



**TOWN OF
CARRBORO**

NORTH CAROLINA

TRANSMITTAL

PLANNING DEPARTMENT

DELIVERED VIA: *HAND* *MAIL* *FAX* *EMAIL*

To: **David Andrews, Town
Manager, Town Council**

From: **Laura Janway, Environmental
Planner, Patricia McGuire, Planning
Director**

Date: **January 21, 2020**

Subject: **Implementation Update: Energy and Climate Protection Plan (2014)
& Community Climate Action Plan (2017)**

Summary

The purpose of this memo is to provide the Board with a progress report on implementation of the Energy and Climate Protection Plan (ECPP), adopted May 28, 2014, and the Community Climate Action Plan (CCAP), adopted January 24, 2017. The ECPP concentrates on lowering municipal greenhouse gas emissions and the CCAP establishes a 50% reduction goal in per capita greenhouse emissions by 2025. Town staff are examining and pursuing several initiatives to reach the emissions reductions goals.

Staff have continued to implement the ECPP by addressing rehabilitation of municipal buildings and examining building performance. Staff also completed an employee recycling drive and worked to make Town's annual Holiday Party a zero waste event.

Recent CCAP implementation measures include the first Green Neighborhood Initiative outreach meeting and the commencement of the CCAP implementation survey. Town staff have completed a 10-year climate emergency budget and worked with the Environmental Advisory Board to revise ECPP and CCAP goals. Staff worked to initiate invasive species removal volunteer events, have submitted a grant to the Volkswagen (VW) Emissions Mitigation Fund Diesel Program, and have partnered with the Center for Advanced Hindsight for a grant proposal to the Triangle J Council of Governments Transportation Demand Management Program to reduce single-occupancy vehicle trips in Carrboro.

Facility Condition Assessment

The Facility Condition Assessment has been completed and Town staff are currently working to address rehabilitation of municipal buildings and will be examining building performance.

Staff have drafted a Request for Qualifications to select an Architectural and Engineering Firm (Consultant) interested in providing consulting services for developing renovation plans for Carrboro's Town Hall and Century Center. The consultant will provide energy analyses of Town Hall and the Century Center and will provide recommended solutions to retrofit existing buildings to achieve energy sustainability goals. The consultant will also provide conceptual drawings for planned renovations and additions and provide detailed construction drawings for specific renovations identified by Town Staff. The Town Council has recently expressed interest in exceeding the goals outlined in the Energy and Climate Protection Plan, towards a net-zero energy footprint.

Town Hall Roof Replacement

While performing the municipal greenhouse gas emissions inventory for 2019, staff will evaluate the yearly energy usage of Town Hall and will compare seasonal pre-and post-roof installation energy use to estimate of the likely energy reductions from this project.

Exploration of LED Lighting for Town Buildings

Town staff are working with Duke Energy to assess opportunities to convert indoor lighting fixtures to LEDs. These conversions qualify for incentives from Duke Energy, who will pay for a portion of the upgrades. LED lights will save energy and reduce municipal emissions.

Town Zero Waste Holiday Party and Recycling Drive

Town staff worked with Orange County to arrange to borrow composting bags and x-frames for food waste from the annual staff Holiday Party. Staff also organized a successful employee recycling drive at the event. Employees gathered used batteries, printer ink cartridges, lightbulbs, and plastic bags for recycling.

LED Streetlights

Duke Energy and Piedmont Electric Membership Corporation have finished installing the LED streetlights. Town staff are working to ensure all streetlights have been installed correctly and working with residents to address concerns about unwanted spill light. Town staff are working to finalize an LED infographic and Frequently Asked Questions Page for the Town website.

Town Council 6/25/19 Resolution Regarding Climate Action Goals and Budget Plan

The 6/25/19 Resolution directed staff and the Environmental Advisory Board to perform the following tasks:

The Carrboro Town Council directs the Town Manager to charge staff to work with the EAB to review the carbon reduction goals in the Environmental and Climate Protection Plan (ECPP) and Community Climate Action Plan (CCAP).

- The EAB reviewed the CCAP carbon reduction goals in the 8/22/19, 9/5/19, and 9/19/19 meetings.
- The EAB reviewed the ECPP carbon reduction goals in the 10/3/19 meeting.

The Town Council directs both staff and the EAB to recommend changes as may be needed to achieve goals defined the Town of Carrboro's 2009 climate resolution, recognizing the latest science and historical responsibilities for climate change.

- Staff provided the EAB with a summary of climate action goals made by other local governments, definitions of common terms used in climate goals, scientific recommendations made by the Intergovernmental Panel on Climate Change (IPCC) and research performed to update climate goals to include the principles of climate equity.
- On 9/19/19, the EAB unanimously passed a motion to recommend a change in the CCAP goals to an 80% community reduction of 2010 levels by 2030.
- On 10/3/19, the EAB unanimously passed a motion to recommend a change in the ECPP goals to an 80% community reduction of 2010 levels by 2030.

The Carrboro Town Council directs the Town Manager to charge staff to work with the EAB to identify substitutions to or additional activities or projects and their estimated CO₂ reductions

- The EAB began prioritizing their CCAP recommendations at the 6/5/19 meeting. In-depth discussions were held at the 6/19/19, 7/24/19, 8/22/19, and 9/19/19 Special Meetings.
- At the 1/16/20 meeting, the EAB discussed their recommendations for the ECPP.
- At the 9/5/19 meeting, the EAB discussed options for changes in advisory boards related to CCAP implementation.
- On 9/7/19, the EAB chair approved a draft memo to the Town Council to advise on board structure, including the creation of a new, climate-focused advisory board. This memo was sent to the Planning Director and Town Manager.

The Town Council directs both staff and the EAB to recommend such changes to include within the Town's Climate Plans, in order to more effectively reach the Town's climate reduction goals, while also recognizing principles of race and equity and climate justice.

- At the 11/7/19 meeting, the EAB discussed a list of their current recommendations and added additional ideas.
- At the 1/16/20 meeting, the EAB finalized their recommendations for the ECPP.
- See Attachment C for summary of EAB recommendations.

The Carrboro Town Council directs the Town Manger to charge staff to update cost estimations of current and proposed projects and activities, and develop a 10-year annual climate emergency budget proposal for implementing updated climate action plan goals and related activities and projects for consideration by the Carrboro Town Council beginning in the FY 2020-21 budget cycle, and annually thereafter.

- Staff have completed a climate emergency budget proposal which will be presented as a separate agenda item.

The resolution also states that the Town Council will assess the recommended climate plan updates and budget based by cost, ability to reduce greenhouse gas emissions per the Town's

carbon reduction goals, and implications for race and equity and climate justice for final inclusion in the Town's FY 2020-21 budget and annually thereafter.

The resolution also directed the Town Manager to charge staff to leverage resources from Orange County, the State of North Carolina and the Federal government, when these are available, for helping achieve the Town's goals and for offsetting costs when possible.

Orange County Climate Council

- *Policy Connections:* CCAP Community Integration Recommendation #2: Community Integration Recommendation #2: Expand Public Partnerships to More Explicitly Consider Climate Action.

Town staff, Town Council Member Sammy Slade, and Carrboro at-large representative Kathy Kaufman have attended monthly meetings of the Orange County Climate Council. In recent meetings, the Council has discussed diversity, environmental justice, building broad community support for climate action, and the group's strengths and challenges. The Council worked to define a mission and vision and form committees. Town staff have joined a committee to work on a climate action reporting database. The Council will also work to identify joint projects in future meetings.

Volkswagen (VW) Settlement Phase 1 – Diesel and Bus Program

- *Policy Connections:* ECPP Goals
- *Policy Connections:* CCAP Transportation Recommendation #1: Reduce Greenhouse Gas Emissions from Motor Vehicle Use by 50% by 2025.

In September, Town staff submitted a proposal for two newer, more-efficient diesel refuse trucks and two compressed natural gas (CNG) vehicles as part of a pilot project with Orange Water and Sewer Authority (OWASA) for a potential biogas-to-fuel project. Staff will provide an update on the status of the proposal after notification by grant administrators.

Transportation Demand Management (TDM) Grant

- *Policy Connections:* CCAP Transportation Recommendation #4: Further Promote Walking, Biking, Transit

The Center for Advanced Hindsight has partnered with the Town of Carrboro to submit a proposal to the Triangle J Council of Governments (TJCOG) Transportation Demand Management (TDM) Program. This funding source is provided by the North Carolina Department of Transportation – Public Transportation Division (NCDOTPTD), the Capital Area Metropolitan Planning Organization (CAMPO), and the Durham-Chapel Hill-Carrboro MPO (DCHC-MPO) in order to implement the Triangle Regional 7-Year Long-Range TDM Plan.

The project proposal will involve designing welcome packets for Carrboro residents outlining

alternative transportation options to reduce single-occupant vehicle (SOV) trips in Carrboro. The funding will allow the Center for Advanced Hindsight and other project partners will also perform research to test the effectiveness of this educational campaign. This project will help grant partners learn to incentivize and motivate residents to explore transportation options and find alternatives that suit their needs.

U.S. Census Bureau data from 2014-2018 shows that approximately 28% of Carrboro residents have moved to a new residence within the past year. The Town population has also increased by 8.9% over the past decade. New Carrboro residents or individuals who relocate to new locations may not have knowledge of specific transportation options in their neighborhoods. Moreover, residents may not be aware of how to locate the resources and information they need to make these decisions. The Town can help disseminate information directly to those who need it through a dedicated, targeted welcome packet informational campaign. Town staff can also look for opportunities to better connect with residents who may not have internet access or prefer traditional forms of communication. Mailed correspondence, such as the proposed welcome packet, can serve this purpose for residents who are not active on email or social media platforms.

Town of Carrboro staff will participate in planning sessions, provide data in both the exploratory and outcome phases of the project, and provide ongoing communication and engagement with project partners and Carrboro residents.

This project will improve air quality, reduce greenhouse gas emissions, and enhance quality of life within Carrboro, Orange County, and the greater Triangle community.

Invasive Species Volunteer Group

- *Policy Connections:* Ecosystem Recommendation #5: Improve Regulations and Community Capacity to Discourage Invasive Plants and Encourage Native Plants

In late July 2019, Mayor Lavelle and Town staff met with a Carrboro resident to discuss a proposal to form a volunteer invasive species removal team in Carrboro and decided to begin with Town properties. Staff from the Planning, Recreation and Parks, Public Works, and Finance Departments met to discuss the logistics of the project. On January 11, 2020, Town staff held the first volunteer invasive species removal event at Wilson Park.

Approximately 20 volunteers, including several students from Carrboro High School, helped to remove wisteria (*Wisteria spp.*), English ivy (*Hedera helix*), autumn olive (*Elaeagnus umbellata*), privet (*Ligustrum spp.*), and leatherleaf mahonia (*Mahonia bealei*) from the park using use hand-held tools. The group removed enough vegetation to fill four parking spots in the parking lot. Public Works staff picked up the vegetation the week after the event was held. Volunteers expressed interest in attending future events and helping the Town manage invasive species.

Managed Natural Landscape Ordinance

- *Policy Connections:* Ecosystem Recommendation #5: Improve Regulations and Community Capacity to Discourage Invasive Plants and Encourage Native Plants

Ecosystem Recommendation #5 states that the Town should encourage naturalized landscaping instead of manicured lawns. These types of landscapes offer critical wildlife habitat, cause a decline in the use of petroleum-based fertilizers and pesticides, more effectively capture stormwater runoff, and reduce the heat island effect.

Town staff are currently working on continued revisions on a draft of amendments to the Town Code to allow for managed natural landscapes.

Green Neighborhoods Initiative

- *Policy Connections:* CCAP Community Integration Recommendation #3: Create Participatory Green Neighborhood Budgeting Program to Reduce Carbon Emissions, Build Community, Save Money, and Reallocate Savings to New Green Project Initiatives

On December 10, 2019, staff held the first Green Neighborhoods Outreach Meeting. At the meeting, Staff provided a presentation with an introduction to the Community Climate Action Plan and a summary of the Green Neighborhoods Initiative. Next, attendees identified their neighborhoods by placing stickers on a large paper map of the Town. This map will be used to ensure all Green Neighborhoods in Carrboro are represented by community champions.

Afterwards, all attendees were asked to break into groups depending on their project interests. Planning staff facilitated discussion. Groups included:

- Ecosystem Protection & Enhancement
- Food Choices
- Energy Efficiency & Renewable Energy
- Transportation

Groups used guided worksheets to discuss the following questions:

- What project are you interested in helping to champion in your neighborhood?
- What actions can you take to educate your neighbors and get others involved?
- How can the Town help facilitate your initiative?
- Can you identify any barriers to success in your neighborhood?
- Does your neighborhood have any established methods of communication? Do you have any meeting spaces in your neighborhood?
- Can you commit to reporting your neighborhood's progress to the Town through an online or paper reporting form?
- What action will you take next to move your project forward?

Before adjournment, Town staff provided direction for next steps on the project. Attendees who provided contact information will be sent a link to the Green Neighborhood information page on the Town website, which will include meeting summaries, presentations, a project reporting form, and other resources. Paper copies of project reporting forms will be available in the Town Hall front lobby.

Public Outreach

Staff will hold future Green Neighborhoods Outreach Meetings outside of Town Hall. Staff are working to compile a map showing public meeting spaces throughout Carrboro. This map will be used to schedule future Green Neighborhoods outreach events to ensure that all neighborhoods in the Town are represented in this initiative.

Green Neighborhoods Phase 1: Backyard Composting

The Town anticipates unrolling a backyard composting program as the first phase of the Green Neighborhood Initiative. Through composting promotion, the Town can begin to build communication networks within neighborhoods and between neighborhoods and the Town. These networks can be used to expand public outreach to encourage other emissions reduction initiatives outlined in the Community Climate Action Plan.

The Community Climate Action Plan includes a recommendation to promote composting to improve soil quality, increase soil organic content, enhance water quality by improving infiltration, and decrease methane gas landfill emissions and greenhouse gas emissions from trash pickup.

- *Policy Connections:* CCAP Ecosystem Integration Recommendation #3:
Accelerate Efforts to Study and Implement a Comprehensive Organics
Collection and Composting Program

To encourage composting, the Town has purchased kitchen composting bins and backyard composting bins, which will be offered at a discount to Carrboro residents. The Town Finance Department is working to ensure that the Town has the requisite state sales tax permit and internal protocols in place. Town staff have created an order form and a reporting form. The reporting form will contain information needed for Town staff to calculate greenhouse gas emissions reduction and to determine participation in each neighborhood. Staff will calculate greenhouse gas emissions reductions using the EPA's Waste Reduction (WARM) Model. The Town will begin sales of the composting bins in early 2020.

Multifamily Housing

While backyard composting will be relatively simple for single-family homeowners, approximately 56% of residents within the Town are renters. Those who live in rental units will have less ability to compost at home. The Town will need to ensure that these residents have access to participate.

Public Outreach

Public works staff have updated the Town's composting web pages. The web pages include information about composting benefits and uses, backyard composting, local composting drop-off, and vermicomposting. Town staff also worked to write, produce, and film an informational composting video that will be available on the Town website. Staff have also worked to create a composting brochure for residents.

CCAP Survey

- *Policy Connections:* CCAP Food Choice Recommendation #2: Develop Local Dietary Consumption and Associated GHG Profile

The CCAP survey began in November 2019. Over the past few months, a research team has randomly called 400 Carrboro residents over age 18 in order to reach a +/- 5% error rate. The research team is currently working to analyze the data and will provide results to the Town. The team will also cross-tabulate the data with demographic information to illustrate further trends in residents' habits.

The survey will provide data for a baseline snapshot of habits related to CCAP recommendations as well, including food choices, composting, commuting, and gardening. This baseline data will allow the Town to begin benchmarking and tracking progress towards emissions-reduction goals.

Program Expansion

In order to maximize emissions reduction, the Town will need to continue to promote composting beyond backyard efforts. Town staff have explored options to expand composting bin storage at Town Hall by renovating the area near the garbage dumpsters. These changes are currently in design and staff will meet to discuss how to finalize the project.

As residents purchase bins and provide address information, the Town will create a heat map showing neighborhoods actively participating in organic waste diversion. An active neighborhood will be chosen for an Every-Other-Week pilot initiative designed by Planning Department and Public Works staff. The heat map will also provide information about the success of composting in rental units and inform Town staff how to modify strategies for greater waste diversion.

The Green Neighborhood initiative will be expanded as composting momentum grows. Town staff will pursue other initiatives outlined in the CCAP, such as promoting home energy efficiency and invasive species management as Green Neighborhoods are formed and communication channels are established.

Municipal Greenhouse Gas Inventory

- *Policy Connections:* ECPP Section 4 (Measurement, Inventory, Assessment, and Reporting). Pursuing these activities will inform actions and stakeholders and create transparency.

Town staff are working to complete the 2018 and 2019 Municipal Greenhouse Gas Inventories. Staff have obtained and compiled the 2018 and 2019 electricity and natural gas bills for Town buildings. This data, along with vehicle fuel use data, will be entered for analysis to continue to track ECPP implementation progress.