



City of Charleston Resiliency & Sustainability Advisory Committee Agenda

February 1, 2024, 11:00am – 12:00pm
2 George St, 1st Floor Public Meeting Room & Hybrid via Zoom

1. Welcome, Moment of Silence
New Member Introduction
Election of Chairperson and Vice Chairperson
Stewart Weinberg, Vice Chairperson
2. Climate Action Plan: 2023 Progress Report
Katie McKain
3. Sustainability Updates and 2024 Priorities
Katie McKain
4. Resilience Updates and 2024 Priorities
Dale Morris
5. Sustainable Construction Materials
and Methods Presentation
April Magill, Root Down Building Collective
6. Public Comment Period*

*Public Comment Instructions: Please use **one** of the following methods to request to speak at the meeting or provide comments to the committee:

1. Attendees may speak live in person or by “raising their hand” on the webinar.
2. Sign-up to speak or leave comments for the Committee by completing the form at: <http://innovate.charleston-sc.gov/comments/> (due by 10am on meeting date)
3. Request to speak or submit a comment via voicemail at 843-724-3789 or email at mckaink@charleston-sc.gov. Please provide your name, phone number and address.

WEBINAR LINK: <https://us02web.zoom.us/j/87142628321>

Meeting Phone Number: Call 1 (929) 205 6099, Webinar ID: 871 4262 8321

In accordance with the Americans with Disabilities Act, people who need alternative formats, ASL (American Sign Language) Interpretation or other accommodation please contact Janet Schumacher at (843) 577-1389 or schumacherj@charleston-sc.gov prior to the meeting.

CLIMATE ACTION PLAN 2023 PROGRESS REPORT

This report highlights implementation progress from May 2021 (plan adoption) to December 2023. The 5-year action plan is estimated to be fully implemented by 2026.



TRANSPORTATION

- 2 ELECTRIC NISSAN LEAFS ADDED TO CITY FLEET, PREVENTING 1.8 METRIC TONS OF CO₂E*
- 98,897 TRIPS (160,000 MILES) IN BIKE SHARE AVOIDING 13 METRIC TONS OF CO₂E*
- 100% OF LEAF BLOWER FLEET IS ELECTRIC, ELIMINATING 356 METRIC TONS OF CO₂E YEARLY
- 7,358 REMOTE STAFF WORK DAYS, ELIMINATES 90 METRIC TONS OF CO₂E FROM COMMUTE (2022)



CARBON SINKS

- 29 RAIN GARDENS AND 12 RAINWATER HARVESTING SYSTEMS INSTALLED, INFILTRATING 511,845 GALLONS OF WATER*
- 146 TREES PLANTED ON PUBLIC PROPERTY*
- 50 STORM DRAINS ADOPTED*
- MULBERRY FOOD FOREST PLANTING IN 2024



BUILDINGS

- REPLACEMENT OF EV CHARGING STATIONS READY FOR PERMITTING- WILL EXPAND TO 28 CHARGING STATIONS AND TO 4 CITY GARAGES
- ALL NEW CITY CONSTRUCTION PLANNED TO FOLLOW CHARLESTON RISES BUILDING CERTIFICATION PROGRAM



WASTE

- 155 TONS OF FOOD SCRAPS COMPOSTED, 14 DROP SITES, 2,072 HOUSEHOLDS COMPOSTING, AND 253 METRIC TONS OF CO₂E ELIMINATED*
- 700+ PUMPKINS COMPOSTED (2.4 TONS)*
- 75 NEW RECYCLING CAN LIDS FOR CITY PARKS
- SUSTAINABLE EVENT MANUAL CREATED



EDUCATION AND COMMUNITY ENGAGEMENT

- 200+ RESIDENTS PARTICIPATED IN PUMPKIN SMASH EVENT, COMPOSTING OVER 700 PUMPKINS
- 6 CLIMATE AMBASSADOR PRESENTATIONS, INSPIRING 226 PEOPLE TO TAKE CLIMATE ACTION*
- 200 RESIDENTS AT DRIVE ELECTRIC CHARLESTON EVENT LEARNED ABOUT ELECTRIC VEHICLES
- 10 COMPOST WORKSHOPS REACHED OVER 750 RESIDENTS, 550 KITCHEN CADDIES GIVEN AWAY
- 600+ RESIDENTS ENGAGED AT WEST ASHLEY FARMERS MARKET (April - Nov, 2023)
- 12 MONTHLY COMMUNICATION CAMPAIGNS WITH HUNDREDS OF SOCIAL MEDIA INTERACTIONS*

* = 2023 DATA
CO₂E = CARBON DIOXIDE EQUIVALENT

VISION

To substantially reduce carbon pollution in an equitable way and improve the health and quality of life of Charlestonians now and in the future.

TABLE 1: BUILDINGS ACTION PLAN

ID	ACTIONS	STATUS	PROGRESS
STRATEGY: Increase energy efficiency and conservation			
B1	Support efforts to strengthen the energy code (2009) at the state level and advocate for state building policies that align with carbon neutrality by 2050 and other initiatives in the SC Energy Efficiency Roadmap	Ongoing	Support to submit a statewide application to DOE ' Technical Assistance for Adoption of Latest and Zero Building Codes Grant ' to adopt a more recent energy code and obtain more staff to support code compliance. (No cost share)
B2	Support state efforts and explore local equitable gap funding opportunities for energy efficiency in new construction and upgrades to existing construction	Underway	Collaborating statewide on EPA ' Climate Pollution Reduction Grant ' application for funding to support energy efficiency in new and existing buildings, with a focus on housing in disadvantaged communities. (No cost share)
B3	Consider expanding incentives for sustainable construction and renewable energy via the zoning code, such as building certification programs like Charleston RISES	Underway	This action is being considered as part of the City's zoning code rewrite.
B4	Increase staff capacity and funding to conduct a Facilities Assessment Plan and continue improving energy efficiency of existing City buildings, and to ensure new City buildings lead by example by being energy efficient and pursuing industry best practices that align with carbon neutrality by 2050	Underway	New capital projects pursue energy efficient equipment. Hiring a Facilities Analyst and conducting an assessment are essential next steps.
B5	Create mechanical, electrical and plumbing standards that include energy efficiency for City facilities	Coming Soon	Pending staff capacity and future Facilities Assessment Plan.
B6	Consider creating stronger guidelines above minimum code for new City construction, include total cost of ownership standards and consideration of a tailored Charleston RISES certification	Ongoing	New City owned construction pursues LEED and Charleston RISES best practices.
B7	Assess feasibility of expanding staff capacity and training to strengthen enforcement of energy code compliance	Underway	If SC submits an application for DOE ' Technical Assistance for Adoption of Latest and Zero Building Codes Grant ', it could provide staff to support energy code compliance. (No cost share)
B8	Consider developing or adopting alternative standards that expand allowable construction method options to include those which are inherently more energy efficient and sustainable, such as rammed earth, etc.	Underway	Staff in various departments are learning about alternative and sustainable construction materials and methods available.

TABLE 1 (CONTINUED): BUILDINGS ACTION PLAN

ID	ACTIONS	STATUS	PROGRESS
STRATEGY: Promote and plan for renewable energy			
B9	Explore opportunities to restart the Green Business Challenge	Underway	Partnering with the Charleston Climate Coalition to support their launch of 'Lowcountry Thrives', a new program aiming to promote sustainable practices and provide resources for local businesses to be more eco-friendly.
B10	Support state efforts for the disclosure of utility data by property sellers	Started	A potential statewide application to DOE 'Technical Assistance for Adoption of Latest and Zero Building Codes Grant' could include this effort. (No cost share)
B11	Support renewable energy projects including community solar and other initiatives, such as those in the SC Energy Efficiency Roadmap	Ongoing	City provided scope input and a letter of support for the state's EPA 'Solar For All Grant' application, which could support community solar in disadvantaged communities and on City facilities. (No cost share)
B12	Create design guidelines for renewable energy standards in the historic district	Complete	The Board of Architectural Review adopted a policy statement for solar to provide direction and encourage the use of solar in the historic district.
B13	Investigate the feasibility of renewable energy and battery storage opportunities for City facilities and plan for future funding opportunities	Ongoing	All new capital projects are including solar energy in their design, including a new fire station on Johns Island, the Hope Center, and the new Public Service and Safety Operations Center. 'Electric vehicle ready' infrastructure is now standard in new City construction. A solar feasibility assessment for existing structures is included in the EPA 'Solar for All Grant' scope. It is dependent upon the completion of a Facilities Assessment Plan that will inform proactive maintenance for City facilities, including a roof replacement schedule. (No cost share)

TABLE 2: TRANSPORTATION ACTION PLAN

ID	ACTIONS	STATUS	PROGRESS
STRATEGY: Increase use of public transit systems			
T1	Require new large development projects located along existing or planned transit corridors to install bus stop shelters and transportation infrastructure like turnouts	Complete	This is now required in the zoning code as part of the Technical Review Committee's process and successful installations are visible all over the City, such as Morrison Yard.
STRATEGY: Increase employee commuter options			
T2	Explore opportunities with CARTA to create an employer transit program for part-time City staff riders, such as charging fees based on use	Coming Soon	Initial analysis determined to wait for the new Lowcountry Rapid Transit, as most staff are located north of the City.
T3	Review existing temporary City telecommuting policy and adopt permanent policy	Complete	90 metric tons of CO ₂ E were avoided thanks to remote work in 2022. Program could be expanded to reduce staff commute pollution even more and save taxpayer \$ on office space.
STRATEGY: Embrace electric and other low/no emission motors			
T4	Expand publicly-accessible electric vehicle charging infrastructure, especially at ride share, mobility hubs, on-street peninsula access and City parking facilities	Underway	Construction of 28 EV charging stations in 4 City garages will begin in 2024. A Regional EV Infrastructure Plan is being created for public parking, and a regional application for the DOT 'Charging, Fueling and Infrastructure Grant' is being led by BCDCOG with City support.
T5	Create policy to require charging stations in new large commercial construction and consider EV ready requirements for smaller projects	Underway	Seeking funding rebates for existing and new construction through EPA 'Climate Pollution Reduction Grant' . The EV-ready code is prepared and will be part of the zoning update.
T6	Create a plan to transition the City fleet and other small engines to alternative fuel vehicles, include vehicle replacement standards and charging infrastructure	Underway	City's fleet welcomed its first two electric vehicles in 2023. City is applying for DOE 'Energy Efficiency & Conservation Block Grant' to fund a Fleet Transition Plan and acquire additional EVs. City is considering applying for EPA 'Clean Heavy Duty Vehicle Grant' , NOFO expected early 2024.
T7	Consider options to phase in alternatives to gas powered small inefficient engines	Ongoing	The City successfully converted 90 fleet leaf blowers to electric, achieving the City's 100% transition goal and saving 356 metric tons of CO ₂ e annually. Staff now prioritize electric when buying all small engine equipment. An 'Electric Lawn Care Expo' was hosted in April 2022 to raise awareness of available alternatives.
STRATEGY: Improve land use policy to reduce vehicle miles travelled			
T8	Concentrate development in compact, walkable centers that are well connected to public transit and offer a mix of uses, services and housing options	Ongoing	The City's Comprehensive Plan and zoning code already address this, and it remains a priority in the zoning code update.
T9	Right-size parking codes with maximums and explore opportunities to allow developers to pay into a parking in-lieu fund	Underway	This is being considered in the zoning code rewrite.

TABLE 2 (CONTINUED): TRANSPORTATION ACTION PLAN

ID	ACTIONS	STATUS	PROGRESS
STRATEGY: Increase bicycle and pedestrian activity			
T10	Continue to work on the bike share program and provide micromobility services for all City employees	Ongoing	The City launched a new e-bike share program in 2022 which has expanded to 62 hubs and produced 162,082 total trips to date (279,561 miles). Discussions continue on a potential discount and/or monthly membership for City employees and City residents.
T11	Improve and expand bicycle and pedestrian facilities and infrastructure, such as intersection improvements, bicycle repair service stations and bicycle corridors identified in the People Pedal Plan	Underway	Two new staff positions were hired in 2023 to implement the People Pedal Plan. They include a Mobility Planner and a Transportation Project Manager to oversee construction contracts.
T12	Establish temporary and permanent car free areas such as rethinking curb spaces	Ongoing	2nd Sunday on King St remains successful, and last year saw the introduction of quarterly evening family-friendly street fests on King.
T13	Transition existing Complete Streets resolution into ordinance prioritizing pedestrians at key crossings	Coming Soon	Pending staff capacity. SCDOT adopted Complete Streets Policy in 2021 to include walking, biking and transit needs as part of their plans.
T14	Expand consistent wayfinding signage to increase safety and the user experience	Coming Soon	Pending staff capacity and resources.
STRATEGY: Reduce idling			
T15	Explore creative options to improve enforcement of the City's existing anti-idling policy	Coming Soon	Pending staff capacity. (This ordinance is currently enforced by the Livability Department.)
T16	Improve traffic signals on the peninsula by synchronizing 88 of the traffic signals to benefit all modes	Underway	Some funding has been allocated by BCDCOG to have the traffic signals retimed on the peninsula. This is in coordination with SCDOT's Road Safety Audit.
T17	Encourage virtual community meetings or those located along transit routes, as possible	Ongoing	New technology was installed in the Public Meeting Room in 2023 to allow for hybrid meetings. Many committees meet virtually or a hybrid, such as City Council, the Resiliency and Sustainability Advisory Committee and the Peninsula Perimeter Protection Advisory Committee.

TABLE 3: WASTE ACTION PLAN

ID	ACTIONS	STATUS	PROGRESS
STRATEGY: Reduce waste and consumption			
W1	Continue supporting the elimination of single-use plastics	Ongoing	City amended plastic code in 2023 to close the extra thick plastic bag loophole. Outreach efforts are underway and support to businesses continues.
W2	Perform a garbage can audit and use the data to evaluate and restructure the way garbage and trash are collected to incentivize recycling and composting	Underway	The extensive audit, commenced in 2022, is currently 75% complete.
W3	Promote zero waste office practices for City staff to reduce, reuse and recycle and consider establishing sustainable procurement standards for City operations	Ongoing	City Green Team inspired more eco-friendly MEOC activations and created a reusable water bottle campaign to help reduce single use plastic water bottles.
W4	Strengthen partnerships to enhance edible food recovery and donation, such as Food Rescue US	Ongoing	A partnership with Fields to Families donates edible unsold produce at City farmers markets to people in need.
W5	Support the reuse, repair, recovery and refurbishment economy, including for construction waste	Underway	City started a yard sign recycling program in 2023 to reuse the metal H-frames for public meeting announcements and save taxpayer dollars. We are seeking partners to help support the repair, recovery and refurbishment sectors, please contact us.
STRATEGY: Increase recycling and composting			
W6	Explore ways to create more opportunities for community wide composting, such as drop centers	Ongoing	The residential compost program, with six partner jurisdictions, has diverted over 209 tons from landfills (15 garbage trucks) by 2,000+ households. In 2024, it expands to 20 drop sites. Pumpkin composting, enhanced with a Pumpkin Smash in 2023, will further expand. Ongoing compost outreach and training efforts continue with funding support from SCDHEC 'Solid Waste Grant' . (No cost share)
W7	Explore opportunities to make composting more available in City buildings, at City sponsored events such as Farmers Markets, and private events held on City property	Ongoing	Two City departments and both City farmers markets piloted composting successfully in 2023 and plan to continue.
W8	Continue to add recycling bins next to garbage cans in public places and label them with consistent signage	Ongoing	With a SCDHEC 'Solid Waste Grant' award, the City is proactively replacing worn and illegible recycling can lids and signs in parks to reduce contamination.
W9	Support the County's efforts to promote education for event and commercial recycling, and examine options to encourage businesses and events to recycle	Ongoing	A 'Sustainable Events Manual' was created in 2023 to guide event planners.
W10	Support mattress recycling	Ongoing	A mattress recycling program was successfully piloted in 2021 with SCDHEC 'Solid Waste Grant' funding. COVID budget cuts paused implementation, however, the program is funded to start again in early 2024.

TABLE 4: CARBON SINKS ACTION PLAN

ID	ACTIONS	STATUS	PROGRESS
STRATEGY: Protect and promote natural ecosystems			
C1	Collaborate with regional and state partners to increase preservation and restoration of saltwater ecosystems like our marshes and wetlands as these are key carbon sequestering assets	Ongoing	Marketing support for oyster shell recycling and marsh grass plantings is ongoing. Marsh restoration with NFWF grant project happening in Oldtown Creek.
C2	Continue with opportunities to acquire flood damaged properties and convert the land use to natural conditions that capture carbon and water	Ongoing	Over 46 properties have been acquired so far resulting in 8.7 acres of new green space. Staff have plans for more as capacity allows. 94 acres at Oakville were preserved in a conservation easement with support from partners.
C3	Examine land use policy to make room for existing marshes to migrate, such as adjusting zoning and developing more stringent marsh buffers	Underway	An analysis occurred as part of the Comprehensive Plan, the data is being used to inform the zoning code rewrite.
C4	Continue to expand Charleston Rainproof and Adopt a Drain programs as ways to protect water quality and health of blue carbon	Ongoing	<p>The 2023 Rainproof Mini Grant Program resulted in 29 new rain gardens, for a total of 68 rain gardens since inception.</p> <p>Adopt a Drain is a regional program with Charleston County and new partner, Isle of Palms.</p> <p>Both programs will benefit from increased staff capacity and funding.</p>
C5	Pilot the application of super sink plants in appropriate public spaces, such as non-invasive native bamboo, and adapt practices to be pollinator friendly	Underway	Charleston, a Bee City USA Affiliate, is considering a pilot for super sink plants, pending staff capacity, resources, or partner support. If interested, please contact us.


TABLE 4 (CONTINUED): CARBON SINKS ACTION PLAN

ID	ACTIONS	STATUS	PROGRESS
STRATEGY: Plant and protect tree canopy			
C6	Plant and prioritize tree plantings in areas that need it most, such as underserved communities with less overall canopy and communities with aging inventory	Underway	Tree canopy storymap analyzes and identifies underserved communities. City considering an application for USDA 'Urban & Community Forestry Grant' to support trees in disadvantaged communities. (No cost share)
C7	Consider strengthening tree protection regulations in zoning per recommendations in the Trees to Offset Stormwater project report	Underway	Planning is complete and this is being considered as part of the zoning code rewrite.
C8	Encourage tree plantings on private property	Ongoing	Collaborating with 'Charleston Trees' and Charleston Parks Conservancy to plant more trees on public and private property, resources are available on our website for property owners. CPC is also partnering creating Charleston's first Food Forest at Ardmore in West Ashley.
C9	Continue the City's Street Tree Program planting trees in the ROW in partnership with residents	Ongoing	The program continues but is still experiencing a lack of staff capacity to complete all requests and has a wait list.
C10	Perform street tree inventory and use data to guide funding to maintain existing canopy and seek opportunities to grow canopy and diversify species	Underway	Street Tree Inventory is in process. City considering using that data to submit an application for USDA 'Urban & Community Forestry Grant' to support capacity, tree plantings and maintenance in disadvantaged communities. (No cost share)
C11	Explore partnerships to create an urban forestry workforce training program with local school programs, such as Trident Tech horticulture program	Underway	City is partnering and supporting 'Charleston Trees' and Charleston Parks Conservancy who are aiming to develop this program. City is planning to include this in the scope if a potential USDA 'Urban & Community Forestry Grant' application moves forward.

WHAT YOU CAN DO, CHARLESTON



CREATING A MORE RESILIENT AND SUSTAINABLE FUTURE.

WAYS TO TAKE CLIMATE ACTION AROUND YOUR HOME



You can make a difference by taking action in your home with small changes. Here are some suggestions of how you can help right now. The actions with the highest impact are marked .




SUSTAIN YOUR LIFESTYLE

- Consume foods which are grown locally and/ or are grown organically. Join a [farm share](#) and shop at [farmers' markets](#). Plant fruits and vegetables in your own garden or participate in a [community garden](#). Eat at restaurants that feature local and seasonal foods, including [seafood](#).
-  Eat a plant rich diet. [Reduce your consumption of meat and dairy](#). Try "meatless Mondays". Avoid food waste.
- Buy [local products](#).
- Support [environmentally-conscious businesses](#).
-  Follow the City's [Sustainable Event Guide](#) when hosting.
- Communicate with your elected officials regarding new and emerging solutions. Attend the City's [Resiliency and Sustainability Advisory Committee](#) public meetings.

PROTECT YOUR AIR, WATER AND CARBON SINKS

-  [Plant trees](#), especially where they'll provide shade for your house, and [native plants](#) for their resilience.
- Reduce pesticide and fertilizer use. Enrich your soil with compost. [Purchase compost](#) made locally.
- Properly dispose of waste including pet waste. It should not go down the storm drain.
-  Participate in marsh restoration programs like [SC Oyster Restoration](#) and [From Seeds to Shoreline](#) (at school).


REDUCE YOUR WASTE

- Buy only items that are necessary and you will use. Focus on enduring purchases instead of disposable.
- Avoid single-serving packaging, especially plastic. Buy in bulk with reusable bags or jars.
-  [Compost](#) your organic (food, yard) waste.
- Take your own reusable bags to the store.
- Donate unused clothes and electronics to charity.
- Opt-in for electronic catalogs and billing statements. [Try these 4 tips](#) to stop junk mail.
- Use extra paper as scrap paper and print double sided.
- Recycle. Find out [what can be recycled](#). View Charleston County's recycling [pick up schedule](#).



MAKE YOUR HOME MORE RESILIENT

- [Adopt a storm drain](#) to help maximize the amount of water that can flow into drains and protect water quality.
- Connect a [rain barrel](#) to your gutter system.
- [Rainproof](#) your home and install a rain garden, native plants, a green roof, or permeable pavement.
- Establish a household emergency plan and kit for storms, heat emergencies and other disasters.

LIGHTEN YOUR TRANSPORTATION FOOTPRINT

- Reduce single-destination and single-occupant trips.
-  Walk, [ride a bike](#), use public transit, or carpool. Use tools like [Lowcountry Go](#), or [plan your CARTA route](#) online or in the easy [Transit app](#).
- Use the most efficient vehicle when feasible.
- Avoid idling your vehicle, such as in the carpool pick up.
- Ride in a more efficient or alternative fuel car, such as a hybrid or electric vehicle.

USE ENERGY EFFICIENTLY AND RENEWABLY

- Get a free energy assessment from [Dominion](#) or [Berkeley Electric](#). Or use the [SC Energy Saver Tool](#).
-  Perform energy efficiency improvements, like insulation. Utilize free weatherization programs (if income qualified) such as [Energy Conservation Corps](#) and [Palmetto CAP](#).
-  Consider installing solar on your home. Do an [initial assessment](#). Get the facts about [how solar works](#) and understand [consumer information](#).
- Use CFL and LED bulbs, they save energy and last longer.
- Unplug electronics and turn off lights. Use power strips.
- Adjust your thermostat to save while asleep or away from home. Install a programmable thermostat.
- Replace refrigerators and other appliances with those labeled ENERGY STAR®.
- Only run the dishwasher, dryer and washer when full.
- Wash clothes in cold water and hang out to dry.
- Take shorter showers. Install a low-flow showerhead.