Taking Climate Action in Charleston

Climate Action Plan 2021-2026
Let’s talk about climate

- The impacts of climate change in Charleston
- Charleston Climate Action Plan
- What you can do to help
Impacts of climate change in Charleston
How is our planet warming?

1. Solar radiation in the form of lightwaves passes through the atmosphere.

2. Most of this radiation is absorbed by the Earth and warms it.

3. Some energy is radiated back into space by the Earth in the form of infrared waves.

4. Some of this outgoing infrared radiation is trapped by the Earth’s atmosphere and warms it.
1. When we add greenhouse gases to our atmosphere, they buildup and act like a “blanket” around the earth that traps heat.

2. As the “blanket” thickens with an increase in CO₂ concentration, more of the outgoing infrared radiation is trapped.

3. This leads to the long term warming of our planet— which disrupts our climate.

Adapted from The Climate Reality Project
As a prime example, when humans burn fossil fuels for energy, we add more and more heat trapping gases into the atmosphere, thickening the “blanket”, making our planet warmer.
“We are the first generation to feel the sting of climate change, and we are the last generation that can do something about it.”

- Jay Inslee

Photo credit: Post and Courier
Smoke from Australia’s 2020 wildfires circled around the globe.
2020’s monsoon rainfall in Bihar was 50% higher than usual. India’s super monsoon was 2020’s deadliest climate disaster, claiming 1,900 lives.
Across Oregon, more than 2,300 homes had burned in wildfires by mid-September 2020.
Worldwide Extreme Weather Catastrophes
1980 – 2020

- **Red**: Extreme temperatures, droughts, fires
- **Blue**: Floods, mudslides
- **Orange**: Storms

Data: 2017 Munich Re, Geo Risks Research, NatCatSERVICE. As of 2021.
Adapted from The Climate Reality Project
Global impacts of carbon emissions

1.5C change in global surface temperature relative to 1850-1900

Natural drivers only  
(solar and volcanic activity)

Natural and human drivers combined

Observed

‘Very likely’ range of simulations

Guardian graphic. Source: Intergovernmental Panel on Climate Change
FIGURE 1: OBSERVED SEA LEVEL RISE IN CHARLESTON HARBOR
NOAA Charleston Tide Station
Potentially inaccessible roads due to flooding from large storm
Video: Possible Future Impact

Nobody can predict the future, however we can use data and technology to make simulations

https://www.youtube.com/watch?v=ttvxt7UhIA4
Southern-facing view across Spring & Cannon streets, towards Courtenay Dr.

Image courtesy Climate Central & Google Earth
Battery, White Point Garden, King St area
Image courtesy Climate Central & Google Earth
Cathedral of St. John the Baptist
Image courtesy Climate Central & Google Earth
NE Concord St. from St. Adgers’ Wharf
Image courtesy Climate Central & Google Earth
Charleston’s Climate Action Plan
The Charleston Climate Action Plan
A 5-year strategic framework to reduce carbon pollution.

- Buildings
- Transportation
- Waste
- Carbon sinks
5 year action plan

- Reflects the latest science
- Aligns with industry standards
- Aligns with other City plans
- Emphasizes the importance of ongoing, equitable community engagement
Climate Action Rooted in Social Equity

At-risk communities bear the brunt of climate impacts
The Climate Action Plan prioritizes inclusivity

- Over 1,000 members of the community provided input.
- Over 150 people volunteered to be a part of the working groups.
- More than 30 meetings took place for adequate collaboration.

The Climate Action Plan was built by the community, for the community.

Special thanks to all of the volunteers who contributed their time in a working group!
The Climate Action Plan has 51 action items
Co-Benefits

Every action in the Climate Action Plan has two or more additional benefits for Charlestonians, such as:

- Cost savings
- Improve mobility
- Improve public health / air quality
- Ecosystem protection / water quality
- Safety
- Economic development and retention
- Enhance climate adaptation
- Historic preservation
- Cultural preservation
- Raise awareness and role model
- Beautification
Emissions reduction targets

- Net zero emissions by 2050
- 56% reduction by 2030
Emissions reduction targets

WE NEED YOUR HELP!

- Net zero emissions by 2050
- 56% reduction by 2030

Small changes add up!
Take Climate Action Today, Charleston

View checklist on last page of plan.

Post it in your home.

Protect Your Air, Water, and Carbon Sinks

What we can do

Plant trees and native plants

“Right tree, right place”
Protect Your Air, Water, and Carbon Sinks

What local government is doing

- Charleston’s Street Tree Program helps you plant trees
- Tree plantings in winter, Arbor Day in December
Reduce your waste

What we can do

- Compost our food waste
- Use resources available online to get started
Reduce your waste

What local government is doing

- 2016 Charleston restaurant composting pilot program
- **New!** Charleston composting food scrap drop off program - Started January 2022
- **New!** Charleston County compost bins - Spring 2022
Make your home more resilient

Adopt a storm drain

- Monitor
- Clear
- Report

Benefits

- Reduces flooding
- Reduces pollution
- Beautification
Make your home more resilient

Install rain gardens and cisterns
• Charleston Rainproof has resources to get us started
• Visit examples in City parks!

Benefits
• Reduces flooding
• Protects water quality
• Beautification
Reduce your transportation footprint

What local government is doing

Holy Spokes Bike Share

Photo: Post & Courier
Reduce your transportation footprint

What we can do

- Walk
- Ride a bike
- Use public transit
- Carpool
- Use electric vehicles when possible
Use energy efficiently & renewably

Discounted
● Energy efficient light bulbs
● Smart thermostats

Free
● Energy saving tips
● Free energy assessments
Sustain Your Lifestyle
Sustain Your Lifestyle

Land Use Change: Aboveground changes in biomass from deforestation, and belowground changes in soil carbon.

Farm: Methane emissions from cows, methane from rice, emissions from fertilizers, manure, and farm machinery.

Animal Feed: On-farm emissions from crop production and its processing into feed for livestock.

Processing: Emissions from energy use in the process of converting raw agricultural products into final food items.

Transport: Emissions from energy use in the transport of food items in-country and internationally.

Retail: Emissions from energy use in refrigeration and other retail processes.

Packaging: Emissions from the production of packaging materials, material transport and end-of-life disposal.
Sustain Your Lifestyle

Food: greenhouse gas emissions across the supply chain

Note: Greenhouse gas emissions are given as global average values based on data across 38,700 commercially viable farms in 119 countries.


OurWorldInData.org - Research and data to make progress against the world’s largest problems.

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Sustain your lifestyle

What we can do

- Eat more plant-based diet
- Reduce consumption of meat & dairy
- Seek out more local vegetables
Sustain your lifestyle

How to get there

● **Free recipes online**
  ○ purplecarrot.com
● **Vegan restaurants**
● Try “Meatless Mondays”
● **Shop at your local Farmers Market**
Shift Your Mindset

**Perspective**

- Moving away from consumerism, and towards conservation
- Have a clear vision of what you would like the future to look like and change your behavior to better align with that vision.
You Can Help

Government can’t meet climate goals alone.

We can all take individual action to help address the climate crisis.

Encourage small group action too, like at a business, club or house of worship.

Take small steps.
Take Climate Action - Be a part of the solution!

- Learn more online: www.charleston-sc.gov/sustainability
- Talk about it!
  - Include climate change in everyday conversations.
- Become a Climate Ambassador
- Check these resources for more information
  - @SustainableCharleston
  - @SustainabilityCHS
Commit to taking one action today.

I challenge you to **sign the pledge** and commit now to take at least ONE action!

Scan the QR code on your smartphone, or visit the link below to fill out the Climate Action Pledge form tinyurl.com/2p4esnv9

Will you commit to being part of the solution?

www.charleston-sc.gov/sustainability
Thank you!

www.charleston-sc.gov/sustainability