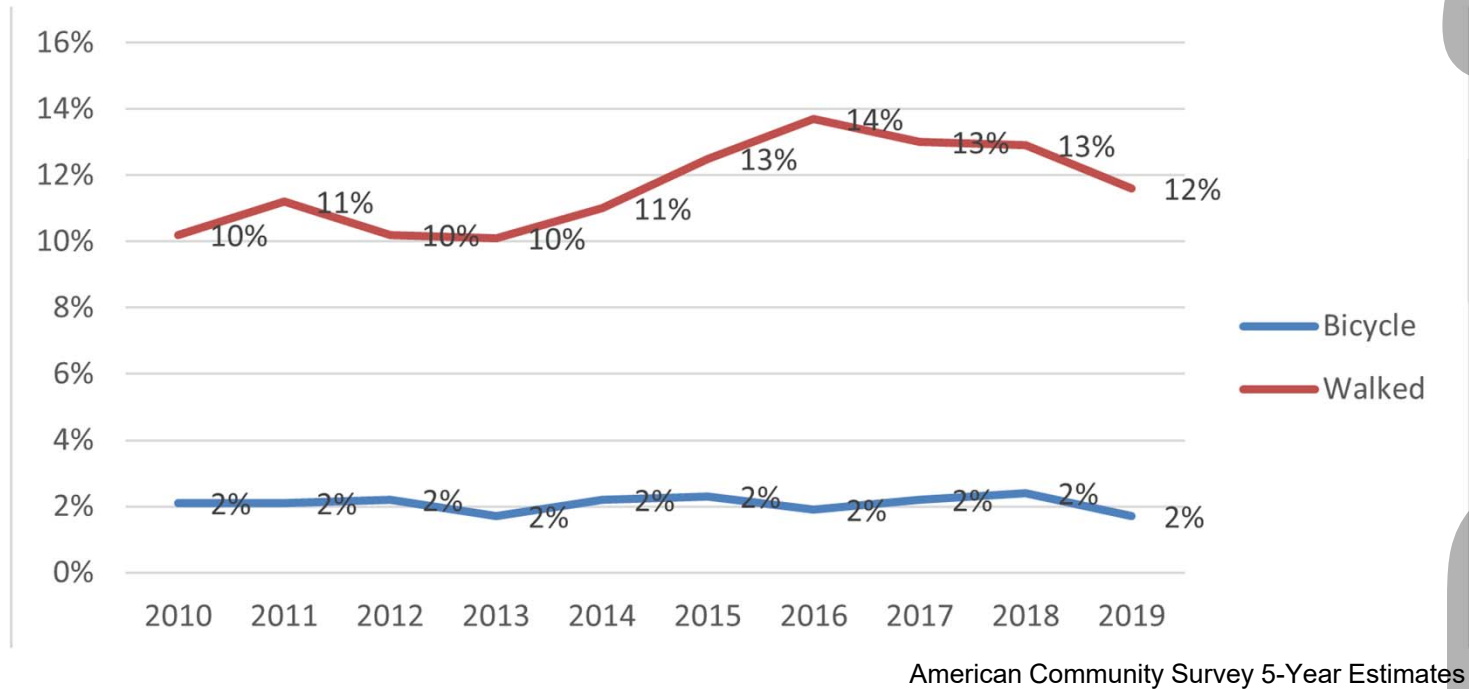## February 15—August 15, 2020

Bolin Creek Trail is a 1.5-mile trail connecting the Community Center Park and the Battle Branch Trail. It is 10' wide and paved through meadow and wooded floodplain.

## Map
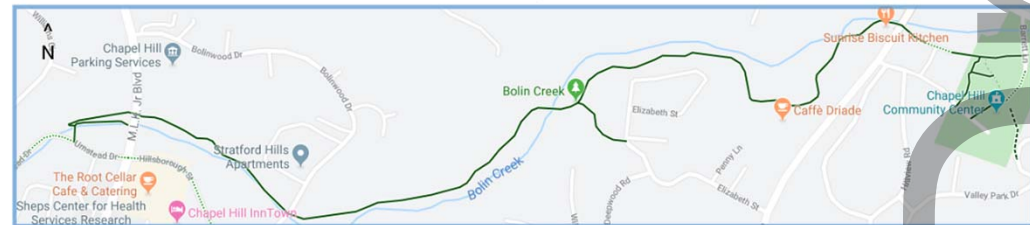
# Pedestrian and bicycle travel and facilities



American Community Survey 5-Year Estimates

# FY22 Climate Action Fund

| Action | Fund Cost | Other Funds | Total Cost | ROI (yrs) |
|---|---|---|---|---|
| Install 2 EV Charging Stations (Town Hall) | $11,968 | $18,000 | $29,968 | N/A |
| LUMO Rewrite (sustainable design) | $34,000 | $1,198,517 | $1,232,517 | N/A |
| Grant: EV Refuse Truck(s) | TBD | $464,690 | $844,890 | TBD |
| Grant: Climate Corps Fellow (EV Planning) | $0 | $11,250 | $11,250 | N/A |
| Grant: EV Charging Station (Eubanks P&R) | TBD | $18,500 | TBD | N/A |

FY23 Preview: 1-2 EV Fleet Vehicles (Town Hall)

**Transportation & Land Use**

# Key Indicators

1. Reduction in waste/water GHGs

2. Solid waste diverted from landfill

3. Net acreage of stream buffers and urban forest

4. Net acreage of urban tree canopy coverage

Waste, Water &
Natural Resources

Waste, Water &
Natural Resources
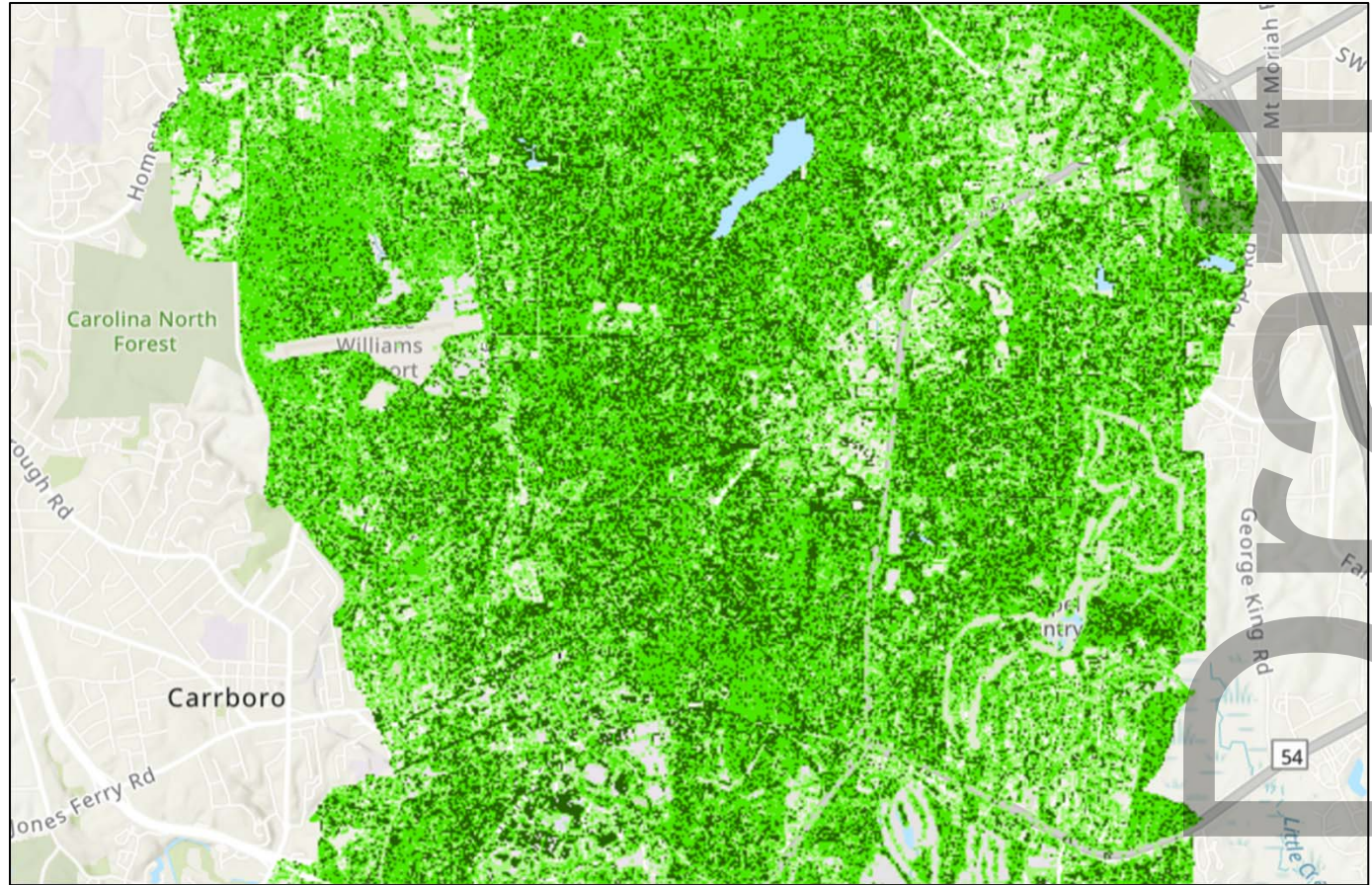
# FY22 Climate Action Fund

**Waste, Water & Natural Resources**

| Action | Fund Cost | Other Funds | Total Cost | ROI (yrs) |
|---|---|---|---|---|
| Water Alert Sensors (rain, stream gauges) | $9,000 | 0 | $9,000 | N/A |

<u>FY23 Preview</u>: Participate in Solid Waste Master planning ($0)

Draft

# Key Indicators

1. Time to recovery after a catastrophic event

2. Average Income

3. Access to food/basic services

4. Neighborhood Cohesion

**Resiliency**

Draft

# Key Indicators

1. Time to recovery after a catastrophic event

2. Average Income

3. Access to food/basic services

4. Neighborhood Cohesion

**Resiliency**

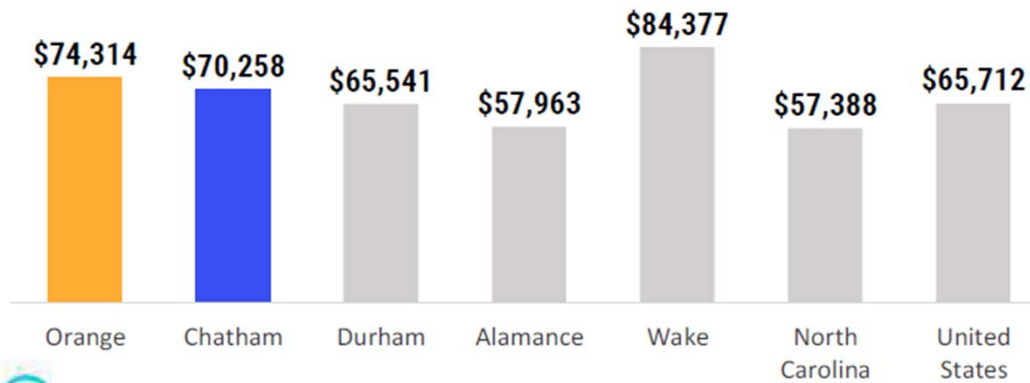Draft

**Wake Leads, Orange 2nd in Regional Median Household Income in 2019**

Household Income is the total annual earnings of all members of a household, whether they are a family or separate individuals living together (Distinct from Median Family Income and Per Capita Income)

| Orange | Chatham | Durham | Alamance | Wake | North Carolina | United States |
|--------|---------|--------|----------|------|----------------|---------------|
| $74,314 | $70,258 | $65,541 | $57,963 | $84,377 | $57,388 | $65,712 |

Source: U.S. Census Bureau Small Area Income and Poverty Estimates (SAIPE)

Chapel Hill Median Household Income:

| Income & Poverty | |
|------------------|---|
| Median household income (in 2019 dollars), 2015-2019 | $73,614 |
| Per capita income in past 12 months (in 2019 dollars), 2015-20 | $42,485 |
| Persons in poverty, percent | ⚠ 19.5% |

**Resiliency**

Draft

LEGEND

| | |
|---|---|
| | A ROUTE |
| | B ROUTE |
| | CCX ROUTE |
| | CL ROUTE |
| | CM ROUTE |
| | CW ROUTE |
| | D ROUTE |

**Resiliency**
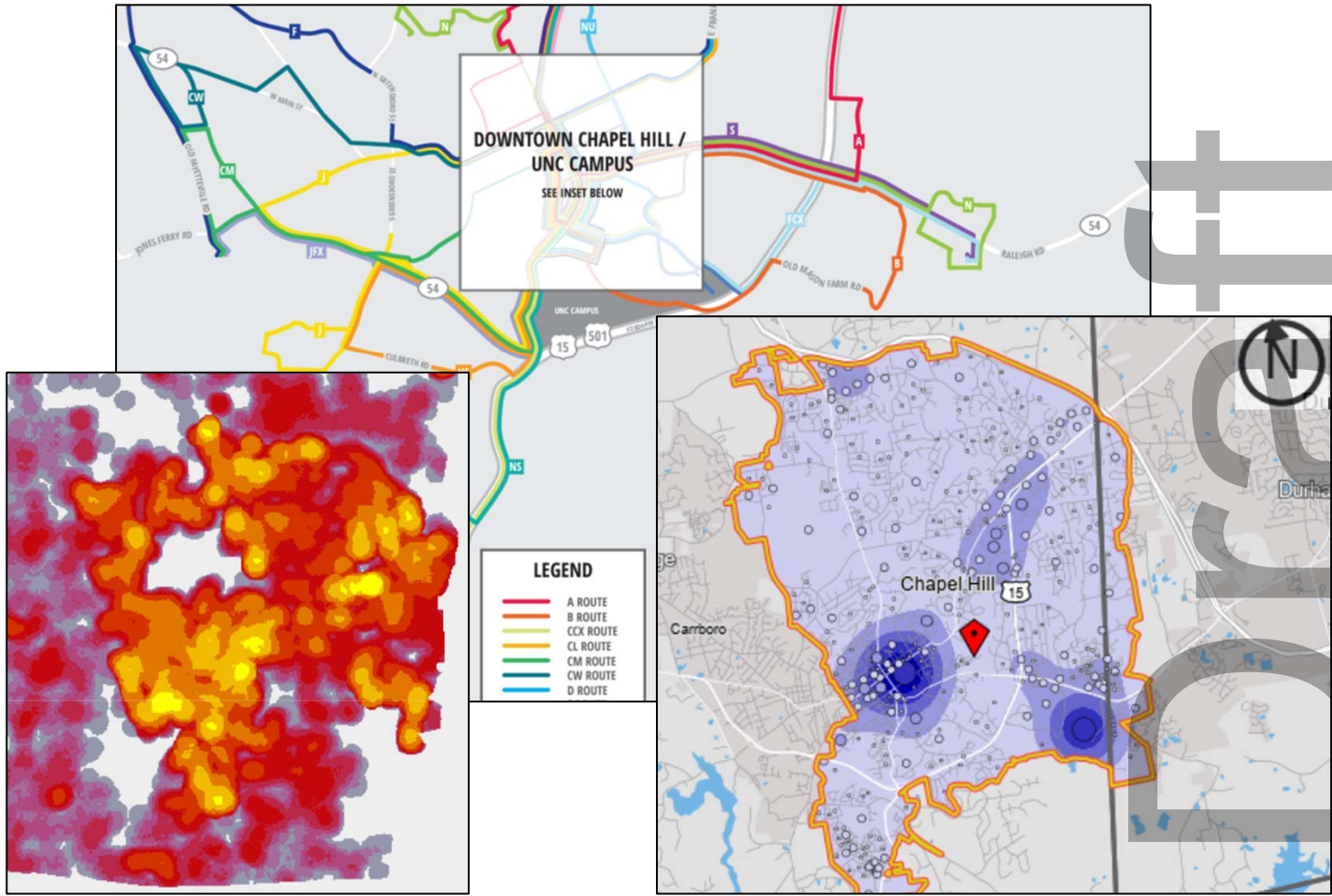
# FY22 Climate Action Fund

| Action | Fund Cost | Other Funds | Total Cost | ROI (yrs) |
|---|---|---|---|---|
| LUMO Rewrite Green Infrastructure Study | $25,000 | See LUMO above | $25,000 | N/A |
| ArcGIS Urban Hub (dashboard website) | $2,500 | $0 | $2,500 | N/A |
| Tree Planting | $0 | $40,000 | $0 | N/A |

FY23 Preview: ArcGIS Urban Hub (dashboard website)

**Resiliency**

# 3. Online Hub

# Climate Action Plan
Burlington, Vermont

In April 2014, the City Council ratified Burlington's updated Climate Action Plan, including 39 strategies in 8 ke... These strategies, requiring the work of various City departments and stakeholders, were identified to help us ... greenhouse gas reduction targets while advancing Burlington as a great place to live, work, and play...

## Progress Report

A lot of work has been done since the Plan was ratified - but there's still more to do. What has been completed? What remains incomplete, and what strategies have ... or implemented? Click the sector headings below to learn more.

Community Transportation

Compact Mixed Use Development

Energy Efficiency in Buildings

Governm... Transporta...

**0** Incomplete

**3** Launched

**2** Implemented

**1** Complete

## Progress Report

### Create a downtown Transportation Management Association (TMA)
**Strategy:**
Develop a downtown transportation management association that plans, de- velops, and manages all employee transportation and parking programs, infrastructure, and related facilities. The goal of the TMA would be to offer and improve cost-effective and convenient alternative transportation services while simultaneously reducing travel demand and traffic congestion and im- proving air quality.
**Department(s):** Community Economic Development Office and Department of Public Works  **Staff:** Chapin Spencer
**Details:**
Study of Transportation Demand Management Plan and Parking Management Plan -- both of which support TMA development -- currently underway
Progress: Launched

### Develop a Citywide Bike/Pedestrian Plan
**Strategy:**
This proposed action would build upon the City's North/South Bike Plan by taking a more comprehensive look at the City's existing bike/pedestrian infrastructure and designing and implementing necessary improvements.
**Department(s):** Dept. of Public Works  **Staff:** Nicole Losch
**Details:**
Bike-Walk Transportation Plan underway with winter 2016 anticipated completion.
Progress: Complete

### Develop infrastructure for fuel-efficient vehicles
**Strategy:**
This proposed action would develop infrastructure and incentives for fuel-efficient vehicles. This might include charging stations for electric and electric-hybrid vehicles and fueling stations for CNG and other alternative fuel vehicles.
**Department(s):** Dept. of Public Works and Burlington Electric Department  **Staff:** Chapin Spencer
**Details:**
4 new EV stations installed/upgraded: BED, corner of Church and Main Street, Marketplace and Lakeview Garages http://bit.ly/1MXHQJq
Progress: Implemented

# 5. Recommendation

# Recommendation

That the Council receive the information and provide guidance to staff, as needed.

# Questions

Do you have any questions about tonight's report?

Is there anything you wanted to hear more about?

Brennan Bouma

Sustainability Program Analyst

**(919) 969-5011**

www.sustainchapelhill.org

Draft

# Supplemental slides

**1. Green the grid** ▼30-31%



**2. Sustainable transport.** ▼12-13%



**3. Sustainable development** ▼11%



**4. Green building retrofits** ▼6-7%

# **Resiliency** ▼recovery time



## Action Examples

Green infrastructure planning

Tree planting + invasive species removal

## Target Examples

Green infrastructure ordinance by 2022

Plant 200+ trees per year

Draft

# Resiliency Plan Indicators

**1,848 mental health emergency visits** (North Carolina Institute of Medicine)

**6.6 per 100,000 rate of unintentional opioid overdose death** in Orange County (Community Health Assessment)

**10.5% of Orange County residents, between 0-65 years of age are uninsured** (Small Area Health Insurance Estimates)

**115 weekly minimum wage hours** required to afford a Fair Market Rate (FMR) two-bedroom apartment (Orange County Affordable Housing 101)

**6.6% annual unemployment rate** (Community Health Assessment)

**58.6% of students in North Carolina are on free or reduced meal programs** (Kids Count Data Center)