



# Consider Adopting the Climate Action & Response Plan

April 7, 2021



# Recommendations

That the Council adopt the Climate Action and Response Plan, request funding options as part of the FY21-22 budget process (R-10), and join other NC cities in declaring a climate emergency (R-11).



# Overview

1. Plan Summary
2. Revisions since January
3. Data Gathering
4. Proposed Next Steps
5. Action Updates
6. Recommendations



# 1. Plan Summary

# sustainchapelhill.org

**2021**

## Town of Chapel Hill Climate Action and Response Plan

## Timeline for Climate Action and Response Plan Implementation

**2020**  
CARP drafted

**2021**  
CARP adopted, implementation begins

**2022**  
Green infrastructure ordinance enacted

**2023**  
Green building policy adopted, LUMO Rewrite enacted

**2024**  
EV bus pilot ends, Solid Waste Master Plan complete

**2025**

- Next 5-Year Plan Update
- Top 3 stormwater projects complete
- 11 fleet vehicles electrified
- MSC replaces 4 municipal buildings\*
- 40% of new bldgs all-electric
- 50% of new bldgs net-zero
- Replace 10 buses with all-electric
- Bus rapid transit online
- MSC = municipal service center, designed to meet AA 2030 Challenge

**2030**

- 100% of new bldgs all-electric
- 100% new bldgs net-zero
- Half of Town facilities 50% net-zero
- 10% of residential is 50% net-zero
- 10% of commercial is 50% net-zero
- 11,151 electric vehicles
- 7,500 all-electric buildings

**2040**

- Mobility Plan implemented (35)
- 10% reduction in vehicle miles
- 20% of residential is 50% net-zero
- 10% of commercial is 50% net-zero
- 25,371 electric vehicles

**2050**

- Zero waste (45)
- 100% of buildings all-electric
- 30% of residential is 50% net-zero
- 15% of commercial is 50% net-zero
- Duke Energy + Dominion carbon neutral
- 35% or greater car travel to walk/bike/bus

Town of Chapel Hill Climate Action and Response Plan 4

## Chapel Hill Climate Goals

The Town of Chapel Hill is committed to reducing Greenhouse Gas (GHG) emissions at the Community-wide level and for Town operations.

Governor Roy Cooper issued an executive order in support of the Paris Agreement in 2018. The order commits to reducing statewide GHG emissions to 40% below 2005 levels by 2025.

### Town & Community Goals

**50%** reduction by 2030

**net-zero** by 2050

**80%** clean, renewable energy by 2030

**100%** clean, renewable energy by 2050

### What is clean, renewable energy?

Renewable energy is derived from natural processes that are regenerative over short periods of time or cannot be depleted such as solar, wind or geothermal. Clean energy comes from renewable energy sources that do not generate emissions.

### What is net zero?

Net zero emissions means achieving a balance between activities that create GHG emissions with those that remove them from the atmosphere. Another term for net zero is 'carbon neutral'. Today, reaching net zero emissions often requires the use of renewable energy to 'offset' any GHG emissions that cannot be eliminated.

Town of Chapel Hill Climate Action and Response Plan 8



**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

Complete top 3 subwatershed study stormwater projects

Plant 200+ trees per year

# Taking Action Together



**Buildings  
& Energy**



**Transportation  
& Land Use**

**95% of Community emissions**



**Waste, Water &  
Natural Resources**



**Resiliency**



## TOWN GOVERNMENT ACTIONS

-  Update Green Building Policy for new construction
-  Net-zero emissions for new municipal buildings
-  Energy upgrades for existing municipal green buildings & facilities
-  Create walkable, bikeable, transit-served neighborhoods
-  Increase walking, biking & transit use (mode-shift)
-  Electrify the municipal fleet
-  Electrify the transit fleet
-  Increase transit ridership and implement Bus Rapid Transit (BRT)
-  Protect water quality, natural, & agricultural resources
-  Enhance green infrastructure
-  Strengthen early warning systems for climate hazards & heat

## TOWN & COMMUNITY ACTIONS

-  Net-zero emissions for new construction
-  Energy upgrades for existing buildings & facilities
-  Convert community buildings to all-electric
-  Green the grid
-  Create a Town-wide EV charging station network
-  Expand Transportation Demand Management (TDM) programming
-  Produce zero waste
-  Broaden community-wide resiliency & recovery actions
-  Expand climate action education, outreach, & awareness
-  Grow partnerships, funding, & incentives

## Key Benefits of Taking Action



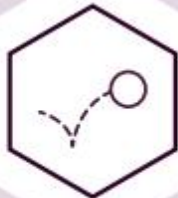
### Public and Environmental Health

Improving air and water quality, stormwater management, recreation, mental health and other ecosystem service benefits.



### Racial Equity and Climate Justice

Addressing inequities in climate change burdens on frontline community members and achieving an equitable distribution of climate action benefits.



### Regional Partnerships

Working collaboratively across the region to take action.

























































### Resilience to Stressors

Improving our ability to bounce back and bounce forward in the face of climate change.

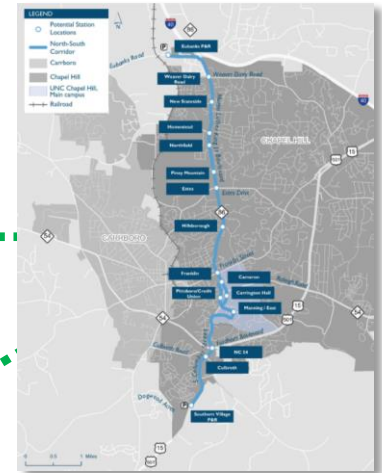
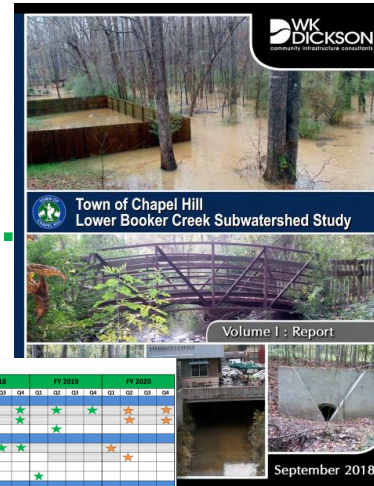
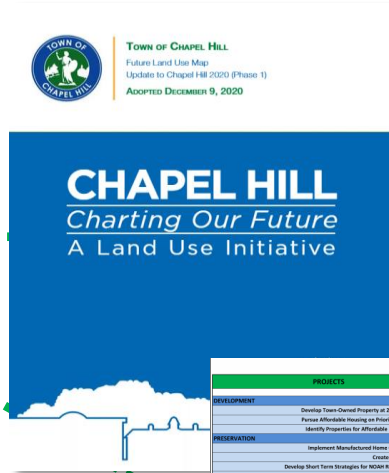
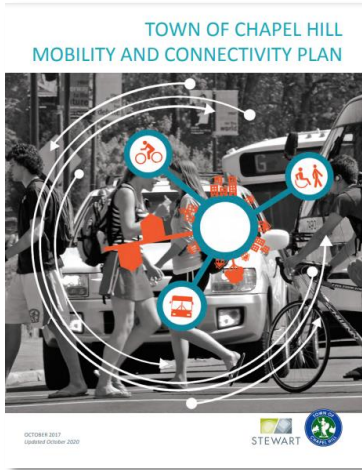


### Job Creation

Investment in sustainability creates a green economy, with local jobs that pay a living wage like: solar installer, green builder, sustainable farm manager, EV station installer, etc.

ACTION	GHG REDUCTION POTENTIAL (MTCO2e)	LEVEL OF INVESTMENT REQUIRED BY TOWN	TOWN'S AUTHORITY TO ACT	CO-BENEFITS
 <b>TRANSPORTATION &amp; LAND USE</b>				
Create a town-wide electric vehicle (EV) charging station network	 107,028	 \$1.7M	Some authority 	     
Expand TDM and plan for mobility on-demand network	 24,119	 \$-\$-\$	Some authority 	   
Create walkable, bikeable, transit-served neighborhoods	 19,905	 \$	Some authority 	     
Increase walking, biking and transit use (mode-shift)	 12,505	 \$\$\$\$	Some authority 	     
Electrify the transit fleet	 4,572	 \$2.82M	Some authority 	  
Increase transit ridership and implement Bus Rapid Transit (BRT)	 2,305	 \$200M	Some authority 	   
Electrify the municipal fleet	 803	 \$480,000	Full authority 	    

# Systems Approach



**Affordable Housing**

PROJECTS	FY 2018		FY 2019		FY 2020	
	01	02	03	04	01	02
<b>DEVELOPMENT</b>						
Develop Town-Owned Property at 2300 Homestead Road		★	★	★	★	★
Permit Affordable Housing on Historical Town Properties	★	★	★		★	★
Identify Properties for Affordable Housing Development	★	★	★		★	★
<b>PRESERVATION</b>						
Implement Manufactured Home Communities Strategy						
Create Preservation Strategy						★
Develop Short Term Strategies for Rental Resident Displacement						
Acquire and Rehab Properties for Affordable Housing Preservation			★			
<b>POLICY</b>						
Implement the Employee Housing Program		★		★	★	★
Participate in the UMO Re-Write Project		★		★	★	★
Create Goals for Affordable Housing in Rural Developments		★		★	★	★
Develop Home Repair Policy						★
Explore Affordable Housing Incentive Options					★	★
<b>FINANCING</b>						
Implement Affordable Housing Investment Plan - Affordable Housing Bond		★	★	★	★	★
Manage the Affordable Housing Development Reserve		★	★	★	★	★
Manage the Affordable Housing Fund		★	★	★	★	★
Jointly Manage the HOPE Program		★	★	★	★	★
Manage the Community Development Block Grant Program		★	★	★	★	★
<b>MANAGING TOWN-OWNED HOUSING</b>						
Create and Implement a Public Housing Master Plan		★	★	★	★	★
Manage Public Housing Inventory		★	★	★	★	★
<b>COLLABORATIONS</b>						
Manage Transitional Housing Inventory		★	★	★	★	★
Conduct Tours and Committees						
Serve as a Partner on Committees and Boards						
Expand Collaboration with Key Partners						

# 2. Revisions

# Revisions Summary



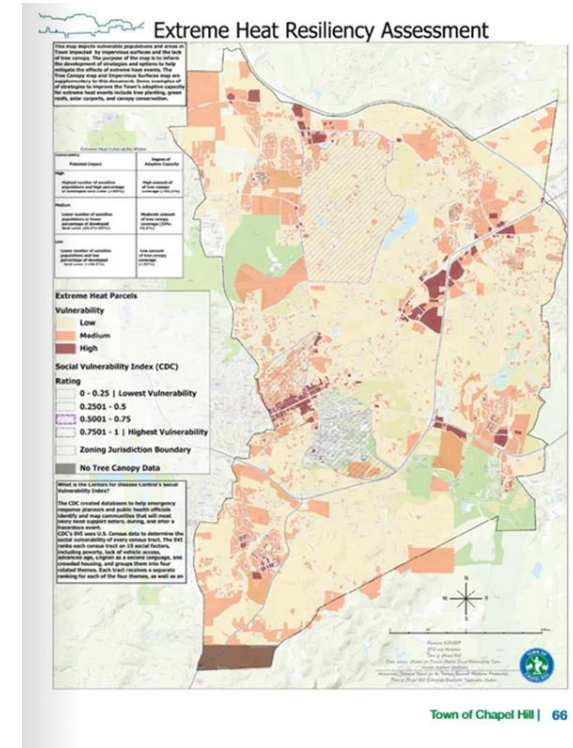
- ✓ Addressed 12 theme areas from January 27 Staff Report to Council
- ✓ Updated plan to include 120+ specific changes identified by public feedback, survey, board and Council review
- ✓ Made additional revisions from Environmental Stewardship Board
- ✓ Met with Sunrise Chapelboro to discuss letter and revisions, including additional improvements

# **3. Data Gathering**

# Impacts: Who and Where?

Reviewed available data to identify places in town where communities of color or low wealth may be disproportionately impacted by the impacts of climate change (e.g., flooding, extreme heat)

- FLUM resilience map series (shown)
- GARE Racial Equity Tool Methodology
- EPA Environmental Justice Screening and Mapping Tool



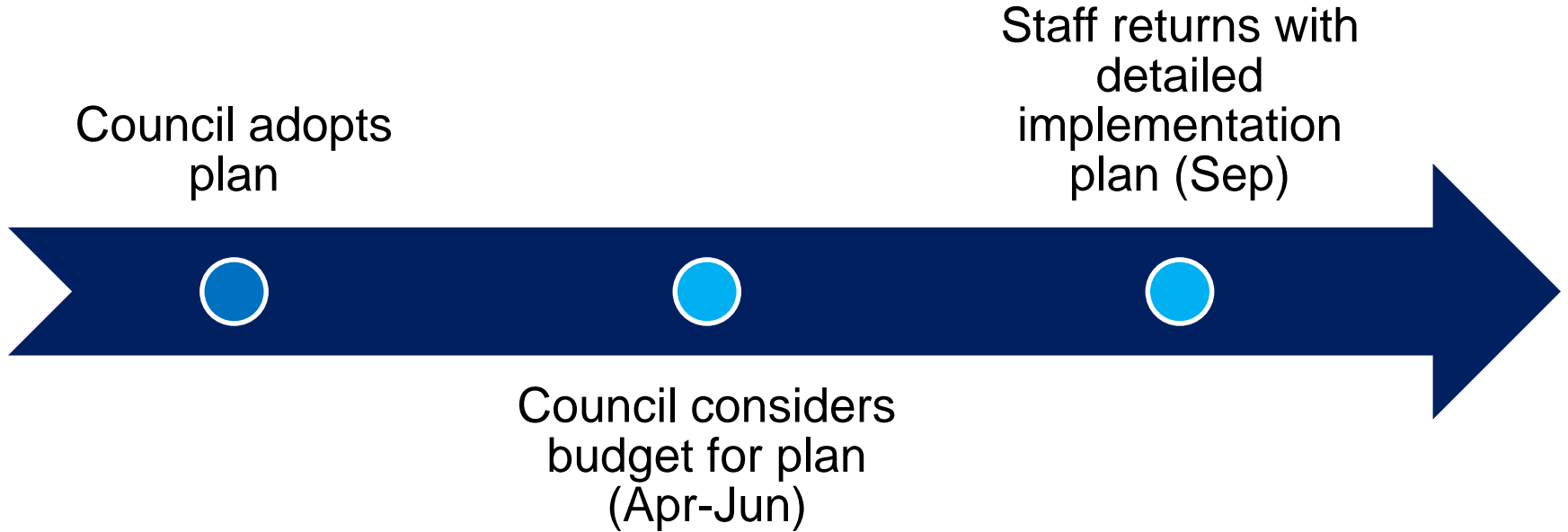


# Impacts: Who and Where?

Selected Variables
<b>EJ Indexes</b>
EJ Index for PM2.5
EJ Index for Ozone
EJ Index for NATA* Diesel PM
EJ Index for NATA* Air Toxics Cancer Risk
EJ Index for NATA* Respiratory Hazard Index
EJ Index for Traffic Proximity and Volume
EJ Index for Lead Paint Indicator
EJ Index for Superfund Proximity
EJ Index for RMP Proximity
EJ Index for Hazardous Waste Proximity
EJ Index for Wastewater Discharge Indicator

# 4. Next Steps

# Looking Forward



# 5. Action Updates

# Action Updates

## Recent Grant Awards

- LED Ballfield Lights (\$128k)
- Tree Planting (\$40k)
- EV Charging Stations (\$18k)
- Solar EV Charging Station (\$18.5k)



# 6. Recommendations

# Recommendations

That the Council adopt the Climate Action and Response Plan, request funding options as part of the FY21-22 budget process (R-10), and join other NC cities in declaring a climate emergency (R-11).



