Green Cincinnati Plan 2023

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

A Word from the Mayor

Dear Cincinnati,

As the state, national, and international communities work to tackle the causes and effects of global climate change, it is pivotal that we take local action to reduce emissions, conserve natural resources, adapt our infrastructure, and build a resilient Cincinnati for the next generation. After all, cities like ours are the perfect communities to bring climate action to life—big enough to understand real-time impacts, yet nimble enough to get things done.

Cincinnati has long been recognized as a leader in the environmental field. We were named the nation's Most Sustainable City twice since 2018 by *Site Selection Magazine*, #2 for Urban Agriculture by *Best Cities for Urban Gardening*, and 4th out of the top 100 Cities with the Best Parks by the Trust for Public Lands. We have so much to be proud of, yet there is still plenty of work to do.

When it comes down to it, climate change is a risk multiplier—Black, Brown, and low-income communities in our city experience the effects of climate change first and worst. Thus, this crisis presents a dual opportunity—a chance to build a new economy around clean energy and green technologies, create thousands of new jobs, and invigorate our city, while putting equity and the communities most impacted in the center of the frame. With decisive and intentional action, strong leadership, and creative solutions, we can build upon the progress we've made and establish ourselves as a climate change role model for cities around the world.

I am proud of what our City and residents have worked together to produce in the 2023 Green Cincinnati Plan that follows. As your Mayor, I join City leaders and our many partners in a shared commitment to doing what it takes to accomplish the vision set forth. I want to thank everyone who has helped prepare this Plan, and I call on all Cincinnatians to help us make the 2023 Green Cincinnati Plan a reality.

Thank you,

Mayor Aftab Pureval

Acknowledgements

The 2023 Green Cincinnati Plan (GCP) represents the hard work of many people, community groups, and organizations. Through a robust community engagement process, they shared their time, expertise, and thoughts. The GCP would not exist without them and the dedicated support of the City of Cincinnati's governmental leadership. We are grateful for everyone's participation and contributions and look forward to the implementation of the 2023 GCP.

City of Cincinnati

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Aftab Pureval
Mayor

City Council

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Resilience & Climate Adaptation

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OES FACILITATOR
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OES FACILITATOR
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Zero Waste

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Savannah Sullivan
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Carlie Trott, Ph.D.
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Flequer Vera
Sustainergy Cooperative

Tanner Yess
Groundwork Ohio River Valley

Climate Safe Neighborhoods Communities

Beekman Corridor—Millvale, South Cumminsville, North Fairmount, South Fairmount, and English Woods

Bond Hill & Roselawn

Avondale & Paddock Hills

Carthage

Over-the-Rhine, West End & Camp Washington

Community Engagement Partners

Green Umbrella
Groundwork Ohio River Valley
CitizenLab

Community Hosts

Carthage Christian Church

Cincinnati Zoo and Botanical Garden

Civic Garden Center

First Unitarian Church

McKie Recreation Center

Price Hill Library

Seven Hills Neighborhood Houses

Urban League of Greater Southwestern Ohio

Working in Neighborhoods

Consultants

Delivery Associates
Nutter Consulting

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BUILDING A SUSTAINABLE AND EQUITABLE CITY

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Executive Summary

We grow together and act decisively in the face of great challenges

Climate Change is the Crisis of our Lifetime

Rising temperatures, more extreme storms, more flooding, decreased air quality, more pests and disease, increased migration...

We are facing the crisis of our lifetime. In real time. Climate change is happening now. The impacts of climate change are impacting Cincinnati *now*...and things are projected to get worse unless we take action *now*. The reality of our situation requires an all-hands-on-deck approach.

The 2023 Green Cincinnati Plan (GCP) is just such an approach, born out of one of the most extensive community engagement processes the City has ever undertaken. The GCP details how we will safeguard our natural resources, bolster our communities, and stitch together a social fabric that connects us to each other and the land we live on. The GCP delineates how we will rise to the challenge of climate change and how we will adapt in order to survive.

This is our chance to reinvent the future and save our home. There is a place for you in the action. We hope you will join us.

Local Impacts Pose Unique Threats

Cincinnati faces rising temperatures and more frequent and severe storms that will only intensify in the coming decades. The local impacts of climate change will have far-reaching health and safety consequences for residents.

Reducing carbon emissions is our best defense against climate change. In alignment with the latest science, Cincinnati is strengthening its climate targets. With the adoption of this plan, Cincinnati commits to a 50% reduction in carbon emissions by 2030, and 100% carbon neutrality by 2050.

50%
REDUCTION IN CARBON EMISSIONS BY 2030

100%
CARBON NEUTRALITY BY 2050

However, climate change is more than a carbon issue. It's an equity issue. Priority communities—those situated in areas with fewer trees, degraded infrastructure, and with less access to funds and political capital—have and will disproportionately suffer the effects of climate change. The GCP centered equity in its structure, design, and development to ensure that the Goals, Strategies, and Actions benefit and equip priority communities.

Commitment to Equity

The Green Cincinnati Plan is committed to equity—with an explicit focus on racial equity. We acknowledge Cincinnati's demographic makeup and our history of injustices. We believe that we will be better able to create an environment where all Cincinnatians can thrive by explicitly centering race in our efforts. The GCP will have an intentional focus on addressing the needs of the people and communities who experience elevated burdens from climate change and on an equitable distribution of benefits moving forward.

We commit to embedding racial equity throughout the engagement process, written product, and implementation of the Green Cincinnati Plan to ensure accountability and impact.

History and Overview of The Green Cincinnati Plan

The Green Cincinnati Plan has been the City's sustainability plan since 2008. Updated every five years (2013, 2018, and now 2023), the GCP has helped Cincinnati earn a reputation as an international leader in climate action. Since 2008, the actions outlined in the GCP have helped deliver a 36.6% reduction in the City's carbon emissions.

The 2023 GCP is organized into eight Focus Areas that articulate the City's Visions, Goals, Strategies, and Actions in response to the climate crisis:

- Buildings and Energy
- City Operations
- Community Activation
- Food
- Mobility
- Natural Environment
- Resilience & Climate Adaptation
- Zero Waste

These eight Focus Areas outline 40 high-impact strategies to reduce our carbon emissions 50% by 2030 and achieve 100% community-wide carbon neutrality by 2050. In addition, the Plan identifies 30 measurable goals to track our progress towards a more sustainable, equitable, and resilient Cincinnati. These strategies and goals arose as part of a community-wide, community-driven collaborative effort.

The three pillars of Sustainability, Equity, and Resilience serve as the foundation of the Green Cincinnati Plan. These pillars ensure that both the process of creating the GCP and the specific plans outlined in the GCP are grounded in carbon reduction, inclusive community building, and cross-cutting climate adaptation.

To help ensure that the Focus Areas fully embodied the Pillars, a trio of leaders oversaw each of the eight Focus Areas: a subject matter expert who chaired the group, an Equity Liaison who provided feedback and a clear community voice, and a facilitator from the City's Office of Environment & Sustainability.

Unprecedented Community Engagement Efforts

The 2023 Green Cincinnati Plan is the product of a robust and extensive community engagement process.

Guided by a diverse Steering Committee and Equity Committee composed of local business, faith, nonprofit and government leaders, the Focus Area teams led six months of in-person and virtual meetings and surveys, gathering over 3,000 ideas from community members. Engaging Cincinnatians, especially those who live in the most affected and under-resourced communities, ensures residents most impacted by climate change have a voice in creating the vision for a Green Cincinnati. Green Umbrella and Groundwork Ohio River Valley supported this community endeavor by facilitating operations, engagement, and inclusion efforts.

Over 1,600 residents participated in more than 40 public meetings and their input and ideas resulted in the Vision, Goals, Strategies, and Actions for each of the GCP Focus Areas.

GCP Conclusions: Actions and Themes

After comprehensive brainstorming, comparing ideas across Focus Areas, and ranking and prioritizing suggestions, the content for each Focus Area was arranged into four sections:

- **Vision:** articulates the long-term aim of the Focus Area
- **Goals:** represent the benchmarks against which progress toward the Vision will be tracked
- **Strategies:** explain how the City and its partners will move to achieve the Goals
- **Priority Actions:** describe specific steps that can be taken to enact the Strategies

Across the eight Focus Areas of the 2023 Green Cincinnati Plan, several cross-cutting themes emerged:

- Creating jobs
- Prioritizing communities
- Emphasizing and building social cohesion
- Fostering public awareness and education
- Using the landmark federal funding opportunities

These themes cut across all eight Focus Areas as well as across the Pillars of Sustainability, Equity, and Resilience. They demonstrate how

the community's vital voice helped shape the 2023 Green Cincinnati Plan and where the greatest common ground lies. Furthermore, the themes showcase the importance of integrating action at the grassroots level with communities in order to move the City forward toward a new future. With an influx of federal funds from the 2021 Infrastructure Investment & Jobs Act (IIJA) and 2022 Inflation Reduction Act (IRA), Cincinnati can implement the necessary actions to achieve the GCP's goals.

The flower motif, used throughout the plan, symbolizes the vision for Cincinnati and connects the Pillars and eight focus areas: Buildings & Energy, City Operations, Community Activation, Food, Mobility, Natural Environment, Resilience & Climate Adaptation, and Zero Waste.

Join Us: Be the Seeds of Change

The 2023 GCP sets forth an ambitious vision for Cincinnati—a call to action. The flower motif, used throughout the plan, symbolizes this vision and creates an overarching connection among the Pillars and Focus Areas. The flower, like this climate action plan, leads us to think of our natural connections, which are diverse, beautiful, cross-pollinating, delicate, rooted, and dependent on the ecosystem they are a part of.

To realize this vision, the City will lead by example, and partner with local "Champion" organizations to shape collective impact. Cincinnati is home to residents, businesses, nonprofits, and other organizations that are poised to bring this vision to life. We commit to bring Champions together, to elevate the needs of priority communities, and to track and share our collective progress along the way.

This is our chance to reinvent the future and save our home. There is a place for you in the action. We hope you join us. We need you. Be the seeds of change.

Green Cincinnnati Plan
2023

Climate Change in Cincinnati—Why We Need the Green Cincinnati Plan

Green Cincinnati
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Climate Change in Cincinnati—Why we need the Green Cincinnati Plan

A global crisis with real local impacts

Why is Climate Change Happening?

Exploiting fossil fuels for industrialization has spurred prosperity and economic growth over the last 150 years. However, the bill for that growth is now coming due. Increasing concentrations of greenhouse gases in the atmosphere from the burning of fossil fuels are causing changes in our climate. As human population and consumer behaviors grow and require more resources, we must reckon with the consequences of burning fossil fuels to power our lives.

A growing collection of recent scientific reports has found that global climate emissions need to decline by 45% from 2010 levels by 2030 and reach net zero around 2050 to limit global warming to 1.5°C.[1] The local impacts of climate change in Cincinnati—rising heat, increased storms, pests, worsening impacts on health and agriculture, climate migration, increased costs to municipal government—require the City to act to mitigate Cincinnati's impact on global warming.

Children get relief from summer heat in the water fountains at Washington Park. Photo courtesy of City of Cincinnati.

Addressing carbon emissions will take a global effort. With 70% of emissions coming from urban areas, Cincinnati recognizes that cities play a unique role. Focused efforts to decarbonize locally will improve the quality of life, economic well-being, and long-term sustainability of our City and region.

Local Impacts of the Climate Crisis

Although climate change is a global issue, its impacts vary by region. While some parts of the globe and the United States will experience the effects of melting ice caps, rising sea levels, forest fires, and hurricanes, Cincinnati will not. Instead, rising temperatures and an increased frequency and severity of storms will cause major impacts which the City and its residents will have to face together.

Rising Temperatures and Severe Storms

The earth is getting hotter and so is Cincinnati. Historically, Cincinnati experiences about 30 days a year with a heat index over 90°F. By mid-century, it will be 79 days.[2] By 2080, the average daily temperature is projected to be more than 10°F hotter.[3]

While many parts of the world are experiencing drought, Cincinnati is actually experiencing more storms. Annual precipitation in the Midwest has increased 5-10% since 1950.[4] Not only will the Cincinnati region see more storms, the storms will be more severe.

As Cincinnati's climate changes, there will be impacts to our ecosystem, infrastructure, and the health and well-being of residents.

> "Rising temperatures and an increased frequency and severity of storms will cause major impacts

Health Implications

An increase in the number of dangerously hot days will lead to an increase in heat-related illnesses, including heat rash and cramps, and potentially fatal illnesses like asthma and heat stroke. Similarly, extreme temperatures put additional pressures on hospitals, emergency rooms, and medical services.

Illnesses carried by ticks, mosquitos, and other vectors are also expected to increase as the warming weather allows these carriers to move into new geographic regions, expanding their range. Infection rates for Lyme disease (spread by ticks) could rise, and other viruses, like West Nile, could appear in the local mosquito population.[5]

Climate change will also impact air quality. In Cincinnati, major sources of poor air quality include ozone and small particulate matter (PM 2.5). Hot sunny days with stagnant air accelerate ground-level ozone production, which can increase the amount of particulate matter present. Exposure to

these pollutants can cause or exacerbate health conditions like respiratory and cardiovascular diseases, aggravated asthma, and other chronic illnesses, leading, in some instances, to premature death.[6]

Increasing storms and flooding can also lead to adverse health effects, especially in areas where sewer and water infrastructure is inadequate. Flooding from storms can cause sewer back-ups into homes and businesses, and water intrusion into buildings, resulting in increased exposure to pathogens and illness.[7] Flooded homes can cause sleeplessness, anxiety, depression, and post-traumatic stress disorder.[8]

Severe storms caused flooding of the Ohio River onto the Public Landing downtown.

Impact to Infrastructure

Heavy storms caused by climate change can also impact infrastructure. In 2019, large rain events caused hillside instability along Columbia Parkway, requiring a $17.6 million 2-year stabilization project to repair the damage and prevent future landslides.[9]

Large rain events also affect the quality of water in the region. Like many older cities, Cincinnati has a combined storm-sewer system that was not designed to manage the volume of water generated during the kinds of extreme storms we are experiencing now.

When the volume of water exceeds the capacity of the storm-sewer system, the water is evacuated into combined storm sewer overflows (CSOs), resulting in stormwater and raw sewage entering the region's water ways. According to estimates, approximately 7.1 billion gallons of combined sewage overflow in a typical year are released into area waterways.[10] While improvements to the region's sewer system have controlled and removed over 150 CSOs, the number of CSO occurrences per year has remained constant over the past decade due to increased storm events.

Intense storms caused landslides onto Columbia Parkway in 2016, requiring over $17 million to clean-up and repair. Photo courtesy of City Staff.

Agricultural Disruptions

As increased heat causes local waterways to evaporate, this decrease in water supply will negatively impact agricultural productivity.

Crop loss is one of the chronic threats to agriculture from climate change in the Greater Cincinnati Area. Rising temperatures are expected to extend the frost-free season 20 days by mid-century.[11] While this might increase crop yield, hotter summers and periods of drought are expected to lead to a 5-25% decline in corn and soybean crop yields by mid-century.[12]

Moreover, an increase in average winter temperatures will affect the freeze-thaw cycle of the soil. This disruption can lead to challenges like flooding, increased insect and weed populations, and loss of native species that require colder temperatures to germinate.[13] Furthermore, the increase of pests and weeds from rising temperatures and the extended growing season can reduce yields, requiring the use of more adaptive farming techniques.[14]

The region is also expected to become more humid. This increase in high air moisture allows for many agricultural pests and pathogens to flourish, competing with crops and decreasing grain storage. These changes can all result in major economic output losses for farmers and require quick action to adapt farming techniques.

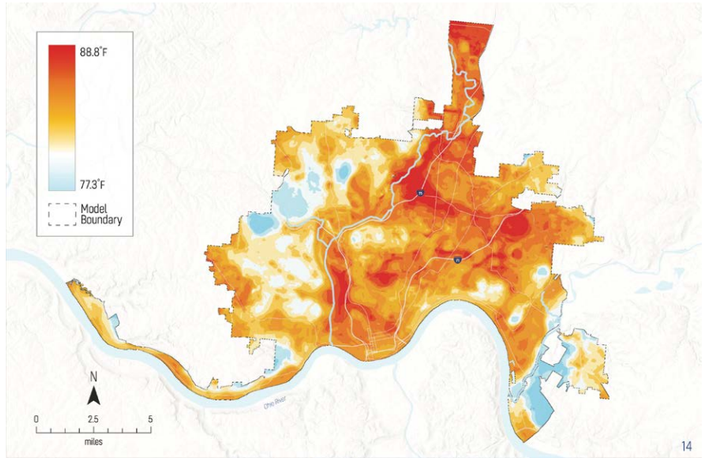
Climate Migration

Extreme heat, more frequent large flood events, forest fires, hurricanes, and other natural disasters are displacing people from their communities.

> "Due to rising temperatures, Cincinnati must develop and prepare the infrastructure and economy to be resilient to climate change.

One example of this is the extreme floods that impacted 13 counties in eastern Kentucky in July 2022. The flooding destroyed homes and infrastructure, required over $154.6 million for recovery, and displaced people from their homes for months.[15]

Cities in the Midwest are expected to experience climate migration from communities impacted by sea level rise and other natural disasters.[16] As a large city within this region, Cincinnati must develop and prepare the infrastructure and economy to be resilient to climate change—as well as prepare to receive those who might relocate to the City out of necessity. Preparing for in-migration requires improving infrastructure to serve a larger, more diverse population, increasing housing availability—especially affordable housing and multi-family housing—and providing transportation improvements for a growing city.



2020 Heat Watch Report predicts Cincinnati neighborhoods could experience up to a 10 degree difference in evening temperatures. This is one example of how climate change will affect the city and residents unequally.

Climate Change is an Equity Issue and a Risk-Multiplier

Not all residents and neighborhoods of Cincinnati will be equally impacted by climate change. In this way, the climate crisis is first and foremost an equity issue.

A 2020 study documented the Urban Heat Island Effect in Cincinnati and found that areas with lower levels of tree canopy and higher levels of impervious surfaces—such as parking lots and roads—have higher surface temperatures, sometimes up to 12°F higher.[17] This means that not all of the city's 52 neighborhoods will experience the impact of rising temperatures equally.

The 2020 Heat Watch Cincinnati study identified the neighborhoods in Cincinnati with the greatest urban heat island exposure. These include predominately low-income communities of color that were historically red-lined and where residents have been systematically denied access to financial services.[18] These neighborhoods will feel the effects of rising temperatures more dramatically, and these effects will be compounded for residents in housing where air conditioning is not available.

Not only will the impacts of climate change not be equally distributed throughout Cincinnati, but the adverse health effects of climate change will also not be distributed equally. Vulnerable populations will be more likely to face worsening health conditions. This includes older adults, children, and those living in risk-prone areas which are disproportionately affected by heat, flooding, and poor air quality. These populations are often communities of color and low-income.[19]

Similarly, with storms, these issues do not impact residents equally. The effects of storms more severely impact residents in neighborhoods on hillsides and in valleys.

The climate crisis acts as a risk-multiplier, making existing problems worse. When considering poverty (including energy poverty), homelessness, and public health issues, some members of our community are at higher risk from the impacts of climate change. The nature of these risks and the way they present in our communities is a growing field of research, shaping the way cities design climate solutions to protect the most vulnerable populations.[20]

The Cost of Inaction

Given how rising temperatures and increased storms will impact the City, it is important to allocate the appropriate resources to address these impacts. In 2022, the Ohio Environmental Council, Power A Clean Future Ohio, and Scioto Analysis published the report "The Bill is Coming Due: Calculating the Financial Cost of Climate Change to Ohio's Local Governments." This report documents how Ohio cities could spend an additional $1.8 to $5.9 billion per year by 2050 to manage the effects of climate change.[21]

The report reviewed 10 climate impacts on municipal spending: air conditioning installation, electrical costs, cool roofing, cooling centers, road repair, drinking water treatment, storm recovery, power lines, stormwater management, and elevating roads. These costs will not only burden the municipalities, but also their residents and taxpayers. Cincinnati must act now to prepare the infrastructure for climate change.

> Ohio cities could spend up to an additional $5.9 billion per year by 2050 to address 10 impacts of climate change
>
> **THE BILL IS COMING DUE**

Green Cincinnnati Plan
2023

What is the Green Cincinnati Plan?

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

What Is the Green Cincinnati Plan?

A bold, collaborative reach for carbon neutrality

The Green Cincinnati Plan (GCP) is a community vision to address climate change and build a more sustainable, equitable, and resilient future. The GCP was first introduced in 2008 and has become a central tenet of city planning. As science, politics, and technology have evolved, the City has updated the GCP every five years (2008, 2013, 2018).

Building on the successes of the previous plans, the City of Cincinnati is proud to present the 2023 Green Cincinnati Plan. For the first time ever, this plan charts a path to carbon neutrality, marking the most ambitious climate action plan in Cincinnati's history. The Plan focuses on the intersectional environmental systems that shape our lives, offering near-term steps toward long-term transformational goals.

The Green Cincinnati Plan reflects many aspects of the award-winning Plan Cincinnati[22]— particularly three of Plan Cincinnati's five initiative areas: Sustain, Connect and Compete. The Green Cincinnati Plan builds on Plan Cincinnati to create an implementation framework for portions of these initiatives. The City and community partners will work with communities to incorporate the Vision, Goals, Strategies, and Actions outlined in this document in developing neighborhood plans.

The Green Cincinnati Plan was first introduced in 2008 and has been updated every five years to maintain relevant recommendations as science, politics, and technology have evolved.

Green Cincinnati Plan Sustainability Milestones

The GCP has served as a rallying call for individuals and organizations to come together to take strategic action. Over the years, this collaboration has produced a growing momentum with many notable accomplishments:

2006

- The City of Cincinnati Office of Environmental Quality is formed.

2007

- LEED Tax Abatement introduced to encourage high-performance buildings.

2008

- Cincinnati adopted the 2008 Green Cincinnati Plan as a roadmap for how Cincinnati can be a national leader in addressing global climate change and make Cincinnati a healthier place to live.

2009

- Free parking for electric vehicles at all City parking meters, and some City garages.
- Phase 1 of Energy Efficiency Retrofits in City buildings. In 3 phases, the City completed deep retrofits on more than 60 buildings, reducing the City's energy bills by more than $2 million per year.
- The City's Urban Agriculture Program begins, with six city-owned parcels being leased for $1 each.

2010

- Enhanced curbside recycling offering new, larger recycling carts.

2011

- Green Umbrella restructured as regional sustainability alliance, becoming a backbone organization for sustainability efforts in the region.
- Cincinnati Zoo & Botanical Garden installs 1.5 mW solar canopy over parking lot.

Cincinnati Zoo & Botanical Garden solar canopy.

2012

- 100% Renewable Electricity—The City of Cincinnati completed the "electricity aggregation" process in 2012, buying electricity in bulk on behalf of approximately 60,000 residential and small commercial accounts.
- Car Sharing—Zipcar became Cincinnati's first car sharing company, with vehicles located in Downtown and Over-The-Rhine.
- Cincinnati adopted a new comprehensive plan, called Plan Cincinnati, and one of the five primary initiatives at the core of the plan is to "Sustain—Steward resources and ensure long term viability."
- Solar Power Purchase Agreement (PPA)—Installed solar panels on 3 City facilities: College Hill Rec Center, Beekman Garage, and One-Stop Permit Center.

2013

- 2013 Green Cincinnati Plan published.
- Lick Run Greenway project launched in South Fairmount to reduce combined sewer overflows (CSOs) into the Mill Creek.

2014

- Red Bike bikeshare launched in Downtown and Uptown neighborhoods.

Photo courtesy of Red Bike.

2015

- Cincinnati District 3 police station—Built as a sustainable, energy efficient and environmentally friendly facility meeting LEED Platinum status, the new station is designed to generate as much energy as it consumes.
- Expansion of the Red Bike system, which increased the size from 35 stations to 50 stations.
- First Annual Midwest Regional Sustainability Summit—attended by more than 300 individuals representing 150 businesses and organizations.
- The Greater Cincinnati Regional Food Policy Council is formed to address food access & consumption, production & land use, distribution and assessment, planning & zoning.

What is the Green Cincinnati Plan?

2016

- Electric Vehicle Chargers—the Office of Environment and Sustainability brokered resources from Nissan and Clean Fuels Ohio to obtain electric vehicle DC fast chargers at 5 locations in Cincinnati.
- Natural Gas Aggregation—the City entered a new Natural Gas Aggregation Contract with Constellation Natural Gas as the provider. Approximately 46,000 of 69,000 eligible households were purchasing their natural gas through this program.
- Opening of Cincinnati Bell Connector—The streetcar operates on a 3.6-mile loop.
- Solarize Program launches, accelerating the pace of residential solar installations.
- The first Food Waste Forum convenes 150 stakeholders to create a regional food waste action plan.

2017

- Curbside textile recycling—Residents are now able to recycle clothing, textiles and housewares just as easy as they can recycle other items.
- Cincinnati signs a contract to provide 100% green energy to City facilities.
- Cincinnati becomes the 1st aggregation program in the US to offer 100% green energy for both electricity and natural gas.
- Mayor Cranley signs the Compact of Mayors—a global agreement of 648 cities that have agreed to measure emissions and climate risk and publicly report findings.
- Mayor Cranley commits Cincinnati to 100% Renewable energy by 2035.

2018

- 2018 Green Cincinnati Plan adopted by City Council.
- Cincinnati selected for the American Cities Climate Challenge, infusing money and technical support into accelerating climate strategies.

2019

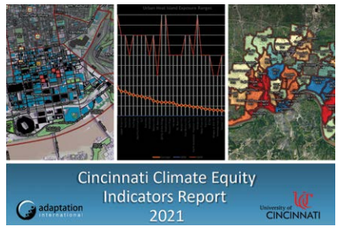
- 100 MW Solar PPA contract signed.
- Warm Up Cincy launched to address energy poverty in multi-family buildings.

2020

- Issue 7 Bus levy passes, significantly increasing funding for regional public transit.

2021

- First Climate Equity Indicators Report published, assessing neighborhood level climate vulnerabilities
- Climate Safe Neighborhoods launches, starting neighborhood-scale climate resilience planning.



The report prioritizes neighborhoods which are hardest hit by climate change.

- Contract signed for LED lighting upgrades to 94 facilities and the installation of 1.34 MW of solar across 9 facilities.
- Lick Run Greenway project completed—a bioengineered surface stream and separated stormwater sewer which eliminates approximately 800 million gallons annually of combined sewer overflows into the Mill Creek.
- Cincinnati secures USDA funding to start community composting <500 sq ft. at various neighborhood sites.

2022

- Climate, Environment & Infrastructure Committee becomes the first climate-focused committee in City Council history.
- Cincinnati signs the Milan Urban Food Policy Pact, and is awarded Special Mention for food waste prevention efforts.
- Complete Streets policy passed by City Council.
- Cincinnati secures grant to launch biochar program to handle Park's wood debris.
- Inaugural Equity Committee formed to shape the 2023 GCP Vision, Goals, & Strategies and establish a formal Equity Commitment and strategic engagement metrics.

2023

Carbon Emissions

To address the climate crisis, the global community is organizing to drastically reduce carbon emissions around the globe. As a city, Cincinnati is working to address carbon emissions at home. Cincinnati first adopted carbon reduction goals in the 2008 Green Cincinnati Plan, establishing a commitment toward an 80% reduction in carbon emissions by 2050, from a 2006 baseline. In order to reduce emissions, it is critical to understand where local emissions are coming from.

Community Emissions Inventory

The Office of Environment & Sustainability models greenhouse gas emissions produced by Cincinnati over the course of a year to measure the climate impact of the City. The Cincinnati Community Emissions Inventory quantifies the amount of carbon emissions from different sources within the City. The inventory is broken down into three major components: stationary energy sources (buildings, factories, etc.), transportation, and waste. Of these three, stationary sources account for approximately 66% of all emissions. Focusing on ways to improve the energy efficiency of stationary sources and to acquire clean sources of power will be critical to reducing emissions citywide.

Since 2008, the actions set forth by the GCP have helped the City make significant progress toward its carbon reduction goals. Cincinnati's 2021 community emissions inventory estimates total community-wide emissions of 5.9 MMT CO2e (million metric tons of carbon dioxide equivalent), representing a 36.6% decrease from the 2006 baseline of 9.3 MMT CO2e. While there have been reductions across each of the major categories, energy efficiency and renewable energy projects to stationary energy sources (buildings, factories, etc.) have been the driving force behind the reductions. **The current trajectory of carbon emissions reductions puts the City on track to meet its decarbonization commitments.**

2022 COMMUNITY CARBON EMISSIONS

24.75%
COMMERCIAL BUILDING ENERGY USAGE

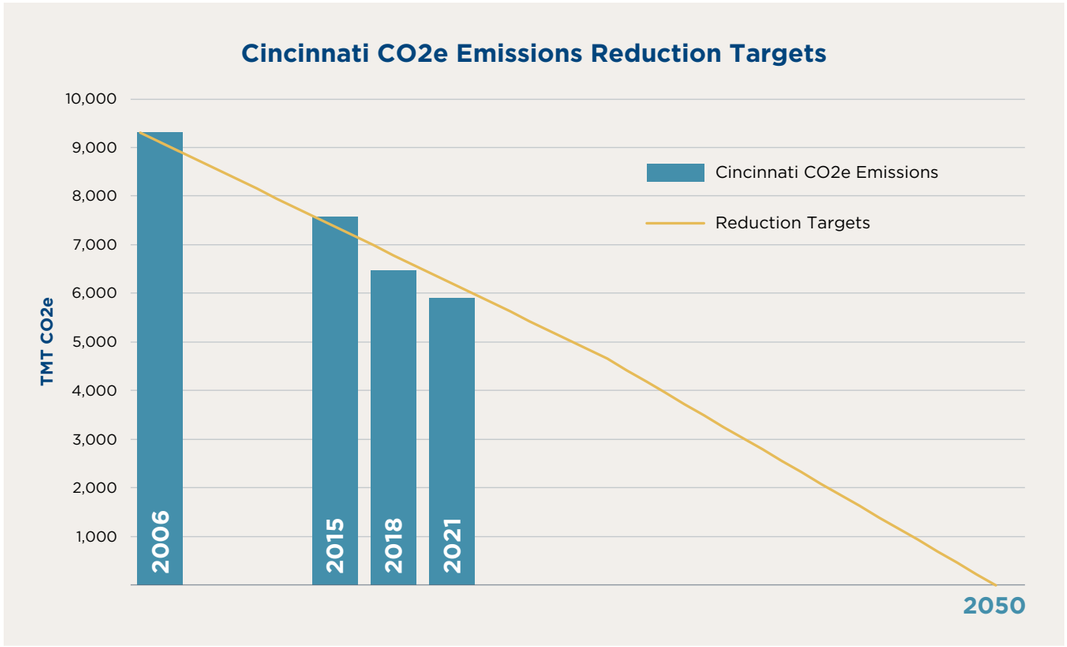
17.53%
RESIDENTIAL BUILDING ENERGY USAGE

32.35%
TRANSPORTATION

1.97%
SOLID WASTE

2.99%
GOVERNMENT OPERATIONS

20.41%
INDUSTRIAL BUILDING ENERGY USAGE



Moving forward toward Carbon Neutrality

The 2023 Green Cincinnati Plan marks a departure from the carbon goals of the past. With recent developments in the science of climate change, it has become apparent that the world will need to accelerate decarbonization. **With the adoption of this plan, Cincinnati commits to 50% reduction in carbon emissions by 2030, and 100% community-wide carbon neutrality by 2050.**

The City of Cincinnati Government is committed to leading by example. But it is important to note that the government accounts for less than 4% of all the emissions in Cincinnati. To achieve carbon neutrality will require all hands on deck, with concerted effort from individuals and institutions.

With a vision of a zero-carbon future, this climate action plan identifies the near-term steps Cincinnati must take to achieve this aspirational goal. **In many ways, this plan is a roadmap for re-inventing a city—re-inventing the way we construct our buildings, the way we power our homes, the way we get around, and the way we interact with and honor nature.**

ClimateOS Overview. Photo Courtesy of ClimateView.

ClimateView — Making climate data accessible and interactive

The City of Cincinnati is using the ClimateView platform to assist in carbon emissions measurement, tracking, and forecasting. The platform allows the City to identify the optimal pathways to net zero by highlighting which sectors are producing emissions, exploring different emission reduction scenarios, and understanding the impacts different actions have on emissions. Most importantly, ClimateView is intended to allow residents and businesses to track the City's progress by bringing the Green Cincinnati Plan to life through interactive emissions reports and status updates on the Plan's priority actions.

Central Pillars of the Green Cincinnati Plan

The Green Cincinnati Plan Steering Committee determined that the 2023 GCP would have three central pillars: Sustainability, Equity, and Resilience. These three important concepts are closely related and have significant implications for individuals, communities, and the natural world. The pillars serve as central tenets, upon which the Goals, Strategies, and Actions of the 2023 GCP are built. A deeper explanation of each of these pillars follows below.

The 2023 GCP Steering Committee guided the process and was composed of a diverse group of local business, faith, nonprofit, and government leaders. Photo courtesy of Monica Windholz.

Sustainability

Sustainability is the practice of preserving natural resources and ecosystems for the benefit of current and future generations. It involves making decisions and taking actions that minimize the negative impact of human activities on the environment, while also ensuring that the needs of society are met. Ultimately, the goal of environmental sustainability is to create a healthy, balanced, and maintainable relationship between humans and the natural world.

Currently, our culture of extraction threatens sustainability. We take and take and take from the natural environment without replacing or regenerating the extracted resources. The 2023 GCP has many goals, strategies, and actions that seek to restore and regenerate our environment, shift to renewable sources of energy, and eliminate the carbon pollution that is driving climate disruption.

Examples of Sustainability Aligned Strategies in the Green Cincinnati Plan:

- Decrease energy usage in new and existing buildings through the adoption of energy-efficiency program.
- Provide residents and businesses with continual access to power from clean energy sources.
- Amplify the workforce to meet the demands of the green economy.
- Improve bike and pedestrian connectivity so that residents can safely access the places they need to go.
- Improve preservation, health, and maintenance of trees in existing urban canopy.
- Divert food waste through prevention, reuse/recovery, and composting.

2023 GCP Definition
Sustainability means creating and maintaining conditions to meet the needs of present generations without compromising the ability of future generations to meet their own needs. It acknowledges that human survival and well-being depends on our natural environment.

2023 GCP Definition
Resilience is a tenacious ability for individuals and communities to collaboratively anticipate, accommodate, and positively adapt to thrive amidst changing climate conditions through greater social cohesion, strong partnerships, and access to resources.

Resilience

Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow—no matter what kinds of challenges and threats they face. In the context of climate change, resilience is like the triage and emergency room of the sustainability building. It measures a community's ability to prepare for and adapt to climate hazards and recover quickly from climate-related disasters. Given this importance, Resilience is both a foundational pillar and the subject of Focus Area for the 2023 GCP.

To increase its own resilience, Cincinnati can empower communities to identify the climate threats unique to them and prepare for possible shocks or disasters. When we work to build resilience in our neighborhoods, we deepen relationships and connections, creating positive social cohesion that spans both the built and natural environments. In other words, people are *collaborating* with the natural environment rather than simply interacting with it.

In the coming decades, building resilience will be essential to urban policy as well as a smart investment for all cities, including Cincinnati. Because resilient cities can better handle natural and human-made disasters, they can protect human life, absorbing the impact of economic, environmental, and social hazards. By taking steps to deepen Cincinnati's own resilience, we are making the City a healthier, more attractive place to live and do business.

Examples of Resilience Aligned Actions in the Green Cincinnati Plan:

- Decrease sewer backups, sewer overflows, and overland flooding (aka flash flooding) by supporting community-wide sewer infrastructure improvements and prioritizing projects in priority communities.
- Establish prioritized facilities as "Resilience Hubs"—centers that foster community connection and preparedness during emergencies.
- Incentivize green infrastructure projects in communities with extreme heat and flood vulnerabilities.
- Conduct inventories, assessments, and clean-ups of contaminated industrial sites—referred to as brownfields—aligned with both community revitalization priorities and city planned reuse.
- Implement affordable housing strategies to stabilize communities.

Equity

Climate change impacts communities of color and other vulnerable populations in disproportionate ways. For example, bad air quality leads to higher asthma rates, degraded infrastructure leads to flooding and sewer backups, and fewer trees and more pavement lead to higher and more unhealthy temperatures. These factors are more prevalent in communities of color and other vulnerable priority neighborhoods.

By centering equity in climate action planning—using tools like the 2021 Cincinnati Climate Equity Indicators Report[23]—we can better reduce the burden of climate events and reallocate the benefits of taking action. To place equity firmly at the center, however, we must purposefully engage with and invest in the people and communities most impacted by environmental injustice. In addition, the City recommends an approach called "targeted universalism": setting universal goals from which all groups benefit yet achieving these goals through targeted approaches. Intentionally prioritizing equity at every stage gives us a better chance of disrupting these cycles of injustice. Supported by the GCP Equity Framework (See Appendix), Cincinnati is on a journey toward more equitable climate action.

Examples of Equity Aligned Strategies in the Green Cincinnati Plan:

- Reduce energy costs for tenants and homeowners experiencing energy poverty to improve the affordability of housing.
- Use a variety of systems to create equitable access to nutritious, affordable food in every neighborhood, prioritizing communities that need it most and creating food sovereignty.
- Provide reliable public transportation options and an improved rider experience to connect residents to the places where they need to go.
- Increase air quality studies and education and reduce pollution from air emissions.
- Reduce extreme heat, overland flooding, landslides, and water pollution vulnerabilities by incentivizing, improving, and increasing green infrastructure.

2023 GCP Definition
Equity is just and fair inclusion in which all can participate, prosper, and reach their full potential. In sustainability work, equity must be recognitional, procedural, distributional, restorational, and transformational.

> "A community's success or failure in preparing for the impacts of climate change will be measured by how it is able to address the needs of those on the frontlines of impacts and those already suffering from a range of challenges, including lack of economic opportunity, racism, and pollution.
>
> **GEORGETOWN CLIMATE CENTER**

Green Cincinnnati Plan
2023

Operationalizing Equity

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

Operationalizing Equity

Integrating equity throughout the GCP journey

A Word from Ashlee Young, Equity Committee Chair

It has been my honor to serve as the Equity Committee Chair for the Green Cincinnati Plan. One of the greatest challenges facing our community is climate change. Often when we talk about climate change, the language we use is not accessible to everyone and it doesn't center those most impacted. Like other issues in our community, climate impacts are not created equally or distributed equally; many of them disproportionately impact our Black and Brown communities, and communities with low wealth. It is important that we are deliberate about reducing those impacts.

What excites me most about the 2023 Green Cincinnati Plan is the intentionality of embedding equity into the process and plan with an explicit focus on racial equity.

It is up to all of us to hold our community accountable for how the plan is developed and implemented. Every step of the way it will be important to assess who will benefit and who will be burdened by the decisions we make. We see this intentional focus from the federal government with Justice40 and, it is our time as a community to put this commitment into practice through implementation and budgetary process.

Accountability lies with all of us, so the next time you are asked to be involved in any effort, think about who will benefit from this decision, who will be burdened by this decision. And we must ask, are those most impacted not only at the table, but are they leading and deciding what is best for their community? The choice is ours: as a city we can do the hard work now or we can suffer the consequences of having the same patterns repeated later, causing further harm to our communities.

If we want to see real change, we have to do things differently. Doing things differently is being intentional about creating a community-driven process for climate action planning. Investing in and supporting the leadership, knowledge, and expertise of those most impacted by any aspects of climate change will be needed to create community solutions that work.

EQUITY COMMITTEE CHAIR

EQUITY COMMITTEE CHAIR
Ashlee Young

ORGANIZATION
Vice President of Policy & Engagement, Interact for Health

Moving from equity as a concept described in the pillar to real-life application is neither simple nor easy, but it is imperative. The building blocks of common language, commitment, strategy, and tools will assist in integrating equity; a detailed description of these resources follows below.

As a public statement of collective commitment to the integration of equity, the GCP Steering Committee adopted the following Equity Commitment Statement.

This statement and the collective honesty and buy-in that it embodies will continue to guide and inform all involved in the Green Cincinnati Plan moving forward.

Equity Commitment
The Green Cincinnati Plan (GCP) is committed to equity—with an explicit focus on racial equity. We acknowledge Cincinnati's demographic makeup and our history of injustices. We believe that we will be better able to create an environment where all Cincinnatians can thrive by explicitly centering race in our efforts. The GCP will have an intentional focus on addressing the needs of those people and communities who experience elevated burdens from climate change and on an equitable distribution of benefits moving forward. We commit to embedding racial equity throughout the engagement process, written product, and implementation of the Green Cincinnati Plan to ensure accountability and impact.

Common Language

As discussed in Equity Pillar above and approved by the Steering Committee, the Green Cincinnati Plan shares the following foundational definitions of equity:

Equity: just and fair inclusion in which all can participate, prosper, and reach their full potential. In sustainability work, equity must be recognitional, procedural, distributional, restorational, and transformational.

Racial Equity: an outcome in which "race no longer determines one's socioeconomic outcomes. As a process, we apply racial equity when those most impacted by structural racial inequity" can fully participate in the development of "institutional policies and practices that impact their lives."[24]

> Like other issues in our community, climate impacts are not created equally or distributed equally, many of them disproportionately impact our Black and Brown communities, and communities with low wealth. It is important that we are deliberate about reducing those impacts.
>
> **ASHLEE YOUNG**
> GCP Equity Committee Chair

There are five types of equity as identified in the GCP's definition:

1. **Recognitional equity** identifies and acknowledges injustices affecting specific populations that various institutions have created, including government.[25]
2. **Procedural equity** addresses power structures and access to participation in decision-making. A key to this is ensuring equitable, inclusive, and meaningful engagement and asking how our engagement shifts power, builds trust, and ensures accountability, both structurally and intergenerationally.[25]
3. **Distributional equity** addresses the distribution of burdens and benefits and deploys targeted resources to reduce inequities across different populations.[25]
4. **Restorational equity** makes commitments to correct past harms and facilitate repair, including revitalizing degraded relationships, land, and other resources.[25]
5. **Transformational equity** addresses underlying structural conditions that cause social and racial injustices while cultivating accountability, reducing harm, and preventing future unintended consequences.[25]

Priority Communities: communities where climate mitigation and efforts to close the disparity gaps are likely to be most impactful due to historic and systemic discrimination, vulnerability to climate-related events and disasters, and capacity to adapt to these challenges.

As the City works to operationalize the climate equity strategies of the GCP, a common language and approach to prioritizing communities hit first and worst by the climate crisis is needed. In climate equity work, communities are referred to by many different terms—frontline, disadvantaged, under-resourced, minority, low-income, and more. The GCP uses the term "Priority Communities" to communicate the essence of these various terms and to signal the importance of elevating these communities' needs based on a nuanced approach that is supported by both data and lived experience.

The particular strategy being implemented and the exact focus of the implementing partner will help determine how communities get prioritized. Tools like the Climate Equity Indicators Report[26]—and other resources found in the GCP Equity Framework (see Appendix)—will provide the necessary quantitative data while residents' lived experiences will provide the necessary qualitative data. In fact, the GCP Equity Framework

provides an expanded set of tools and offers guidance on determining Priority Communities for GCP implementation.

We live during a critical moment in human history. We have created a problem that will require us to come together to deliver the transformational change the moment requires. This Plan is a community vision born from the many voices who have contributed their ideas and energy.

Green Cincinnnati Plan
2023

How was the Green Cincinnati Plan Co-Created?

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

How was the Green Cincinnati Plan Co-Created?

Building a community vision through inclusive community engagement

1680
IN PERSON ATTENDEES
+
1073
VIRTUAL ATTENDEES
+
1013
SURVEY RESPONDENTS

3766
INDIVIDUALS ENGAGED

139
ORGANIZATIONS REPRESENTED

50/52
CINCINNATI NEIGHBORHOODS REACHED

A People-Centered Plan

People are at the center of this plan. Reinvention gives the opportunity to consider the "design-flaws" of the way things were done in the past. In designing a human-centered climate action plan, the community was challenged to define the core values on which the Plan is built.

Intentionally Inclusive Community Engagement

In many ways, process is as important as product. With the foundational Pillars of Sustainability, Equity, and Resilience in place, the Steering Committee co-designed a community engagement process to collect input from residents and partner organizations.

The process was launched with a kickoff event in May of 2022 at the Cincinnati Zoo. More than 300 residents attended to give shape to the plan, provide suggestions, and identify key community organizations who should be involved.

The effort was informed by an Equity Committee, charged with creating an The GCP Equity Framework to guide the process and eventually implementation.

Eight subcommittees focused on developing climate action plans in the following areas:

- Buildings & Energy
- City Operations
- Community Activation
- Food
- Mobility
- Natural Environment
- Resilience & Climate Adaptation
- Zero Waste

From June to December of 2022, each of the subcommittees held a series of in-person and virtual engagement opportunities. A trio of leaders oversaw each Focus Area Subcommittee: a subject matter expert who served as Focus Area chair, an Equity Liaison who ensured community voice, and a facilitator from the Office of Environment & Sustainability (OES) who provided structure and support. With the directive to engage and include the community at every step in the Plan's formation, each Focus Area team held three public meetings throughout the summer and fall of 2022. In all, hundreds of residents participated in 40+ public meetings and contributed over 3,000 ideas for sustainable action, resulting in the Vision, Goals, Strategies, and Priority Actions in the Focus Area section of this Plan.

Equity Liaison Darryl Franklin presents at the Zero Waste Focus Area Meeting. Photo courtesy of City of Cincinnati.

Rooting In Equity

From the launch of the 2023 Green Cincinnati Plan process, the City was intentional about using equity as a core design principle. The Steering Committee and Focus Area Subcommittee Chairs represented a diversity of perspectives reflective of Cincinnati's demographics. To help weave equity throughout the plan, each subcommittee was supported with an Equity Liaison, a member of the Equity Committee. These individuals served as a member of the leadership "trio" of each Focus Area during the community engagement to create space for valuable—and too many times unheard—perspectives. In these two primary ways, people of diverse backgrounds were intentionally included and served as the leaders and decision-makers.

Resident Survey Provides for Virtual Engagement

Throughout the process, the Office of Environment and Sustainability and partners also provided virtual engagement options primarily via a survey of local community members. The survey asked residents about their perceptions around the impacts of climate change and what actions they would recommend. These ideas formed the themes considered in each Focus Area. Over 1,000 residents responded, representing 50 out of 52 of Cincinnati's neighborhoods.

92%
OF CINCINNATIANS THINK CLIMATE CHANGE IS ALREADY AFFECTING OUR CITY

77%
AGREE THAT IT IS NOT AFFECTING ALL RESIDENTS EQUALLY

Centering Priority Communities—Climate Safe Neighborhoods

Climate Safe Neighborhoods (CSN) is a national effort through Groundwork USA to identify neighborhoods that are more vulnerable to the effects of climate change because of racial and social injustices, spread awareness and educate residents in those neighborhoods, and ignite action towards climate resilience. The Climate Safe Neighborhoods partnership explores the relationship between historical race-based housing segregation and the current and predicted impacts of climate change. Effective community engagement is important for creating better policies and programs, addressing inequality, and building resilient communities.

Since 2021, Groundwork Ohio River Valley in partnership with Green Umbrella and the Office of Environment and Sustainability developed neighborhood Climate Advisory Groups to identify solutions to address extreme heat and flooding. Through intentional engagement with residents in priority communities, the effort honors community members as the subject matter experts in identifying local issues and co-creating community-based solutions. Residents are compensated for their work, and the goal is to develop neighborhood resilience maps, which serve as a platform for activating the residents' vision and as a tool to advocate for resources. As of early 2023, 8 neighborhoods and 38 resident leaders have created Climate Resilience Plans (See Appendix). Many components of these plans are reflected in the GCP.

> My focus was never on climate, but it was always about climate.
>
> **MARISHA DAVIS**
> Lower Price Hill resident,
> Climate Advisory Group participant,
> and now a Groundwork Neighborhood Liaison

Community members contribute to the Resilience map for South Cumminsville during the Climate Safe Community Series meeting. Photo courtesy of City of Cincinnati.

Additionally, the community engagement strategy took an explicitly accessible and placed-based approach with a focus on those communities experiencing the brunt of the impacts of climate change. All GCP community meetings were held in priority communities and at partners' facilities accessible by public transit. Surveys were made available in both virtual and paper formats as well as translated into Spanish.

The Climate Safe Community Series, an adaptation of the Climate Safe Neighborhoods effort, allowed Groundwork Ohio River Valley, Green Umbrella, and OES to pilot an approach for residents of neighborhoods experiencing disproportionate impacts of climate change firsthand to share their neighborhood-level expertise, craft a vision for their community, and provide recommendations for the 2023 GCP. Across 4 sessions during the summer of 2022, more than 225 residents representing 11 priority communities gathered to share their lived experiences. To make participation possible, childcare was provided, and residents were compensated for their time. Nearly 300 ideas were shared to improve the sustainability, equity, and resilience of these key neighborhoods. All ideas and suggestions were considered in developing the Goals, Strategies, and Actions of the Focus Areas.

Tying it all together

Co-creation of a community vision requires listening, collaboration, and compromise. With more than 3,000 citizen recommendations, the Focus Area subcommittees worked to synthesize the input from multiple channels.

Cross-Cutting Themes that Span the 2023 Green Cincinnati Plan

To develop the Goals, Strategies, and Actions for the Focus Areas, the 2023 Green Cincinnati Plan process incorporated feedback from many voices, backgrounds, and levels of expertise. During this process, a number of cross-cutting themes emerged as key community priorities:

- Creating Jobs
- Prioritizing Communities
- Emphasizing and Building Social Cohesion
- Fostering Public Awareness
- Leveraging Landmark Federal Funding

These themes span all eight Focus Areas as well as the three Pillars of Sustainability, Equity, and Resilience. They represent a desire and need expressed in multiple ways throughout the engagement process. They

demonstrate how the community's vital voice helped shape the 2023 GCP. Furthermore, the themes showcase the importance of integrating action at the grassroots level with communities in order to move the City forward toward a new future.

Creating Jobs

Jobs that are self-sustaining provide dignity and an opportunity for wealth-building. Many priority communities lack access to such jobs and required training, forcing residents to travel far distances to work and school. This need for self-sustaining jobs arose as a theme in nearly all Focus Areas—more so than any other theme. The emerging technology and redevelopment needed to reduce the City's carbon footprint and enact the strategies in the GCP require the creation of new training pathways and jobs of varying skill levels. The training and job creation opportunities before us will be further explored in following sections.

Prioritizing Communities

Centering Equity in the GCP highlighted the need to prioritize change in the neighborhoods and communities which need it most—not necessarily those with the loudest voices or the most influence. All areas and aspects of the GCP must prioritize the communities that have been historically underrepresented and have endured a disproportionate amount of environmental injustice. While data is an imperative source that drives strategy, the lived experience of those most impacted must be considered as well.

Emphasizing and Building Social Cohesion

Social cohesion (tight-knit communities) is a critical tool for resilience and climate adaptation, and its importance came up again and again in the GCP development process. By emphasizing social cohesion, we ensure we are identifying solutions that match infrastructure and policy changes to the specific communities being served. Additionally, these solutions strengthen the relationships among members of a community and engage the community in each step of the decision-making process.

Justice40

Justice40 (J40) is dynamic, cross-department effort across the federal government to explicitly require equitable benefits be applied to programs related to climate change (e.g., clean energy and energy efficiency, clean transportation, affordable housing, workforce development, pollution remediation, clean water infrastructure, and more)—including federal funding. Justice40 aims to bring resources to communities most impacted by climate change, pollution, and environmental hazards.

Fostering Public Awareness

The City cannot accomplish all the goals of the 2023 Green Cincinnati Plan on its own. Instead, it must rely on the involvement and commitment of partner organizations and grass-roots efforts. Furthermore, the City needs the public's help. By understanding the GCP's overall significance and supporting investment in the appropriate strategies and actions, the public can provide the necessary momentum to propel Cincinnati forward.

Leveraging Funding Opportunities

Passed in 2022, the Infrastructure Investment & Jobs Act (IIJA) and Inflation Reduction Act (IRA) brought enormous funding opportunities to states and municipalities for job creation, infrastructure improvements, and technology development and adoption. The importance of leveraging these opportunities to accomplish the goals of the GCP spans all eight Focus Areas.

These cross-cutting themes that span the Focus Areas and the Pillars help to unify the actions and efforts of the City and community partners.

Thanks to intentional alignment of the GCP Action Plans with J40 priorities, The City of Cincinnati is primed to leverage the unprecedented federal funding opportunities through the implementation of the Green Cincinnati Plan. With the support and engagement of the broader community, the GCP lays out an actionable roadmap to advance climate action, resilience, equity, and job creation in our community. The overarching themes in the GCP align with the funding priorities of IIJA and IRA. The City of Cincinnati is exploring and pursuing funding opportunities to implement key GCP actions to improve energy efficiency, increase access to clean energy, promote active transportation, and build community resilience.

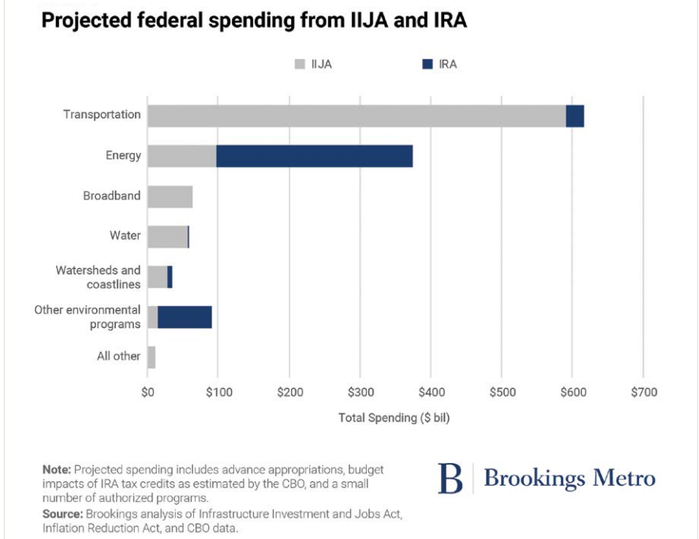
How was the Green Cincinnati Plan Co-Created?

Federal Funding Opportunity Before Us

Substantial investment is required to implement the GCP in full. Luckily, we are in the midst of an unprecedented opportunity to fund sustainability projects. The federal government recently passed two key pieces of legislation, the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA), that created over $1.6 trillion in funding opportunities.

Passed in November 2021, the IIJA, provides $1.2 trillion to invest in critical infrastructure across the United States. From 2022-2026, IIJA will provide funding to implement and improve public transit, transportation infrastructure, EV charging, resilient infrastructure, environmental remediation, and power infrastructure. Building on a strong infrastructure foundation, the IRA, subsequently passed in 2022, invests $369 billion in energy security and climate programs. Over the next ten years, IRA will fund community investment in energy efficiency, electric vehicles, solar, and greenhouse-gas-emission-reduction programs.

IIJA and IRA are aligned with the Biden Administration's priorities to create good-paying union jobs, tackle the climate crisis, and advance environmental justice and equity. To achieve these goals, President Biden also commissioned the Justice40 initiative (J40), a whole-of-government effort to ensure that federal agencies deliver at least 40% of the overall benefits from federal investments to disadvantaged communities. J40-related criteria and tools are starting to influence most funding opportunities stemming from federal agencies and will continue to do so in coming years.



Source: Adie Tomer, Caroline George, and Joseph W. Kane. Brookings Metro: "The start of America's infrastructure decade."

1,680

PLANNING SESSION ATTENDEES

139

ORGANIZATIONS REPRESENTED

42

PUBLIC MEETINGS

3000+

RECOMMENDATIONS RECEIVED

Thank you

to all the community voices who shaped this plan

Green Cincinnnati Plan
2023

Focus Area Action Plans

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

Focus Area Action Plans

Nurturing aligned action through partnership and accountability

The 2023 Green Cincinnati Plan (GCP) outlines 40 high-impact strategies to reduce our carbon emissions 50% by 2030 and achieve 100% carbon neutrality by 2050. In addition, the Plan identifies 30 measurable goals that will be used to report our progress towards a more sustainable, equitable, and resilient Cincinnati. Building on the shoulders of Cincinnati's climate action planning efforts since 2008, these high-impact strategies arose as part of a community-wide, community-driven collaborative effort.

Focus Areas

Climate action happens at the intersection of many interconnected systems including people, nature, infrastructure, economics, and more. The 2023 Green Cincinnati Plan is organized around eight key Focus Areas that play a significant role in driving systems change:

- Buildings and Energy
- City Operations
- Community Activation
- Food
- Mobility
- Natural Resources
- Resilience & Climate Adaptation
- Zero Waste

The connection of the eight Focus Areas is symbolized through the flower motif, in which each Focus Area is its own petal of the flower and holds a unique chapter icon. The flower, like this climate action plan, leads us to think of our natural connections, which are diverse, beautiful, cross-pollinating, delicate, rooted, and dependent on the ecosystems of which they are a part.

Each Focus Area includes the following components:

Vision: A brief, aspirational statement that encapsulates the world we're trying to create within the Focus Area; perhaps not able to be accomplished within the 5-year GCP time frame yet well worth aiming for.

Goals: Measurable assertions that both stretch us toward the Vision and can be tracked over time to ensure accountability and progress in the appropriate direction.

Strategies: Phrases that subdivide the Focus Area and give guidance; allows for categorizing of Priority Actions and points us toward the corresponding Goal; formed from coalescing of input; intended to allow the flexibility to add other emergent Priority Actions later.

Priority Actions: Description of specific steps—gathered and prioritized through the engagement process—that will likely provide the most promising pathways to achieve stated Goals.

Action Alignment

To gauge how closely the Focus Area actions align to the Sustainability, Equity, and Resilience pillars—as well as to other priorities—a cross-section of stakeholders evaluated the actions, measuring them against these metrics. The resulting Action Alignment charts illustrate how closely a proposed action aligns with the pillars and other GCP priorities. These tables appear after each strategy in the Focus Areas, and they offer a way to understand the intersectional nature of the Priority Actions.

Action Alignment Legend

● strong alignment ● moderate alignment ● weak alignment

Implementing Actions & Tracking Progress

The 2023 Green Cincinnati Plan is commitment to action. It articulates an ambitious vision for the City—one that activates our community, strategically invests resources for impact, and does our part to protect the natural environment. In order to realize this vision, the City and partners must take action. To this end, the City shares a four-pronged approach to GCP implementation:

Lead by Example: The City will continue to lead by example by greening government operations and looking for efficiency gains that save Cincinnati money. The City Operations section of the GCP references most of these efforts.

Partner with Champions: Cincinnati is home to businesses, nonprofits, and other institutions that will help move Cincinnati toward a sustainable, equitable, and resilient future. In fact, these organizations are often better positioned than the City to execute Strategies and Actions. The City commits to partnering with these "Champions" and supporting their GCP-related initiatives. The role of Champions in

helping to accomplish the Goals of the GCP cannot be overemphasized.

Equity in Implementation: Equity is foundational in both the development and implementation of the Plan. For our City to remain accountable to building a truly sustainable, equitable, and resilient city, disaggregated data and residents with lived experience of environmental injustice must influence implementation. The City is committed to an implementation approach that holds all involved accountable to the Equity Commitment made.

Track & Communicate Progress: Each GCP Focus Area identifies quantitative Goals in order to drive accountability, learning, and adaptation over time. Working with "Champion" community partners, the City will track progress on each Goal on an annual basis. All Goals within the GCP are intended to be completed in 5 years, unless otherwise stated. The City's Office of Environment and Sustainability (OES) will report progress quarterly to City Council's Climate, Environment, and Infrastructure Committee. Council can intervene, if necessary, to keep efforts on track. Additionally, the City has partnered with ClimateView to provide an accessible, up-to-date dash board of Cincinnati's progress. Finally, the City is piloting a community engagement software called CitizenLab to remain connected to as many community members as possible throughout implementation.

Green Cincinnnati Plan
2023

FOCUS AREA

Buildings & Energy

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

FOCUS AREA

Buildings & Energy

Ensuring energy efficient buildings and clean energy for a healthy, equitable, and resilient city.

Vision

Adoption of clean energy sources and energy efficiency measures by 2050 that result in net-zero emissions from buildings, contributing to a healthy, equitable, and resilient future for our City.

A Word from Sanyog Rathod, Buildings & Energy Focus Area Chair

It has been a distinct pleasure to lead the Buildings & Energy Committee, and work alongside City leadership and the Office of Environment & Sustainability (OES).

Cincinnati has embraced a vision for its future based on sustainability, equity, and resilience. That vision will play a central role in how the City works to achieve its goal of carbon neutrality by 2050. Through past efforts and the hard work of community partners, we have already begun to reduce the climate impacts of our buildings. However, Cincinnati's existing and historic building stock, combined with its reliance on fossil fuels as the primary source for heating and power, means that much work remains.

Cincinnati has an older building stock that can benefit from energy efficiency upgrades.

Deep energy retrofits, alternative and renewable sources of energy, and electrification are critical paths ahead of us. The recent influx of federal funding in the energy efficiency and renewable energy sectors has opened doors that previously did not exist. Tax credits are available to homeowners and businesses to reduce the costs associated with electrifying their buildings. Non-profits, religious institutions, and governments can access the benefits provided by tax credits through a system of direct payments that will make installing solar and energy efficiency more affordable.

This 1870 home in Over the Rhine achieved a LEED Platinum designation by making high performance upgrades that honored the home's historic character. Photo courtesy of Sol design + consulting.

As I engaged with stakeholders during the development of this Green Cincinnati Plan, I heard a desire to implement strategies that will result in buildings that contribute to a healthy, equitable, and resilient future. While our elected leaders will play an important role in developing these strategies, it will ultimately be up to community organizations, residents, and businesses to invest in their buildings and push for cleaner sources of energy.

The Green Cincinnati Plan process has filled me with a sense of optimism about what the City can achieve. It won't be without challenges, but if we work together, we can begin to prepare Cincinnati's buildings and energy sector for a carbon-neutral future.

FOCUS AREA CHAIR

BUILDINGS & ENERGY FOCUS AREA CHAIR
Sanyog Rathod

ORGANIZATION
Sol consulting & design

EQUITY LIAISON

"I hope that we leverage the transition to clean and sustainable energy sources to create family-sustaining jobs, especially in underserved communities.

EQUITY LIAISON
Flequer Vera

ORGANIZATION
CEO, Sustainergy Cooperative

NEIGHBORHOOD
Northside

Energy Efficiency

Goal

Reduce building emissions 30% from 2021 levels by 2030.

BASELINE YEAR(S)

2021

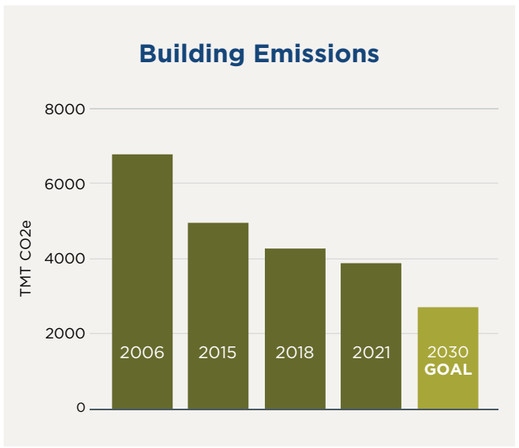
DATA SOURCE(S)

Duke Energy Ohio annual usage data by sector

Strategy

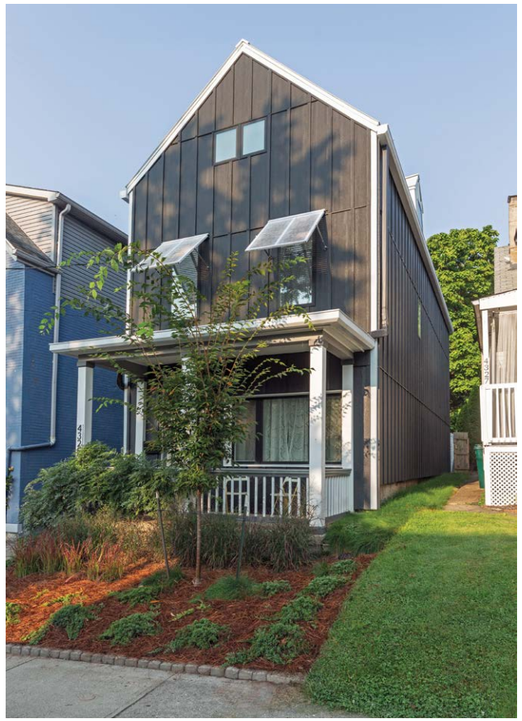
Decrease energy usage in new and existing buildings through adoption of energy efficiency and electrification technologies.

The City must reduce the amount of energy buildings use if we are to meet our carbon emissions goals. Achieving this reduction will require programs and policy tools to assist those who want to decrease energy use and programs to nudge building owners toward embracing energy efficiency. Providing building owners with tools and resources that make investing in energy efficiency more affordable will help decrease energy consumption. Lastly, shifting away from a reliance on natural gas through electrification will further reduce carbon emissions.



Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Improve building performance by implementing policies like benchmarking, building performance standards, or other relevant energy standards	●	●	●	●	●	●	●
Partner with local organizations to offer financing tools such as a loan fund, Commercial Property Assessed Clean Energy (C-PACE), or Green Bank to support investment in energy efficiency	●	●	●	●	●	●	●
Recognize the role embodied carbon plays in the built environment and align incentive programs to encourage the reuse of existing buildings	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment



The upgrades to this historic Northside home demonstrate how existing buildings can help address the climate crisis. Photo courtesy of Casey Moothart.

The 116 year-old Textile Building in downtown Cincinnati was transformed from office space to residential units.

Electrification

Goal

Electrify 20,000 households by 2030.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

Shining A Light, Go Sustainable Energy

Strategy

Electrify buildings with carbon-free energy.

The City must reduce its reliance on fossil fuels, including natural gas for cooking and heating, if it is to meet its carbon emissions goals. One of the best ways to accomplish this is through building electrification. Building owners need to understand the diverse benefits that electrification can provide and the resources that are available to facilitate the transition. Programs that encourage the electrification of new construction will reduce the costs associated with shifting away from natural gas in the future. While electrified buildings may initially rely on electricity from coal or natural gas power plants, they allow for a shift to carbon-free sources of electricity to occur over time.

Heat pumps are an option to electrify buildings and reduce emissions. They provide an efficient way to heat and cool residential buildings without relying on natural gas.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Reduce reliance on natural gas by developing programs to encourage the adoption of heat pumps, heat pump water heaters, and induction stoves	●	●	●	●	●	●	●
Create incentives to encourage developers to electrify new buildings or install infrastructure so buildings can easily convert to all-electric in the future	●	●	●	●	●	●	●
Educate the community and corporate partners about tax credits and other programs available to assist with the transition to more energy-efficient technologies	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Energy Poverty

Goal

Reduce the number of households experiencing energy poverty 10% from 2022 levels by 2028.

BASELINE YEAR(S)

2021

DATA SOURCE(S)

Duke Energy Ohio, US Census

Strategy

Reduce energy costs for tenants and homeowners experiencing energy poverty to improve housing affordability.

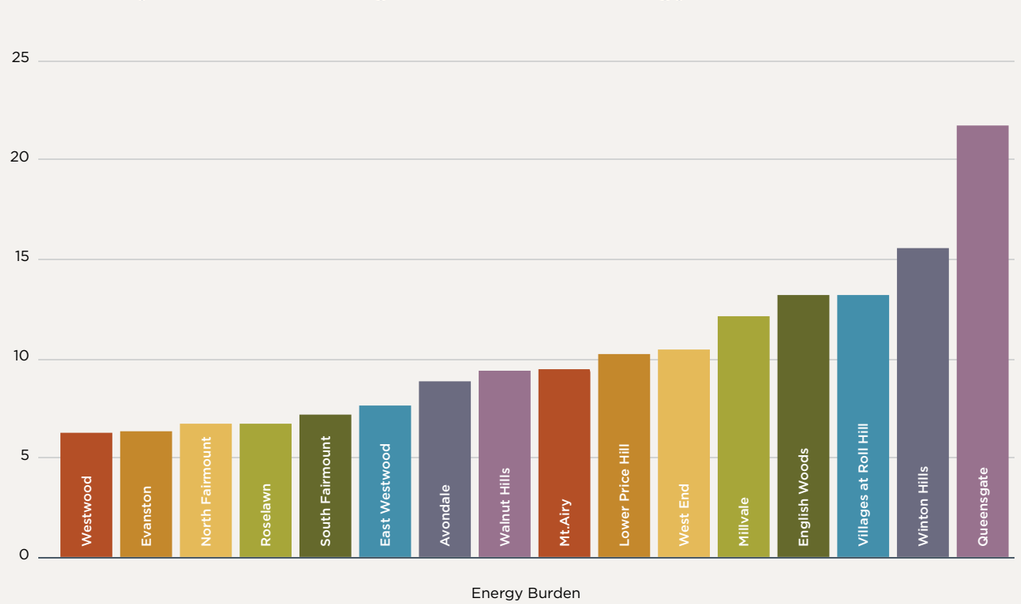
Many Cincinnati residents live in energy poverty. "Energy poverty" occurs when more than 6% of a household's income is spent on utilities. To reduce energy poverty levels, the City must implement strategies to improve the energy efficiency of housing in its priority communities. This can take the form of programs to encourage the adoption of energy-efficiency technologies or policies that increase energy-efficiency requirements for multi-family units. The City must also explore ways to provide access to low-cost sources of electricity such as onsite or community solar.

Multi-family buildings, like this 8-unit building, are often poorly insulated and energy inefficient, resulting in high energy rates and costs to residents.

Priority Actions	GCP PILLARS: Sustainability	Equity	Resilience	ADDITIONAL PRIORITIES: Jobs	Investment	Health	Feasibility
Grow and expand programs such as WarmUp Cincy to support low-income renters, homeowners, and landlords of affordable housing with the installation of weatherization, energy efficiency, and healthy home upgrades	●	●	●	●	●	●	●
Implement and fund programs to install solar on low-income housing	●	●	●	●	●	●	●
Create programs and standards that will increase the energy efficiency of residential and multi-family buildings in order to decrease energy poverty	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

City of Cincinnati Neighborhoods with energy burden above 6%



Clean Energy

Goal

Obtain 40% of electricity load from clean energy sources by 2030.

BASELINE YEAR(S)

2021

DATA SOURCE(S)

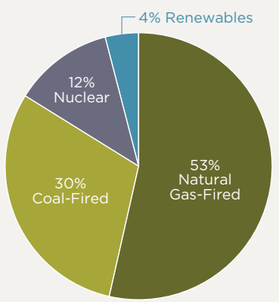
Duke Energy data on amount of solar installed and data on production from City-led PPA agreements

Strategy

Provide residents and businesses with continual access to power from clean energy sources.

In addition to reducing the amount of energy it uses, the City must shift to clean energy sources. Programs that encourage adoption of clean energy sources and make them affordable for residents and businesses will play an important role at the local level. However, to make the transition to clean energy, the City must look beyond its borders to find energy sources and storage options that can help meet its energy needs.

2022 Ohio Electricity Generation by Source



Solarize Cincy helps make the process of installing solar easier for Cincinnati residents. Photo courtesy of City of Cincinnati.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Support programs like Solarize that encourage adoption of rooftop solar	●	●	●	●	●	●	●
Partner with local organizations to offer financing tools such as a loan fund or Green Bank to support investment in renewable energy	●	●	●	●	●	●	●
Continue to pursue wind and solar Power Purchase Agreements (PPAs) to secure enough electricity to support city operations and the Cincinnati aggregation program	●	●	●	●	●	●	●
Identify energy storage options like batteries, pumped storage, or hydrogen storage to maximize use of clean energy and improve grid reliability	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

The New Market Solar Array in Highland County provides electricity for City operations and the residential aggregation program. Photo courtesy of Algonquin Power & Utilities Corp.

Green Cincinnnati Plan
2023

FOCUS AREA

City Operations

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

FOCUS AREA

City Operations

Designing city functions to operationalize sustainability and center climate equity.

Vision

A City that leads by example, centering community voice in the inter-departmental design and implementation of programs and policies.

A Word from Sarah Mostafa, City Operations Focus Area Chair

If the past several years have taught us anything about climate action, it's that cities are moving the needle on climate progress in a real and big way, even absent federal regulation. From tree planting, to building electrification, to investing in multi-modal transportation, cities are responding to the calls for action from their citizens. And while carbon neutrality can only be achieved through cross-sectoral collaboration, one of the most powerful ways cities can demonstrate their commitment to climate action is by investing in their own internal operations.

Mayor Aftab and Councilmember Owens arrive at Green Cincinnati Plan launch in a city electric vehicle. Photo courtesy of Casey Weldon/Spectrum.

This year is the first year that the Green Cincinnati Plan (GCP) has featured a section just dedicated to the City's operations. The City's operational footprint is considerable, at over 6,000 employees utilizing 1,800 fleet vehicles that cover 14.9 million miles a year. By being included in the 2023 GCP, we have the opportunity to transform the City's footprint into a steady march toward climate justice.

The goals, strategies, and actions in the City Operations chapter are a culmination of feedback provided by city employees as well as enthusiastic discussion from department leaders. These measures are bold and ambitious, reflecting just how critical this issue is to the City's leadership.

Creating a more sustainable, equitable, and resilient Cincinnati will require operationalizing these efforts in all City departments. Photo courtesy of City of Cincinnati.

From employee travel to LED streetlights, these measures are more than strategies to reduce carbon emissions; they're a way for the City to herald a new approach to operations, one that leads with employee engagement, equity, and operational resilience. This vision will chart the course for decision-making and planning in the years ahead.

I want to thank Mayor Aftab Pureval, Councilmember Meeka Owens—and all our councilmembers—our department and city leadership, and engaged city employees for their visionary support of an exciting new chapter. Together, we're putting sustainability at the forefront of the City's operations.

FOCUS AREA CHAIR

CITY OPERATIONS FOCUS AREA CHAIR
Sarah Mostafa

ORGANIZATION
Deputy Director,
City of Cincinnati Office of Performance and Data Analytics

EQUITY LIAISON

"I hope to see more city staff across departments incorporating sustainability, resilience, and equity into city plans, projects, and policies."

EQUITY LIAISON
Savannah Sullivan

ORGANIZATION
Climate Action Director
Green Umbrella

NEIGHBORHOOD
Walnut Hills

Climate Equity Budgeting

Goal

Center Justice40 in the City's budget and program design, ensuring at least 40% of spending benefits priority communities.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

City of Cincinnati Biennial Budget

Strategy 1

Use a budget & procurement process that aligns and accelerates the City's climate equity priorities.

The City's budget is a reflection of its values and strategic priorities and sets the direction for policy and program development. To build a sustainable, equitable, and resilient city, Cincinnati will build a budget and procurement strategy that supports these priorities. New federal incentives and grants provide unprecedented opportunity for cities to invest in transformational climate action. To make the most of this funding, the City will add staff and contract support to enhance grant tracking, implementation, and management.

Community input received during planning process calls for adding new voices. Photo courtesy of City of Cincinnati.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Implement participatory and priority-based budgeting	🟡	🟢	🟡	🟡	🟢	🟡	🟢
Develop annual funding for sustainability investments/municipal bond to capitalize on climate incentives of the Inflation Reduction Act (IRA)	🟢	🟡	🟢	🟡	🟡	🟡	🟢
Streamline procurement to enhance the impact of federal funding by using cooperative purchasing including Omnia, GSA, Sourcewell	🟡	🟡	🟡	🟡	🟢	🔴	🟢
Continue to develop a framework for supporting green jobs with a focus on youth	🟢	🟢	🟢	🟢	🟢	🟡	🟢
Hire a grant writer to assist with pursuing federal funding that focuses on the Justice40 initiative to address environmental justice issues.	🟢	🟢	🟢	🟡	🟢	🟡	🟢
Create policy for the procurement of sustainable goods for internal city supplies and materials, conduct a City-wide audit to develop strategic priorities.	🟢	🟢	🟢	🟡	🟡	🟡	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Climate Equity Budgeting

West End residents indicate where climate solutions are needed in their community during the Climate Safe Neighborhoods meeting. Photo courtesy of Ollie Kroner.

Strategy 2

Center and activate community voice in designing climate and equity policies and programs.

The City will center community voice in developing policies, programs, and budgets to address climate equity issues. Recognizing government's historical role in creating and deepening the inequity we see in Cincinnati, the City will focus on procedural equity by inviting and elevating the voices of priority communities. The City will continue to include the lived experiences of community members in tracking and measuring climate equity indicators.

Priority Actions

	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Crowdsource climate solutions with programs like hackathons to tackle complex issues	🟢	🟢	🟢	🟡	🟢	🟡	🟢
Improve communication and accessibility of sustainability programs and progress to the public	🟢	🟢	🟢	🟡	🟢	🟡	🟢
Join and leverage Government Alliance on Race & Equity to advance climate equity programs	🟢	🟢	🟢	🔴	🟢	🟡	🟢
Update the Climate Equity Indicators report every 5 years to design programs that target benefits to priority communities	🟢	🟢	🟢	🟡	🟡	🟢	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Transportation

Goal

400 electric vehicles in the city fleet by 2028.

DATA SOURCE(S)

City Fleet Database

Strategy

Electrify and right-size the city fleet.

To achieve the decarbonization goals of the GCP, the City must reduce the emissions from its fleet. This involves analyzing the usage patterns of fleet vehicles and eliminating extra vehicles. In addition, the City must begin to electrify its fleet to reduce tailpipe emissions.

Priority Actions

	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Conduct an electric vehicle (EV) charging needs assessment for city fleet & install necessary infrastructure at city facilities; partner with County at shared facilities	🟢	🟡	🟢	🟡	🟡	🟡	🟢
Conduct a needs assessment to right-size the city fleet	🟢	🔴	🟡	🔴	🟢	🟡	🟢
Continue to electrify the city fleet and equipment, including lawn equipment	🟢	🟡	🟡	🟡	🟡	🟡	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Transportation

Goal

100% of employees have access to sustainable transportation options.

DATA SOURCE(S)

City Fleet Database

Strategy

Enable green transportation.

The City should promote policies that reduce vehicle emissions from city employees commuting to work. This can be accomplished by reducing the number of single passenger trips through HR policies and incentives that encourage the use of public transit or other carbon-free sources of transportation.

Department of Transportation & Engineering staff member Brian Goubeaux bikes into work even on a wintry day. Photo courtesy Ollie Kroner.

Cincinnati's Vision Zero campaign works to make walking and biking to work safer.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Offer remote work flexibility to reduce commuting	🟢	🟡	🟡	🟡	🟢	🟡	🟢
Develop HR Incentives for employee use of public transit, biking, & walking	🟢	🟡	🟡	🟡	🟡	🟢	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Energy

Goal

100% Renewable Energy for city operations by 2035.

30% energy efficiency improvements by 2030.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

Duke Energy, RMI LEAF Analysis

Strategy

Invest in high-performance and resilient city facilities.

The City is committed to moving to 100% clean energy sources by 2035. Focusing first on energy efficiency will reduce the total amount of clean energy that the City will need. To achieve this reduction, departments and facility managers will need to work together and pursue net-zero performance for all new city facilities. The City can opt for clean energy from the grid and can request proposals for utility-scale renewable energy and storage to help meet these goals. Federal incentives provide unique opportunity for major progress toward these energy goals.

The Cincinnati District 3 Police Headquarters is Net Zero—producing all of the energy it needs to operate. Photo courtesy of Pete Witte.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Establish prioritized facilities as “Resilience Hubs”—centers for community gathering during emergency; equip with solar and backup power to provide relief during emergencies	🟢	🟢	🟢	🟡	🟡	🟢	🟢
Pursue additional utility-scale clean energy with requests for proposal (RFP)	🟢	🟡	🟢	🟢	🟡	🟡	🟢
Organize facility managers to create a sustainable facility policy for new city buildings	🟢	🟡	🟡	🟡	🟢	🟡	🟢
Continue to strategically pursue energy efficiency for city facilities	🟢	🟡	🟢	🟡	🟡	🟡	🟢
Convert streetlights to LED, electrify gas lights	🟢	🟡	🟡	🟡	🟢	🟡	🟢
Publish energy benchmarking data for city facilities on Cincy Insights	🟢	🟡	🟡	🔴	🟢	🟡	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Green Cincinnnati Plan
2023

FOCUS AREA

Community Activation

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

FOCUS AREA

Community Activation

Empowering residents to play a central role in creating climate solutions.

Vision

All residents know about and are empowered to take action to address the systemic issues underlying climate change and environmental injustice through individual and collective action.

A Word from Kylie Johnson, Community Activation Focus Area Chair

From conducting educational programs, to leading outreach efforts, to advocating for stronger policies, I've dedicated my life to securing a healthier environment for my community. The most important lesson I've learned along the way—this work takes all of us.

This chapter of the Green Cincinnati Plan (GCP) was renamed "Community Activation" (from "Advocacy, Education & Outreach") to better capture our need for collective action and engagement of all Cincinnati residents. It's going to take all of us to tackle the systemic issues of climate change and environmental injustice. Advocacy, education, and outreach serve as three foundational pillars to overall Community Activation, and you will find Goals for each in this chapter of the GCP.

Green Corps members working in Lower Price Hill. Photo courtesy of Groundwork Ohio River Valley.

It was an honor to lead the Community Activation Subcommittee, and I'm grateful for the tremendous level of support from my internal team: Molly Robertshaw from the Office of Environment and Sustainability (OES) and our Equity Liaison, Kelsey Hawkins-Johnson.

Together, we worked alongside community members and representatives from nonprofit organizations, businesses, faith communities, educational institutions, and advocacy groups to develop a framework for inspiring Cincinnati residents to take climate action. Our Subcommittee prioritized and refined more than 200 recommendations submitted by the community via written suggestions, online surveys, and three in-person meetings.

Together, we identified several promising pathways to drive the equitable and transformative change needed to address climate change and prioritize its disproportionate effects on marginalized communities. Strategies include:

- using advocacy as a lever to creatively and strategically solve problems
- strengthening school-based environmental education and experiences
- amplifying the workforce to meet the demands of the green economy
- increasing the capacity of residents to drive solutions to climate change.

These co-created Strategies build on the collaborative work so many have engaged in across the City. A new avenue for advocacy was created in early 2022 when Cincinnati established the Climate, Environment & Infrastructure Committee—making history as the first city council committee of its kind focused on climate action. Later that year, Mayor Pureval and City Council prioritized sustainability and education efforts in the city budget by investing $4 million into the Green Cincinnati Plan implementation and expanding the youth employment budget by $1 million. Cincinnati historically ranks as one of the best cities in the nation for a green career, and support for our next generation of leaders continues to grow through programs like Groundwork Ohio River Valley's Green Corps—the largest Green Youth Workforce Program in the nation.

The examples above demonstrate that our Mayor, City Council, City Administration, and community partners are aligned now more than ever to take bold action. Still, there is more work to do. The Green Cincinnati Plan's community-driven approach embodies our collective power, but it will take everyone activated and engaged to meet our aggressive carbon neutrality goals. I'm encouraged by our progress to date and hopeful—now more than ever—that we can build a sustainable, equitable, and resilient city. This work takes all of us, and I look forward to seeing what we will accomplish next through Community Activation.

FOCUS AREA CHAIR

COMMUNITY ACTIVATION FOCUS AREA CHAIR
Kylie Johnson

ORGANIZATION
Southwest Ohio Regional Director
Ohio Environmental Council

EQUITY LIAISON

"I have hope for the expansion of future, young, BIPOC changemakers in the green workforce and at City Hall.

EQUITY LIAISON
Kelsey Hawkins-Johnson

ORGANIZATION
Community & Climate Resilience Program Director
Groundwork Ohio River Valley

NEIGHBORHOOD
Hartwell

Advocacy

Goal

Achieve $25 million in resources toward GCP priorities by 2028 with at least 40% benefiting priority communities.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

CEFA report for City grants and public/private partnership contacts

Strategy

Increase use of advocacy as a lever to creatively and strategically solve problems.

Cincinnati has many strong individual and organizational advocates for environmental causes. Some are effective at rallying and equipping residents to speak up for individual policies, while others are trusted, expert sources that guide local leaders toward stronger and more just systems and structures. Greater coordination between advocacy groups could help Cincinnati solve pressing environmental challenges more quickly. Likewise, helping advocates align on priorities would ensure the right challenges are being tackled. With creative and persistent advocacy at the municipal level and beyond, the City has the opportunity to create broadscale change and attract significant resources.

Ohio Environmental Council team members share their new Advocacy Toolkit at Paddlefest 2022. Photo courtesy of Ohio Environmental Council.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Advocate for the passage of a city budget that supports GCP priorities with at least 40% benefiting priority communities	●	●	●	●	●	●	●
Build and present a case for long-term funding mechanisms that drive emissions reductions; reallocate the resources generated to reduce disparate impacts	●	●	●	●	●	●	●
Support codification of climate justice and racial equity in city decision-making mechanisms	●	●	●	●	●	●	●
Continue to strengthen regional partnerships—like OKI and the Regional Climate Collaborative—to better coordinate, share, and build strategic advantage	●	●	●	●	●	●	●
Increase investment in advocacy, lobbying, grant seeking, and partnership development to increase local receipt of federal/state resources	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Local residents advocate at the Ohio Statehouse. Photo courtesy of Ohio Environmental Council.

Education

Goal

100% of public schools have safe and accessible outdoor learning spaces by 2028.

BASELINE YEAR(S)

2020

DATA SOURCE(S)

Green Umbrella's CPS Outside Impact Team

Strategy

Strengthen the breadth and depth of school-based environmental opportunities.

Children and youth spend most of their time for most of the year attending one of the City's many quality educational institutions. Schools are hubs for much of our community's life, making them a logical place to implement sustainability efforts. Given the large demands placed on educational institutions, we need to leverage creative partnerships and passive learning opportunities to integrate sustainability more broadly and deeply in our schools. This degree of collaboration can have a transformative impact on our City's next generation of leaders in a way that inspires them, challenges them, and invites them to find their own role in solutions.

As of 2020, one third of Cincinnati Public Schools have greenspace dedicated to outdoor education.

Rockdale Elementary students take part in a garden workday. Photo courtesy of Cincinnati Public Schools.

Priority Actions

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Increase school/environmental org partnerships to grow environmental education and climate justice opportunities at schools, including hands-on outdoor learning spaces like Green Schoolyards, with priority given to schools in priority communities	●	●	●	●	●	●	●
Support schools to increasingly model sustainable practices inclusive of operations, buildings, fleet, and grounds in alignment with the US Department of Education's Green Ribbon Schools pillars or similar standards	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Education

Goal

4,000 individuals trained for green economy jobs by 2028 (800/year).

BASELINE YEAR(S)

2022

DATA SOURCE(S)

Sources: National Center for Education Statistics Integrated Post-Secondary Education Data System and local workforce training partners

Strategy

Amplify the workforce to meet the demands of the green economy.

In the U.S., "green jobs" are those that produce goods or provide services that benefit the environment. According to the U.S. Bureau of Labor Statistics, green economy jobs are growing faster than most other job sectors although the number of jobs is still much lower compared to other sectors. Most of the occupations in the "green" sector pay higher than the annual median wage in the U.S., providing greater opportunities for self-sufficiency. However, these jobs also require advanced education and training. With these realities in mind, training and re-training our workforce to meet the rising need for occupations like EV mechanics, solar panel installers, and weatherization technicians is a must.

Green Corps members take a break from invasive species removal. Photo courtesy of Groundwork Ohio River Valley.

Priority Actions

Priority Actions	GCP PILLARS: Sustainability	Equity	Resilience	ADDITIONAL PRIORITIES: Jobs	Investment	Health	Feasibility
Partner with the local Workforce Investment Board, educational institutions, employers, County, State and more to amplify equity-focused, green workforce training and career pathways	●	●	●	●	●	●	●
Continue to grow paid, hands-on learning opportunities and jobs in the green economy with an emphasis on preparing youth and the unemployed and/or difficult to employ for living wage jobs	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Selected green occupations with projected employment growth, 2020–30

Occupation	Median annual wage, 2021[1]	Employment, 2020	Employment, projected 2030	Typical entry-level education
Environmental engineers	$96,820	52,300	54,300	Bachelor's degree
Environmental scientists and specialists, including health	$76,530	87,100	94,400	Bachelor's degree
Conservation scientists	$63,750	25,300	26,800	Bachelor's degree
Wind turbine service technicians[2]	$56,260	6,900	11,700	Postsecondary nondegree award
Environmental engineering technologists and technicians	$48,390	17,300	18,600	Associate's degree
Solar photovoltaic installers[3]	$47,670	11,800	17,900	High school diploma or equivalent
Environmental science and protection technicians, including health	$47,370	34,200	37,800	Associate's degree

Note: None of these occupations typically requires work experience in a related occupation for entry.
1 Wage data exclude self-employed workers.
2 This occupation typically requires long-term on-the-job training to attain competency.
3 This occupation typically requires moderate-term on-the-job training to attain competency.
Source: U.S. Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projections.

Outreach

Goal

25 priority community members equipped to co-lead the 2028 GCP refresh.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

Groundwork Ohio River Valley

Strategy

Increase the capacity of residents, communities, and businesses to drive solutions to climate change.

Residents are fully capable of driving solutions to localized impacts of climate change when provided opportunities to share and learn, prioritize and act. Building both awareness of pressing environmental issues and social cohesion within and across neighborhoods will equip people to create a better future. Residents of priority communities—those experiencing the greatest burdens of environmental injustice—are best positioned to both inform and drive equitable change. The vibrant start-up ecosystem also presents opportunity.

Beekman Corridor Climate Safe Neighborhoods residents meet to learn and share with one another. Photo courtesy of Groundwork Ohio River Valley, 2022.

Fifth Third employees work to remove invasive honeysuckle during a volunteering event at Rapid Run Park. Photo courtesy of Cincinnati Parks.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Create and support more opportunities—like Climate Safe Neighborhoods (CSN)—to identify local environmental problems and enable climate ambassadors to implement sustainable solutions	🟢	🟢	🟢	🟡	🟢	🟢	🟢
Support the Youth Environmental Council to mobilize the next generation	🟡	🟢	🟢	🟡	🟢	🟡	🟢
Support the launch of a one stop shop—physical and virtual—to support residents in making lifestyle changes through informing and incentivizing efforts	🟢	🟡	🟡	🔴	🟡	🟡	🟡
Support business owners and the start-up community to build and enact market solutions to address environmental issues, with a focus on women and minority-owned enterprises	🟢	🟢	🟢	🟡	🟡	🟡	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Green Cincinnnati Plan
2023

FOCUS AREA

Food

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

FOCUS AREA

Food

Growing an equitable food economy that serves all of Cincinnati.

Vision

The food system in Cincinnati will have equitable food access for everyone, a local (within 100 miles) agricultural production and distribution network, living wage jobs in the farming and food sectors, and will eliminate all food waste from the landfill. This circular food economy will disrupt and dismantle the long history of systemic racism, oppression, and inequity and environmental degradation in the food system.

A Word from Dom Peebles, Food Focus Area Chair

I was one of eight children, born and raised in a three-bedroom house in the suburbs of Louisville, KY. Living with eight siblings, I quickly found out the one thing we all have in common—the need for food and nourishment. In an effort to supplement our food, my father would gather my brothers and me on the last Saturday in April every year, and we would head out to the backyard to start the process of our yearly vegetable garden.

This tradition taught me a lot of things, but what sticks out the most is that we always grew more than we could use. With the extras we would reuse old Kroger bags and fill them with veggies and drop them off to everyone that lived in my neighborhood. When I finally got the nerve to ask my father why we did this each year, he only replied, "Because not everyone in our community gets to eat every night, but at least tonight I know they will." I thought to myself, too bad we can't do this all year. This inspired me to form Brick Gardens.

Brick Gardens (BG) is a social enterprise, addressing food insecurity in Cincinnati's most marginalized neighborhoods. In May of 2016, BG was awarded a People's Liberty Project Grant with the mission of converting vacant land and buildings into urban farms and vertical farms, providing fresh healthy produce to food deserts throughout Cincinnati. Brick Gardens has increased its food-growing locations to four sites now, serving six communities: Avondale, Bond Hill, Evanston, Madisonville, Norwood, and Roselawn.

Since the founding of Brick Gardens, I have been invited to participate in several panel discussions on food insecurity, serve on the Board of Trustees for the OTR Community Council and Hamilton County Solid Waste

Community members participate in a work day with Brick Gardens. Opportunities like this bring communities together to create local healthy food. Photo courtesy of Brick Gardens.

Committee, as well as work with the Regional Food Policy Council to help pass urban agriculture zoning laws.

As Chair of the Food Subcommittee, I was delighted to work with such passionate individuals from diverse backgrounds and various organizations all with the mission to create equitable change in our city's food, farm, and green job sector.

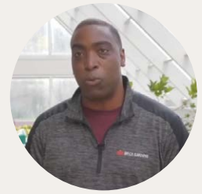
During these interactive discussions, we prioritized and revised the food-related recommendations submitted during the Green Cincinnati Plan (GCP) public engagement process. Additionally, we worked together to provide solid goals, strategies, and actions to guide food-related sustainability efforts throughout the city in the coming years.

As you will see, our recommendations focus on:

- Food access
- Support and funding for agriculture (both urban and rural)
- Jobs.

We have a unique opportunity to feed our neighborhoods and provide jobs by working with county and regional farmers to create a system for employment and food distribution that benefits all of Cincinnati.

FOCUS AREA CHAIR



FOOD FOCUS AREA CHAIR
Domonique Peebles

ORGANIZATION
CEO, Brick Gardens

EQUITY LIAISON

"I am most excited to bring more resources for healthy foods and safer air for low-income neighborhoods

EQUITY LIAISON
Marisha Davis

ORGANIZATION
Meiser's Fresh Grocery & Deli

NEIGHBORHOOD
Lower Price Hill

Local Food

Goal

Increase local food consumption, distribution, and production by 100%.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

Green Umbrella Food Metrics (tracking since 2010)

Winton Terrace Community Garden is one example of a community garden in the City which helps to increase local food production and access. Photo courtesy of Turner Farm Community Garden Program.

Strategy

Use regional (within 100 miles) ecological agriculture to increase food production, distribution, consumption, and climate adaptation.

Local food serves both as an economic engine for the City and region and as a source of food. Harvesting and distributing food locally can help stabilize the supply chain. Given its proximity to rural land, Cincinnati can use an expanded regional approach to increase local food production and distribution. In addition to stabilizing the supply chain, this approach provides better access to fresh fruits and vegetables for everyone. Focusing on local food will help inspire more sustainable agricultural practices. Cincinnati must use a variety of approaches and places for growing and distributing food and consider the climate impacts of food production and dietary choices. Lastly, the City must provide the necessary support to bolster a local food economy.

Priority Actions

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Increase funding for neighborhood gardens and urban agriculture managers	●	●	●	●	●	●	●
Develop a network of neighborhood distribution sites for local food	●	●	●	●	●	●	●
Restore & adapt underutilized spaces (vacant lots, indoor space & rooftops) for food production & ecological benefits and promote regenerative agriculture best practices	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Indoor spaces can be adapted for food production, like this formerly underutilized space which was modified to grow hydroponic crops. Photo courtesy of Brick Gardens.

Farmers markets, like this one at the Northside Farmers Market, provide important distribution sites for local food.Photo courtesy of Northside Farmers Market.

Food Access

Goal

Eliminate food deserts in Cincinnati and create food sovereignty in all 52 neighborhoods.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

U.S. Department of Agriculture Food Atlas

Strategy

Use a variety of systems to create equitable access to nutritious, affordable food in every neighborhood, prioritizing communities that need it most and creating food sovereignty.

Many Cincinnati residents live in food deserts with limited access to affordable healthy food and these food deserts most often occur in Black, Indigenous and other communities of color. The lack of access to nutrient-dense food leads to increased rates of chronic disease in these communities. A newer term, "food apartheid," has emerged and refers to a system of segregation that divides those with access to an abundance of nutritious food from those who have been denied that access due to systemic injustice. Community members are interested in creating a more just and equitable food system, and Cincinnati must implement strategies to provide equitable food access in its priority communities. The City must re-imagine what food distribution and access points look like—by listening to unique community needs and interests. Additionally, the City needs to provide the necessary support to realize this new system and take climate impact into consideration when promoting healthy food choices.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Increase options for food access within food desert neighborhoods, including but not limited to farmers markets, food co-ops, Community Supported Agriculture (CSAs), corner stores, buying clubs, mobile markets, delivery services, community gardens, and food pantries	🟡	🟢	🟢	🟡	🟡	🟢	🟢
Provide city & regional funding for community-driven and innovative food initiatives	🟡	🟢	🟢	🟡	🟡	🟢	🟡
Increase use of locally grown food at neighborhood food access points	🟢	🟢	🟢	🟡	🟡	🟢	🟢
Engage community members on the impact of dietary choices on climate change, environment, and health; elevate the benefits of plant-based options	🟢	🟡	🟡	🔴	🟢	🟢	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Residents shop for food at the Northside Farmers Market. Farmers markets are one way to increase options for healthy food access and eliminate food deserts. Photo courtesy of Northside Farmers Market.

In the neighborhood of Avondale, Rockdale Elementary students participate in a garden work day at the Rockdale Urban Learning Garden which engages and teaches students about growing food locally. Photo courtesy of Cincinnati Public Schools.

Food System

Goal

Implement 5 of the Milan Urban Food Policy Pact (MUFPP) Recommendations by 2028.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

City of Cincinnati Office of Environment & Sustainability and the MUFPP

Strategy

Use the MUFPP framework, working with public and private stakeholders, to develop a sustainable food system in Cincinnati that is inclusive, resilient, safe, diverse, and environmentally friendly.

Despite its long history with and deep connection to food, Cincinnati's food system has never equally benefited everyone. More recently, Cincinnati has taken the path of many urban cities by:

- Outsourcing food production and the use of environmentally unsustainable growing techniques
- Transporting goods many miles
- Landfilling vast amounts of edible food
- Failing to meet the nutritional needs of all its citizenry with healthy, affordable food access (despite an abundance of grocery stores).

This is where The Milan Urban Food Policy Pact (MUFPP) comes in. An international agreement among cities from all over the world, MUFPP works to "develop sustainable food systems that are inclusive, resilient, safe and diverse, that provide healthy and affordable food to all people in a human rights-based framework, that minimize waste and conserve biodiversity while adapting to and mitigating impacts of climate change." MUFPP supports cities wishing to build more sustainable urban food systems by fostering city-to-city cooperation and best practices exchange. As a signatory city, Cincinnati must use the MUFPP framework. This framework, along with Cincinnati's unique midwestern urban location with rural connection/access, can help the City implement a comprehensive 21st century food system that addresses the needs of both the planet and the people.

The Milan Urban Food Policy Pact provides a comprehensive approach to developing a sustainable food system. Photo courtesy of Milan Urban Food Policy Pact.

Priority Actions

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Develop a comprehensive Food System Plan for Cincinnati, taking into consideration its urban/rural connections and preparation for potential large-scale disruptions due to climate change	●	●	●	●	●	●	●
Implement the Milan Urban Food Policy Pact related to good governance, sustainable diets & nutrition, social & economic equity, food production, food supply & distribution, and food waste	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Greater Cincinnati Regional Food Policy Council

The Greater Cincinnati Regional Food Policy Council a collaboration of organizations and individuals working together to develop a sustainable, equitable and resilient food system in Cincinnati. Photo courtesy Green Umbrella.

Community members discuss and prioritize actions and strategies during a Green Cincinnati Plan Food Focus Area Subcommittee session. Photo courtesy of City of Cincinnati.

Food Waste Prevention

Goal

Decrease food going to the landfill 50% by 2030.

BASELINE YEAR(S)

2018

DATA SOURCE(S)

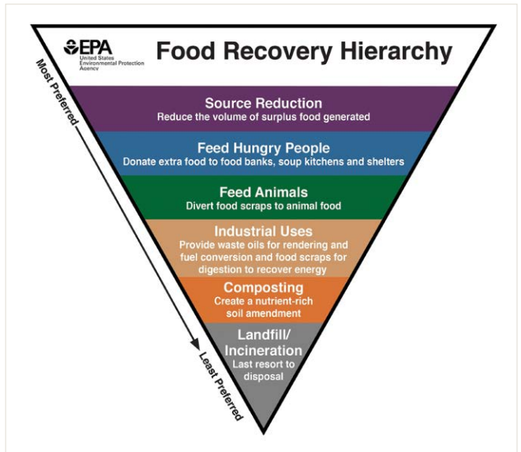
Hamilton County Waste Audit

BASELINE YEAR(S)

2021

DATA SOURCE(S)

Hamilton County Reporting on waste diverted



Reducing food waste going to the landfill can be achieved by following the EPA Food Recovery Hierarchy, and prioritizing prevention, recovery, recycling and composting in that order. Photo courtesy of U.S. Environmental Protection Agency.

Strategy

Increase efficiency of the food system and minimize environmental impact through prevention, reuse/recovery, education, and best practices for surplus food.

In 2021, Cincinnati sent approximately 74,953 tons to the landfill, 31.1% (23,310 tons) of which was organic material (16.8% =12,592 tons of food waste; 14.3% =10,718 tons of yard trimmings). All of this organic waste contributes to methane, a powerful greenhouse gas which is harmful to the environment and drives climate change. Cincinnati needs to reduce the amount of organics residents and businesses are sending to the landfill. The two strategies that have the most positive environmental, social and health impacts are:

- Prevent throwing away perfectly good food
- Recover wasted food that can be transformed or repurposed.

The City needs to prioritize these surplus-food strategies in conjunction with leveraging public-private partnerships and city systems to minimize organics in our landfill. With a food insecurity rate of 33%, Cincinnati must become a better steward of our resources and each other. By taking robust action, we can support both the environment and our citizens.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Continue to support local food rescue, food security & food justice organizations through establishment & support of food access points and increased donation infrastructure for collection, transformation, & distribution of surplus food	●	●	●	●	●	●	●
Expand food waste prevention education and best practices for residential and business sectors	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

See Zero Waste Focus Area for Goals, Strategies & Priority Actions related to Composting.

Examples of local meals created by La Soupe in their Rescue Transform Share Program utilizing surplus food. Pre-portioned meals can also help reduce consumer food waste. Photo courtesy of La Soupe.

La Soupe preps meals for their Nourish The 'Nati Program which is focused on portion-controlled, plant-forward, lean proteins, and whole grains and creates access to food options that encourage healthy eating and fights illness. Photo courtesy of La Soupe.

Jobs

Goal

Increase quantity of jobs in food and agriculture sectors by 20% by 2028.

Strategy

Create pathways to growth and ownership for farmers and food entrepreneurs in city food and agriculture sectors.

In the Food Focus Area, the job discussion centered around training, employment, wages, and creating spaces designated for urban agriculture/gardening. The average age for U.S. farmers is 57.5 years old, highlighting the need for younger people to enter the food space from both the direct food production/growing side and the reuse/redistribution/value-added side. Making a living wage is key to farmer retention and a healthy livelihood. Moreover, farmers and food entrepreneurs need to understand how to best adapt to climate change across all aspects of food production if we are to ensure an everlasting food source.

The Price Hill Community Garden provides a space for local food production in the community, as well as an opportunity for entrepreneurs in the food and agricultural sector. Photo courtesy of Turner Farm Community Garden Program.

Rose Hill Farm in the neighborhood of Spring Grove Village is an example of a local farm providing jobs in the food and agriculture sector and fresh, locally grown food to area residents. Photo courtesy of Rose Hill Farm.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Grow employment opportunities & training for youth (e.g., food gleaning & redistribution in their neighborhoods, Climate Corps, AgriCorps, etc.)	●	●	●	●	●	●	●
Develop career pathways & higher education opportunities with links to create living-wage farmer & food sector jobs	●	●	●	●	●	●	●
Train farmers and gardeners to increase success, including adaptation to a changing climate	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Residents participate in Walnut Hills Redevelopment Foundation Garden Training. Programs like this one train gardeners to increase success. Photo courtesy of Civic Garden Center.

Green Cincinnnati Plan
2023

FOCUS AREA

Mobility

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

FOCUS AREA

Mobility

Enabling accessible and sustainable transportation and mobility options.

Vision

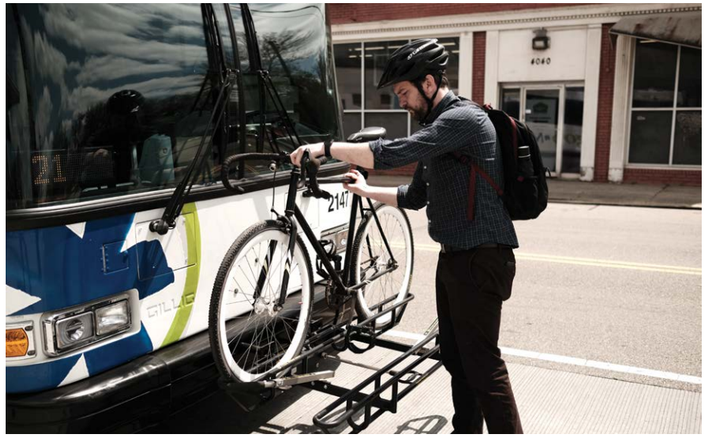
Prioritize people by building sustainable, safe, and accessible mobility options that meet the needs of people who live, work, or visit Cincinnati.

A Word from Pete Metz, Mobility Focus Area Chair

Over the last decade, how we connect people across Cincinnati to jobs, education, health care, and all that our region has to offer has been one of the most important policy issues facing local leaders. We've made tremendous progress in that time—thanks in part to the guidance of the previous Green Cincinnati Plan (GCP)—but there is still so much work to do.

Partners in every corner of the community—local government and elected leaders, the business and civic community, and everyday Cincinnatians—have driven, and continue to drive, this work. And their efforts show:

- Massive new federal funding programs
- Passage of Issue 7 to expand public transit
- Rapidly growing CROWN bike trail network
- Groundswell of support for pedestrian safety initiatives.



Every Metro bus is equipped with a front-mounted bike rack. Passengers can combine transit and cycling to make the first and last mile of their commute easier. Photo courtesy of Metro.

FOCUS AREA CHAIR

MOBILITY FOCUS AREA CHAIR
Pete Metz

ORGANIZATION
Director, The Connected Region
Cincinnati USA Regional Chamber

With all this momentum, there is no better time to be doubling down on our work. Over the last year we've engaged transportation leaders and the community to shape the Mobility section of the updated GCP.

The Lick Run Greenway has walking and biking paths along a mile-long urban stream and pond. Photo courtesy of Tri-State Trails.

Across those conversations we heard a vision for making Cincinnati a place that prioritizes people by building sustainable, safe, and accessible mobility options that meet the needs of people who live, work, or visit Cincinnati.

Much of the work of building a transportation system to achieve this vision will happen outside of City Hall. This plan attests to the City's support for those initiatives and organizations, and challenges them to think boldly about the type of system we're building.

Leading this effort has affirmed for me how far we've come, and how far so many in our community are ready and willing to push us in the future. Their voices and their advocacy will be critical to the success of these Mobility goals, and I'm appreciative of their engagement in this process.

EQUITY LIAISON

"My Equity Liaison experience was like a Tale of Two Cities. Trying to bring two worlds or cities together. Assisting those with no transportation to jobs and entertainment in an effort to bring people and services to those who need them.

EQUITY LIAISON
Derrick L. Feagin

ORGANIZATION
President, South Cumminsville Community Council

NEIGHBORHOOD
South Cumminsville

Public Transit

Goal

Increase the number of passenger miles traveled using public transit 25% by 2030.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

SORTA passenger data

Strategy

Provide reliable public transportation options and an improved rider experience to connect residents to the places where they need to go.

Cincinnati will need its residents to transition away from single-passenger vehicles and shift to public transportation if the City is to achieve its carbon goals. This shift will only occur if residents view public transportation as a reliable and convenient alternative. Bus routes must connect people to the places that they need to go when they need to get there. Improving access to public transportation corridors, as well as the amenities public transportation offers, will drive increased ridership.

The Cincinnati Bell Connector Streetcar is one example of reliable public transportation for the Downtown and OTR neighborhoods, from The Banks to Findlay Market. Photo courtesy of City of Cincinnati DOTE.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Continue to design bus routes and bus stop shelters to ensure convenient and consistent service with reliable connections	🟢	🟢	🟡	🟡	🟡	🔴	🟢
Develop regional bus rapid transit routes along key corridors	🟢	🟢	🟢	🟡	🟡	🟡	🟢
Explore the use of HR incentives to encourage public transit use	🟢	🟡	🟡	🟡	🟢	🟡	🟢
Create more neighborhood mobility networks and transit hubs where residents can connect by bike, walking, and bus	🟢	🟢	🟢	🟡	🟡	🟢	🟢
Explore the expanded use of rail for regional transit	🟢	🟡	🟡	🟢	🟡	🟡	🟡

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

The Uptown Transit Center provides riders with a place to transfer from one route to another. Photo courtesy of Metro.

Zero-Emissions Vehicles

Goal

Increase the use of zero-emission vehicles in the City to 25% by 2030.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

SORTA fleet data, EV registrations (Drive Ohio), Red Bike

Strategy

Support the transition to zero-emission mobility options.

Zero-emissions mobility options will play an important role in helping the City achieve its carbon goals. To support that transition, the City must ensure that all who live, work, or visit have access to electric vehicle (EV) charging infrastructure. Providing access to infrastructure is especially important to residents in multi-family housing or who live in single family homes without driveways. In addition to private vehicles, it is important to support transportation providers and other businesses in their efforts to transition to zero-emissions mobility options.

The Northside Transit Center features electric vehicle chargers that are available to the public. Photo courtesy of Metro.

Public electric vehicle chargers are becoming more prevalent throughout Cincinnati such as this one at the Cincinnati Art Museum in Mt. Adams. Photo courtesy of Electrada.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Install public, streetside electric vehicle (EV) charging stations	●	●	●	●	●	●	●
Develop policies to ensure that vehicle charging infrastructure is available to all residents including those in multi-family buildings and in homes without driveways	●	●	●	●	●	●	●
Continue to support Metro in its efforts to invest in clean fuels buses (electric/hydrogen)	●	●	●	●	●	●	●
Develop policies and incentives to ensure new construction is prepared for EV charging	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Bicycling & Walking

Goal

Increase the number of residents within 0.25 mile of safe bike and pedestrian infrastructure 50% from 2022 levels by 2030.

BASELINE YEAR(S)

2022

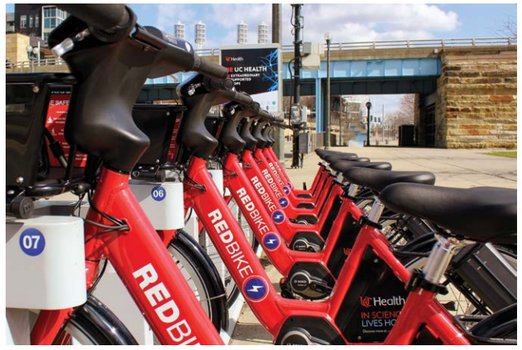
DATA SOURCE(S)

Tri-State Trails

Strategy

Improve bike and pedestrian connectivity so that residents can safely access the places they need to go.

While the City has made substantial improvements to bike and pedestrian infrastructure over the past several years, significant work still needs to be done. Walking or biking between different neighborhoods remains unsafe in some parts of Cincinnati. The City should support public and private investments in trails, bike lanes, and sidewalks that create connectivity. Additionally, the City must ensure that people in all its neighborhoods have access to these resources. In doing so, Cincinnati can create a safe and accessible bike and pedestrian infrastructure that provides a viable alternative to driving.



The Red Bike Program provides a low-cost bike-share system to connect people to places. The program continues to expand to neighborhoods throughout Cincinnati. Photo Courtesy of Cincinnati Red Bike.

The bike lanes on Central Parkway separate cyclists from vehicles improving safety. Photo courtesy of Tri-state Trails.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Continue to invest in Complete Streets to improve connectivity between neighborhoods	●	●	●	●	●	●	●
Continue to improve sidewalk connectivity and maintenance in neighborhoods where connectivity/walkability is lacking	●	●	●	●	●	●	●
Complete the CROWN bike network and connect it to neighborhoods	●	●	●	●	●	●	●
Expand access to Red Bike's traditional and electric bikes to more neighborhoods and increase participation in the Red Bike Go Program	●	●	●	●	●	●	●
Continue to leverage Vision Zero to install bike lanes and traffic calming measures to reduce speeds and improve safety	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Connected Communities

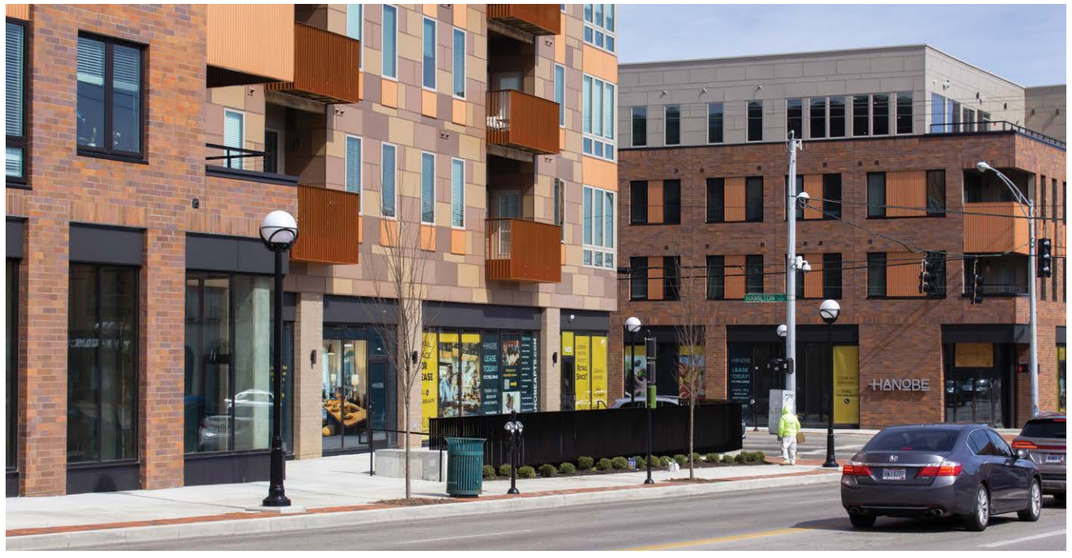
Goal

Build a policy framework that supports the creation of connected communities.

Strategy

Modify land use regulations to support development along transit corridors.

Increasing housing density along transit corridors can expand public transportation use and reduce reliance on single-passenger vehicles. Single-family housing dominates many neighborhoods throughout the City. By modifying existing land-use regulations to allow for multi-family developments, the City can create vibrant residential and business areas. This approach makes it easier to design public transportation routes that encourage ridership by connecting people with the places where they need to go.



The HaNoBe in College Hill is an example of new multi-family housing along a transit corridor. Photo courtesy of College Hill Community Urban Redevelopment Corporation.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Promote “15 Minute Neighborhoods” with mixed residential (including multi-family) and commercial zoning to increase transit connectivity as well as density and affordability	●	●	●	●	●	●	●
Embrace zoning reform that increases density near transit, reduces or eliminates parking requirements across the City, and minimizes the use of surface parking lots	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Green Cincinnnati Plan
2023

FOCUS AREA

Natural Environment

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

FOCUS AREA

Natural Environment

Enhancing ecosystems and green infrastructure to improve health and well being.

Vision

Cincinnati will invest in the creation, preservation, and regeneration of ecosystems and green infrastructure through policy and resource allocation to improve and protect the health and well-being of our diverse residents and the natural environment. We will inspire people, government, and business to value the natural environment to drive transformation.

A Word from Dave Schmitt, Natural Environment Focus Area Chair

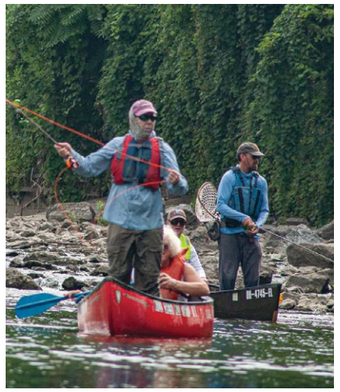
I was deeply honored to be asked to Chair the Natural Environment Subcommittee for the 2023 Green Cincinnati Plan (GCP). I also want to recognize the immense contributions of my partners, Amanda Testerman of the Office of Environment and Sustainability, and Margaux Roberts, our Equity Committee liaison. The work of our subcommittee truly would not have been possible without them.

A team member with Cincinnati Parks prepares a tree for planting in Mt. Echo Park. Increasing the urban tree canopy is an important goal for Cincinnati Parks. Photo courtesy of Cincinnati Parks.

I also chaired this subcommittee for the 2018 GCP, and feel gratified by the amount of progress we've made over the last five years. However, with the growing impact of climate change—and the growing recognition of past inequities—we've got more work to do...and we will do it. Our Mayor, Council, and city administration are united in their passion and energy to work, along with many willing partners, to make real and enduring progress.

Our subcommittee focused on all of the natural resources that make up Cincinnati's environment and the challenges they face: water quality, over-land flooding, greenspace access, tree canopy coverage, and air quality.

Through three public meetings we gathered knowledge and suggestions (in-person and online) from residents, organizations, local experts, and companies across Cincinnati. Both the GCP and our committee benefitted from the tremendous interest shown by the public. There is simply no substitute for the lived experience of our residents and their knowledge of threats and opportunities.



The Mill Creek Alliance hosts paddling and fishing trips on the Mill Creek to engage the public in the resurgence of the watershed as a natural and community asset. Photo courtesy of Mill Creek Alliance.

Using this valuable input, our subcommittee developed aggressive Goals, Strategies, and Actions to protect and improve the health of our environment and residents. In particular, we focused on providing benefits to our priority communities which have suffered disproportionately in the past.

I work every day on the Mill Creek, which 25 years ago was declared "the most endangered urban stream in North America." National experts said it would be impossible to restore it. Today, the stream is roaring back to life and is home to bald eagles, ospreys, game fish, beaver, and many others. We host hundreds of people every year on paddling, pedaling, and fishing trips along its shores. Because of this, I know firsthand that we CAN do this. We can restore and protect our natural environment and make its many benefits available to ALL of our residents. I look forward to working with you over the next five years to achieve—and surpass—these goals.

FOCUS AREA CHAIR

NATURAL ENVIRONMENT FOCUS AREA CHAIR
Dave Schmitt

ORGANIZATION
Executive Director
Mill Creek Alliance

EQUITY LIAISON

"Most importantly, that the voice of the people isn't lost in the political interests but true equity is the overall goal to create communities that thrive.

EQUITY LIAISON
Margaux Roberts

ORGANIZATION
Climate Safe Neighborhood Community Organizer, Groundwork Ohio River Valley

NEIGHBORHOOD
Bond Hill

Tree Canopy

Goal

Maintain 40% urban tree canopy while expanding canopy to 40% residential, 25% mixed-use/industrial, and 10% Central Business District.

BASELINE YEAR(S)

2020

DATA SOURCE(S)

Tree Canopy Assessment and Cincinnati Parks Urban Tree Canopy Dashboard

Strategy

Improve preservation, health, and maintenance of trees in existing urban canopy.

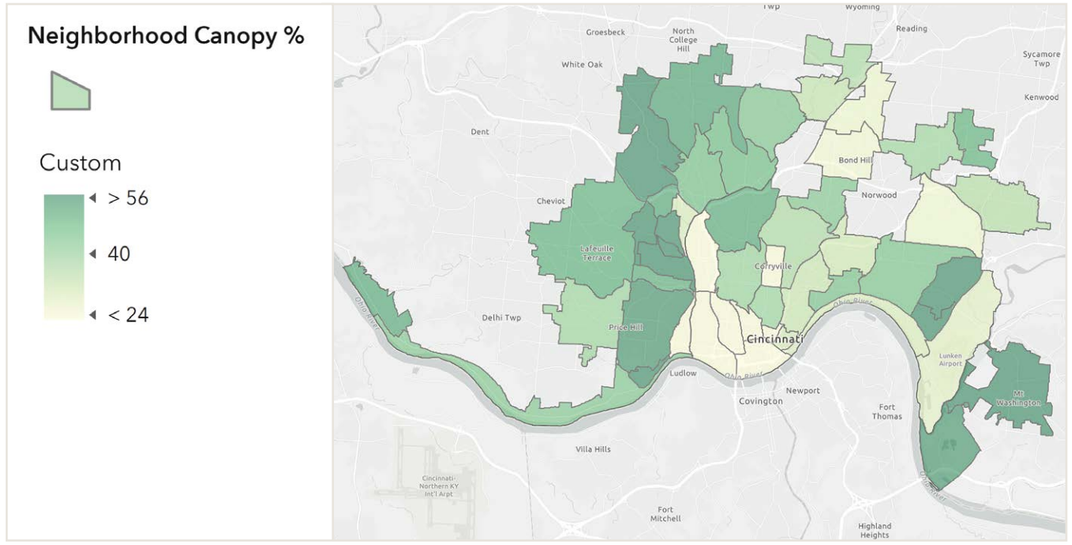
In 2020 the Cincinnati Park Board sponsored a study of urban tree canopy. The study showed the overall urban tree canopy of the City was 40%, but it also highlighted the inequity of urban tree canopy between neighborhoods. Areas with lower tree canopy experience increased heat island effect, have reduced stormwater retention, and increased areas of overland flooding. In addition to maintaining the existing tree canopy, the City must continue efforts to plant trees in neighborhoods with low tree canopy to reduce the heat island effect, increase native species, and offset carbon emissions.

Planting native tree species, like the Serviceberry, is important for supporting the health of native pollinators and animal species.

Students with Hayes Porter Elementary help plant new trees in the West End. Photo courtesy of Cincinnati Parks.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Focus city tree planting in neighborhoods with highest heat island effect as measured in the Climate Equity Indicators Report or most recent data	●	●	●	●	●	●	●
Provide incentives and support for the use of carbon crediting and/or carbon offset program to fund tree planting, maintenance, land conservation, and forest rehabilitation	●	●	●	●	●	●	●
Plant more native tree species through education with non-profits, nurseries, and schools	●	●	●	●	●	●	●
Implement policies that protect existing trees during development efforts	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment



Air Quality

Goal

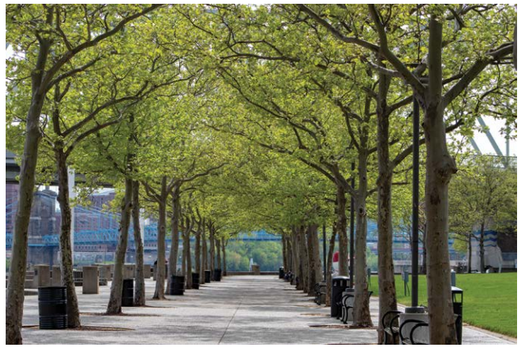
Improve air quality so that Air Quality Index "Healthy Days" are increased by 30% by 2028.

BASELINE YEAR(S)

5-year average 2018-2022

DATA SOURCE(S)

US EPA Air Quality Index Report



Natural corridors, like the trees and greenspace along the Ohio River, can reduce air pollution from between the source and nearby communities.

Strategy

Increase air quality studies and education and reduce pollution from air emissions.

Many Cincinnati residents experience poor outdoor air quality which contributes to adverse health conditions, including asthma and lung disease. In 2022, the US Environmental Protection Agency (EPA) registered 181 days with "moderate," "unhealthy for sensitive groups," or "unhealthy" air quality index ratings in Cincinnati. Ozone and Particulate Matter (PM) 2.5 contribute significantly to these low ratings. Other factors include vehicle emissions and industrial emissions. High air temperatures and ultraviolet radiation further exacerbate poor air quality. The City can improve air quality for residents by:

- Reducing the emissions generated within the City from buildings and gas-powered equipment
- Increasing the tree canopies and natural corridors surrounding neighborhoods.

We need more data and further studies to fully quantify the extent of poor air quality in Cincinnati's neighborhoods. To improve the health of residents, the City must engage and educate residents to understand and reduce sources of poor air quality.

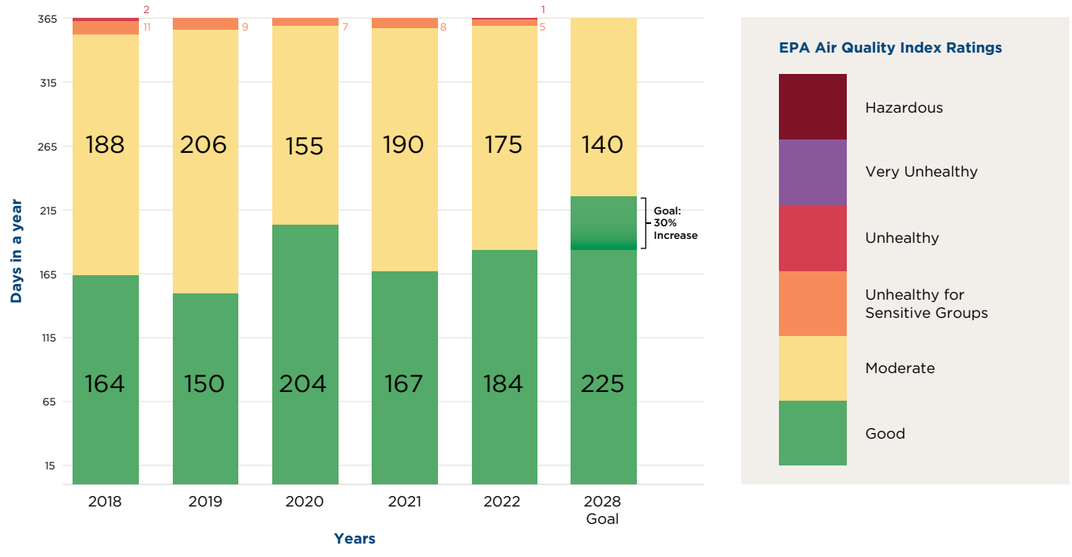
FOCUS AREA Natural Environment

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Expand monitoring of air quality and nuisance odors, incorporating citizen science in priority neighborhoods	🟡	🟢	🟢	🟡	🟢	🟢	🟢
Provide services, resources, and education for residents in priority neighborhoods on air quality alert systems, sources of poor air quality, and air quality regulations	🟡	🟢	🟢	🟡	🟢	🟢	🟢
Support and fund the development of natural corridors and tree barriers along streams and rivers, interstates and highways	🟢	🟢	🟢	🟡	🟡	🟢	🟡
Strengthen air emissions regulations	🟢	🟢	🟢	🔴	🟡	🟢	🟡

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

See Mobility and Buildings & Energy Focus Areas for actions supporting the transition to clean technologies like electric vehicles and buildings, and renewable energy.

Air Quality Index Days Per Year in Cincinnati



Green Space

Goal

Increase access to greenspaces so that every resident has a greenspace within a .5 mile walk by 2028.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

Trust for Public Land ParkScore Index

Strategy 1

Increase the quantity and quality of greenspaces in neighborhoods with low distribution of greenspaces.

Greenspaces in Cincinnati take various forms, including parks, outdoor recreation areas such as ball fields and playgrounds, and natural areas like forests and preserves. In 2022 the Trust for Public Land (TPL) ranked Cincinnati #4 in the nation on its ParkScore Index. The TPL determined the ranking by analyzing the City's park systems for acreage, access, investment, amenities, and equity. While this ranking is encouraging, it also highlights the need to center equity in greenspace investment. Cincinnati can do this by:

- Providing access to greenspaces
- Increasing distribution in areas with low greenspaces
- Engaging youth and Black, indigenous, and people-of-color (BIPOC) communities in these spaces.

Greenspace access

Percentage of Cincinnati residents living within a 10-min walk of a park/greenspace.

Priority Actions	GCP PILLARS: Sustainability	Equity	Resilience	ADDITIONAL PRIORITIES: Jobs	Investment	Health	Feasibility
Create new greenspaces, including use of vacant properties and underused parking lots, ensuring that space will not be redeveloped	●	●	●	●	●	●	●
Continue to improve infrastructure to increase walkability and access to greenspaces	●	●	●	●	●	●	●
Grow greenspace workforce through youth and BIPOC involvement in natural area restoration and education	●	●	●	●	●	●	●
Increase funding for maintenance of greenspaces	●	●	●	●	●	●	●
Implement policies which promote and protect public greenspaces in new developments	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Volunteers with Cincinnati Parks help to remove invasive honeysuckle and maintain parks and greenspaces. Photo courtesy of Cincinnati Parks

The Groundwork Youth Employment Green Team helps maintain the Rockdale Urban Learning Garden in Avondale. This urban garden was established through the Cincinnati Zoo and Botanical Gardens in partnership with local organizations and includes vegetables, fruiting trees, herbs, flowers, and native plants to attract pollinators. Photo courtesy of MadTree Brewing.

Green Space

Restoring and maintaining watersheds, like the Mill Creek and Little Miami, are important to improving water quality and biodiversity in the region.

Green roofs, like this one at the Cincinnati Museum Center at Union Terminal, are examples of green infrastructure which can mitigate the effects of stormwater and help keep contaminants out of waterways.

Strategy 2

Increase preservation and restoration of aquatic ecosystems & urban forests.

In addition to its highly developed and industrial areas, Cincinnati also boasts a variety of natural ecosystems, including the Ohio River; the Mill Creek and Little Miami watersheds; urban forests such as Mt. Airy, Burnet Woods, California Nature Preserve; and unnamed forested areas. These ecosystems provide multiple benefits like stormwater retention, reduced heat island effect, and public enjoyment. However, development, invasive plant and animal species, and pollution from combined sewer overflows and contaminated stormwater runoff threaten the health of these vital ecosystems. These threats are expected to increase in the coming years due to the impacts of climate change. The City must take action to prioritize and support the preservation of these ecosystems through policy, green infrastructure, and restoration.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Remove invasive species and restore, maintain, and preserve forests, wetlands, riparian areas, and natural corridors along waterways, hillsides, and low-canopy neighborhoods	🟢	🟢	🟢	🟡	🟡	🟢	🟢
Implement policies that restrict development in forested and/or biodiverse areas	🟢	🟡	🟢	🔴	🟢	🟢	🟢
Increase use of green infrastructure to mitigate the effects of stormwater, sewer overflows, overland flooding, and contaminated stormwater in waterways	🟢	🟢	🟢	🟢	🟢	🟢	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Green Space

Eden Park is a greenspace which provides a variety of ecosystems, including pollinator-friendly perennials, forests, and open lawn for recreation.

Utilizing native pollinators and low/mow or no/mow techniques in place of grass along roadways or parking areas can support native species and reduces the pollution created through lawn maintenance.

Strategy 3

Increase biodiversity and health of native species in the City.

Hamilton County is home to five federally endangered plant and animal species and to more than 30 State-of-Ohio endangered species. But, we don't have enough data to know which species can be found—or can live—in Cincinnati. Therefore, the City must support the completion of a biodiversity assessment to understand the health of city ecosystems and prioritize conservation of vulnerable ecosystems. Engaging the public in native habitat building on private land can also support the health of plant, animal, and insect species throughout the City.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Complete Biodiversity Assessment for Cincinnati, incorporating citizen science	●	●	●	●	●	●	●
Support pollinator gardens, native plants, and education, including allowing the use of native grasses and pollinator plants in residential areas, and Low-Mow or No-Mow practices	●	●	●	●	●	●	●
Reduce pesticide and fertilizer use/over-use through education, regulation, and innovation	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Photo Courtesy of MSD

Green Cincinnnati Plan
2023

FOCUS AREA

Resilience & Climate Adaptation

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

FOCUS AREA

Resilience & Climate Adaptation

Anticipating, preparing, and responding to the challenges of changing conditions.

Vision

We are a city that will take bold action to heal past environmental, racial, and economic injustices, and that will continue to adapt, innovate, and respond to vulnerabilities to create a climate-ready, resilient, and socially cohesive community.

A Word from Tanner Yess, Resilience & Climate Adaptation Focus Area Chair

What is resilience? You can see it in the untapped potential of our young people; mothers who take multiple buses to buy groceries; residents that fight stormwater with guerrilla green infrastructure; and the urgency to build trust and partner with our frontline neighborhoods. This subcommittee started at the center, with equity, and with those most at risk from a changing climate—our low-income and/or communities of color. We are looking forward with ideas that could correct yesterday's environmental and social injustices. We are making ourselves ready to adapt to a changing climate by bolstering our collective resilience. In the 2023 Green Cincinnati Plan (GCP), we have made Resilience a dedicated pillar as well as a distinct Focus Area.

Stakeholders provide recommendations for Resilience and Climate Adaptation at the 2023 Green Cincinnati Plan kick-off meeting. Photo courtesy of OES staff.

FOCUS AREA CHAIR

RESILIENCE & CLIMATE ADAPTATION FOCUS AREA CHAIR
Tanner Yess

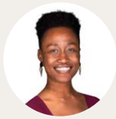
ORGANIZATION
Co-Executive Director
Groundwork Ohio River Valley

Climate Safe Neighborhoods, a program of Groundwork Ohio River Valley in partnership with Green Umbrella and the Office of Environment and Sustainability (OES), has been our North Star for outreach and engagement. Paid equity liaisons have ensured that our process reached those traditionally left out by the sustainability movement. Youth voices have been heard, languages translated, and hard topics discussed. Over seventy people provided input for the Resilience Subcommittee, and partner organizations worked with city government to distill feedback.

Cincinnati stakeholders prioritize actions and strategies at the Resilience and Climate Adaptation Focus Area Subcommittee meeting. Photo courtesy of OES staff.

Climate change is amplifying our ancestors' mistakes by doubling down on issues of infrastructure, public health, access to nature, and other problems perpetuated by racist and classist systems. Though ominous, we see opportunity—a chance to be proactive, prepare for the unexpected, and put resources into righting historical wrongs through green jobs, policy, and the equitable distribution of funding. This is the task we have chosen, and have been chosen for. Join us.

EQUITY LIAISON



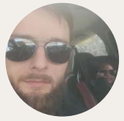
"I want these neighborhoods to truly become sponges, become teaching laboratories for community members."

EQUITY LIAISON
Tyeisha A. Cole

ORGANIZATION
Climate Action Coordinator
Green Umbrella

NEIGHBORHOOD
Millvale & West Price Hill

EQUITY LIAISON



"I hope resiliency centers can come to fruition. Or we can add more funding to community/recreation centers."

EQUITY LIAISON
Phillip Marshall

NEIGHBORHOOD
South Cumminsville

Stormwater & Heat Adaptation

Goal

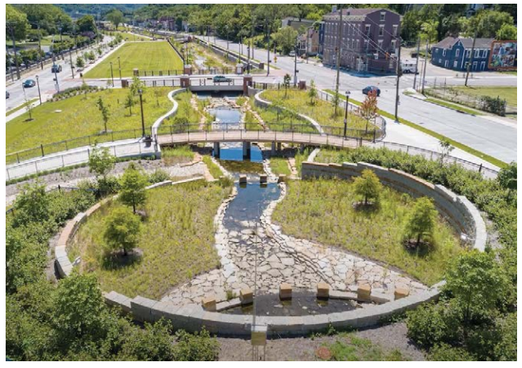
Complete 25 green infrastructure projects by 2028 in extreme heat and overland flood vulnerable communities.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

US EPA Office of Community Revitalization, US EPA Green Infrastructure Program, US EPA Smart Growth Program, US EPA Urban Heat Island Reduction Program, US EPA Environmental Justice Screening Tool; Climate and Economic Justice Screen; Climate Safe Neighborhoods; Climate Equity Indicators Report; Hamilton County Multi-Hazard Mitigation Plan; MSDGC Environmental Sustainability Report; Living With Landslides



The Lick Run Greenway, completed in 2021 by Greater Cincinnati Metropolitan Sewer District, is an example of a large-scale green infrastructure project that reduces combined sewer overflows. Photo courtesy of MSD.

Strategy

Reduce extreme heat, overland flooding, landslides, and water-pollution vulnerabilities by incentivizing, improving, and increasing green infrastructure and other mitigating methods.

To be resilient against extreme heat, overland flooding, sewer backups/overflows, landslides, and water pollution, the City must increase green infrastructure.

"Green infrastructure" means using natural features or planned ecological systems to manage water by mimicking the natural water cycle. Examples of green infrastructure include:

- Green roofs
- Bioswales
- Green medians
- Wetlands
- Parks
- Permeable pavements
- Landscape gardens.

Green infrastructure not only manages storm water exceptionally well, but it is also excellent at mitigating extreme heat. Other methods to tackle extreme heat include, for example, equitable access to air conditioning and the use of heat reflective surfaces.

In contrast to green infrastructure, the urban built environment includes all the physical elements of the places people work and live, such as roads, buildings, houses, bridges, parks, open spaces, and infrastructure (sewer systems, water and power lines, etc.). This built environment sometimes removes or tries to control many natural features, leading to unintended consequences for both people and the urban environment.

For example, hardscapes are large areas with impervious surfaces and gray infrastructure refers to the channelization of natural streams and runoff areas. Hardscapes and gray infrastructure with aging or limited capacity have amplified the effects of extreme storms. The excess water that runs off of hardscapes and gray infrastructure during heavy storms creates overland flooding, sewer backups, and sewer overflows.

These unmitigated storm water events pollute our recreational and potable water supplies, and they have had a direct effect on hillside instability, resulting in more frequent landslides. Large areas with reduced vegetation have also exacerbated extreme heat, creating what is referred to as "the heat island effect."

The City must recognize and adapt to these climate vulnerabilities now, especially because these vulnerabilities predominantly occur in sensitive land use areas and priority communities. Green infrastructure at multiple scales presents a resilient set of cross-cutting solutions that both promote the natural environment and allow for positive economic and social changes within the existing built environment.

Priority Actions

	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Incentivize green infrastructure projects in communities with extreme heat and flood vulnerabilities	🟢	🟢	🟢	🟡	🟡	🟢	🟢
Equitably restructure sewer rates based on permeable land surface and other contributing factors	🟡	🟢	🟢	🔴	🟢	🟡	🟢
Create a "sponge city" with more and diverse green infrastructure in public and residential places including green roofs, bioswales, green medians, wetlands, parks, permeable pavements, and landscape gardens	🟢	🟢	🟢	🟡	🟡	🟢	🟡
Continue to decrease sewer backups, sewer overflows, and overland flooding (flash flooding) by supporting sewer infrastructure improvements in priority communities	🟢	🟢	🟢	🟢	🟡	🟢	🟡
Partner with communities to identify opportunities to address property damage caused by overland flooding and hillside instability	🟡	🟢	🟢	🔴	🟡	🟡	🟡
Ensure all rental housing has at least one room with adequate air conditioning	🟡	🟢	🟢	🟡	🟢	🟢	🟡
Use heat reflective materials when appropriate (roads, parking surfaces, roofs, etc.)	🟢	🟢	🟢	🟡	🟡	🟢	🟡

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

See Natural Environment Focus Areas for more green infrastructure actions

Community Planning & Social Cohesion

Goal

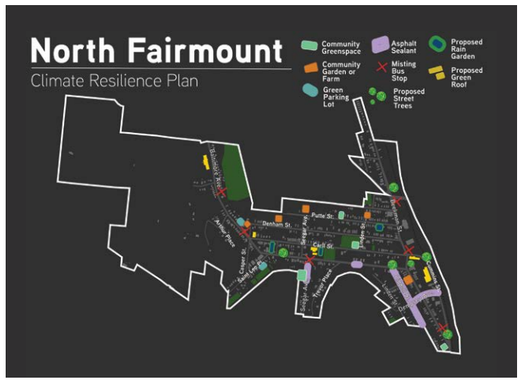
Complete five climate adaptation and resilience projects per year by 2028 that create 10 green jobs per project.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

US EPA Office of Community Revitalization, US EPA Climate Change Adaptation Program, US EPA Environmental Justice Screening Tool; Climate and Economic Justice Screen; Climate Safe Neighborhoods; Climate Equity Indicators Report; Hamilton County Multi-Hazard Mitigation Plan; USDN Resilience Hubs Project; Report on the Impact of Climate Change on Migration



The resilience maps developed through the Climate Safe Neighborhoods project, like this one for North Fairmount, are examples of community planning and social cohesion. Photo courtesy of Groundwork Ohio River Valley.

Strategy 1

Increase access, stability, and security of mixed-income housing and resilience hubs for local residents and anticipated climate migrants.

Social cohesion is the ability for community members to cooperate to achieve shared well-being. Strong social cohesion is one of the most important factors in successfully responding to climate change impacts. Yet, climate change can threaten social cohesion. Affordable housing—a cornerstone of social cohesion—is especially vulnerable to the impacts of climate change. Ensuring the accessibility, stability, and security of affordable housing must be considered in resilient community planning. Reducing poverty and increasing economic mobility can ease the burden climate change places on social cohesion. For these reasons, the need to increase affordable housing underpins much of the socially resilient movement.

Neighborhood children gather at the Millvale Recreation Center. Recreation Centers are places of community connection and present an opportunity for resilience hub development. Photo courtesy of Liz Dufour/Cincinnati Enquirer.

Resilience hubs promote social cohesion, public health, equity, and they can help save lives. Through community planning, these hubs can provide the necessary resources for communities to withstand climate challenges. Resilience hubs come in many forms:

- Community institutions enhanced to increase adaptive capacity
- Multi-faceted support centers for residents
- Educational spaces for emergency preparedness
- Place for coordinated resource distribution and other services in response to climate challenges.

The City and its neighborhoods can take advantage of existing institutions to create the necessary resilience hubs.

In addition to serving residents, Cincinnati must prepare for a possible influx of climate migrants. "Climate migrants" are people who leave their homes because of climate shocks and stressors. People in the most vulnerable situations (those who live in rural, tropical, or drought-stricken areas) will probably migrate first; however, no one can predict the exact origin, number, timing, or scale of climate migrants. Although Cincinnati has its own climate vulnerabilities, it will likely emerge as a climate haven. The City will need tools to adapt to the anticipated population increase.

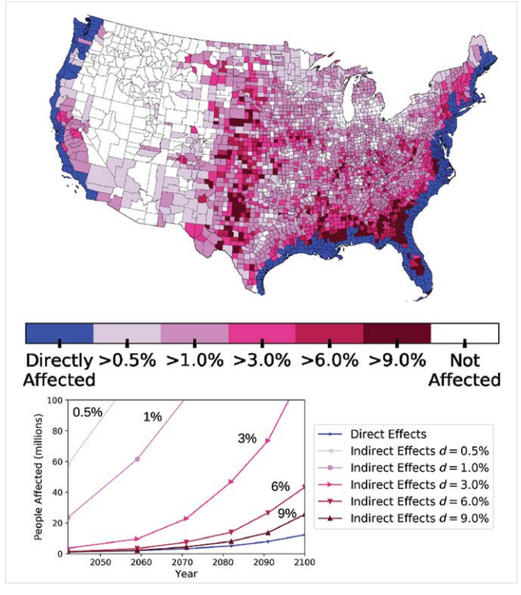
Priority Actions

	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Continue to implement affordable and mixed-income housing strategies to stabilize communities	🟡	🟢	🟢	🟡	🟡	🟢	🟢
Develop neighborhood resilience hubs to foster community connection and increase emergency preparedness	🟡	🟢	🟢	🟡	🟡	🟢	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Community Planning & Social Cohesion

The Green team works on removing invasive species from the green roof at City Hall. Community-based programs like this provide green youth workforce training. Photo courtesy of Groundwork Ohio River Valley and Cincinnati Parks.



Prediction of climate migration within the United States from coastal displacement by 2100 due to sea level rise. Photo courtesy of PLOS One.

Strategy 2

Use more community-based assessments, planning, programs, and training to reduce the social impacts of climate vulnerabilities.

Climate vulnerability describes the extent to which social systems are susceptible to climate change impacts. Priority communities, both within the City and across the country, have an increased sensitivity to climate change and a higher risk of impact. They are likely to have fewer resources to adapt and recover from climate events, but when informed and equipped, these residents can serve as a powerful force for change. The City needs to ensure that residents—both current and future—understand and are prepared for the social effects of climate change. Social impacts may include:

- Health effects and exposure to pollution
- Lack of fresh food access
- Limited availability and connectivity to jobs, education, entertainment, and recreation
- Migration and displacement of households
- Loss of community identity.

FOCUS AREA Resilience & Climate Adaptation

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Fund and expand the Climate Safe Neighborhoods Program to cultivate the social infrastructure for resilient communities and provide green workforce training	🟡	🟢	🟢	🟢	🟡	🟡	🟢
Develop a climate migration response plan	🟡	🟢	🟢	🔴	🟢	🟡	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Pollution Reduction & Adaptive Land Use

Goal

Revitalize 25 contaminated, industrial properties in neighborhoods of the Lower Mill Creek Valley by 2028.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

US EPA Brownfield and Land Revitalization Program; Ohio EPA Brownfield Program; US EPA Environmental Justice Screening Tool; Climate and Economic Justice Screen; Climate Safe Neighborhoods; Climate Equity Indicators Report; Hamilton County Multi-Hazard Mitigation Plan; MSDGC Environmental Sustainability Report; Living With Landslides; Cincinnati Choice Neighborhoods Transformation Plan; The Lower Price Hill Resurgency Plan; Revive Cincinnati: Neighborhoods of the Lower Mill Creek Valley; Made in Camp; Cincinnati Strategic Plan; Community Improvements Study Spring Grove Avenue Corridor; Project Cool It; A Naturally Industrious Revitalization Guide: The Beekman Street & Queen City Avenue Strategic Development Guidebook

Strategy 1

Mitigate pollution and clean up additional legacy brownfield sites to revitalize neighborhoods and result in healthier communities.

Known pollutants as well as emerging pollutants of concern need to be reduced in the environment before our air, water, and land become prohibitively contaminated. Emerging pollutants are those chemicals that have been detected in environmental monitoring that may cause unexpected ecological or health impacts and typically are not regulated under current environmental laws. Significant emerging pollutants of concern include pharmaceuticals and personal care products as well as microplastics.

Due to previous industrial development patterns in Cincinnati, the City is home to numerous vacant and underutilized properties. These properties, referred to as “brownfields,” tend to be contaminated. The challenges of brownfields include:

The historic Crosley building is an example of a brownfield site in Camp Washington. Clean-up of brownfield sites can revitalize neighborhoods and build healthier communities. Photo courtesy of Maddy Schmidt/WCPO.

- Presence of asbestos-containing materials and lead-based paint
- Lack of safety and increased vandalism
- Proximity to residential areas, parks, playgrounds, and flood zones
- Loss of tax revenue for the City.

The City has estimated that up to 500 potential brownfield properties may exist within priority communities of the Lower Mill Creek Valley alone.

Brownfield revitalization outcomes aligned with priority community needs and city planning can include stable, secure, and affordable living environments; energy-efficient, sustainable buildings that use renewable energy sources; economic investment; and job creation.

Benefits of brownfield revitalization for priority communities can include:

- Community pride and neighborhood anchors to strengthen place-making
- Increased economic value
- Better connectivity to fresh food, jobs, training, recreation, and green infrastructure
- Increased workforce capacity
- Creation of resilience hubs
- Climate adaptation to heat and flood vulnerabilities
- Healthier communities with reduced exposure to pollution.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Conduct inventories, assessments, and clean-ups of contaminated industrial sites, referred to as brownfields, in alignment with both community revitalization priorities and city-planned reuse	●	●	●	●	●	●	●
Address emerging pollutants, including pharmaceuticals and personal care products, that are endocrine-disrupting chemicals and microplastics	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Pollution Reduction & Adaptive Land Use

A resident of the East End experiences extreme flooding from the Ohio River on February 24, 2018. Flood zones are sensitive land use areas which require protection and adaptive land use. Photo courtesy of Liz Dufour/Cincinnati Enquirer.

Severe storms in 2016 resulted in landslides on Columbia Parkway. Hillsides are one type of sensitive land-use areas in Cincinnati. Photo courtesy of City of Cincinnati.

Strategy 2

Increase protection of vulnerable lands and infrastructure through policy development.

Urbanization has transformed land use in cities, and the degree of this transformation can impact how vulnerable communities and infrastructure are to climate change. Land use sensitivity is the main measurement of this vulnerability. Highly concentrated urban areas (e.g., heat islands and stormwater-impermeable hardscapes), flood zones, and hillsides are examples of sensitive land use areas in Cincinnati.

Core infrastructure—including energy, water, transportation, and healthcare systems—is especially vulnerable to climate change in these sensitive land use areas due to the socio-economic impacts that an outage would have. This is particularly true in priority communities because residents need these services to survive.

For communities to be resilient to climate change, the City needs to develop policies, such as Low Impact Development, that protect vulnerable land use and core infrastructure without creating unsustainable consequences.

FOCUS AREA Resilience & Climate Adaptation

Priority Actions

	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Protect landslide-prone hillsides and overland flood risk zones through land development policies such as Low Impact Development	🟡	🟢	🟢	🟡	🟡	🟡	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Green Cincinnnati Plan
2023

FOCUS AREA

Zero Waste

Green Cincinnati
BUILDING A SUSTAINABLE AND EQUITABLE CITY

city of CINCINNATI

FOCUS AREA

Zero Waste

Protecting human health and the environment by diverting waste from landfills.

Vision

Cincinnati will achieve 50% diversion city-wide by 2030, and city-wide zero waste (90% diversion) by 2040 through conservation of resources by responsible production, consumption, reuse, and recovery of materials without threat to human health and the environment.

A Word from Michelle Balz, Zero Waste Focus Area Chair

The Zero Waste section focuses on materials we touch every day—your aluminum can, paper coffee cup, plastic water bottle, and even the leaves in your backyard. By reducing, reusing, and recycling these ordinary materials, we conserve the resources used to create and transport the products to us. These materials can become feedstock for regional industry or a valuable amendment to replenish depleted soils.

A typical curbside set-out in Cincinnati includes recycling carts, trash carts, and containers or bags for yard waste. Photo courtesy of OES.

Cincinnati residents currently divert 20% of our "waste" from the landfill. Recycling these materials into new products reduces greenhouse gases and conserves resources. It's equivalent to removing 7,400 cars from the road per year and safeguarding 102,980 trees and 1,200 tons of limestone, iron ore, and coal. Although current recycling and composting efforts have a major environmental impact, Cincinnati has the potential to double or even triple that impact with improved programs and participation.

Hundreds of Cincinnati residents provided input to create the goals and action steps outlined in this section. After multiple community input sessions as well as virtual engagement, the Zero Waste team narrowed down the focus and goals to those that would have the most impact in reducing climate change and improving equity and inclusion for all Cincinnati residents.

I am most excited about the potential to improve recycling accessibility for Cincinnati residents living in multi-family housing. This plan sets the impressive goal of increasing recycling by 50% among multi-family dwellings, public events, and emerging waste streams.

Organics, including food waste, can be used in neighborhood composting and are an important way to reduce waste going to the landfill, and building healthy soil. Photo courtesy of The Common Orchard Project.

The Zero Waste goals for Cincinnati align with the Hamilton County Solid Waste Plan Update 2024-2038 strategies of increasing outreach for residential recycling, expanding yard and food waste composting, and improving infrastructure for multi-family access.

This section presents ambitious goals and actions to reduce materials going to the landfill and use those resources to decrease our carbon footprint. However, achieving these goals will require all Cincinnati residents and businesses to engage and take action. We hope you will help us make the vision of a Zero Waste Cincinnati a reality.

FOCUS AREA CHAIR

ZERO WASTE FOCUS AREA CHAIR
Michelle Balz

ORGANIZATION
Solid Waste Manager
Hamilton County R3Source

EQUITY LIAISON

"My time with the GCP has been a unique and eye-opening experience. I have been allowed to peek into the machinations of administrative planning and I can assure you that we are in good hands.

EQUITY LIAISON
Darryl Franklin

NEIGHBORHOOD
North Fairmount

Recycling

Goal

Increase waste diversion 10% by 2028.

BASELINE YEAR(S)

2023

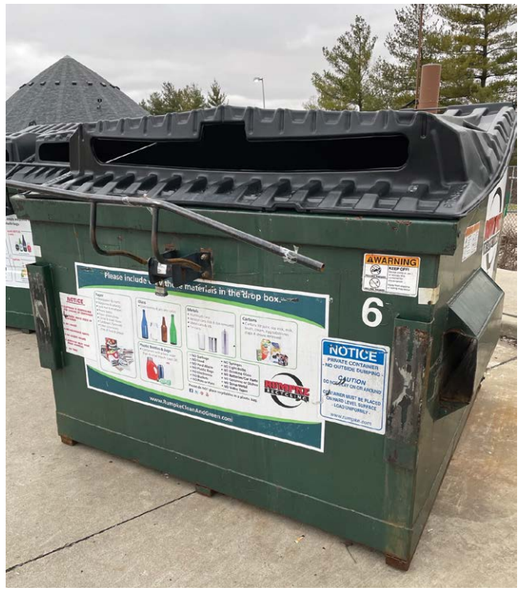
DATA SOURCE(S)

Hamilton County Solid Waste District

Strategy 1

Increase access to recycling for multi-family building residents.

Cincinnati has the oldest curbside recycling program in Ohio, established in 1989. Single family homes have fewer barriers to recycling, so the City has focused much of its efforts there. However, over 50% of Cincinnati residents live in multi-family dwellings. These individuals, typically in priority communities, do not have the same easy access to recycling. Instead, they need to own a car and transport recyclables to a drop-off location. The effort, time, and resources necessary to do this creates a significant barrier for most people. Furthermore, illegal dumping threatens the existence of these drop-offs. In this pilot we propose placing recycling dumpsters directly on site at multi-family residences—so residents have easy access—and piloting a valet and education service to help property managers control for contamination.



An example of a recycling container which could be utilized by multi-family building residents. Photo courtesy of City of Cincinnati.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Increase the number of multi-family dwellings with recycling infrastructure	●	●	●	●	●	●	●
Minimize recycling contamination through culturally appropriate education, partnerships, workforce champions, and resident feedback	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Recycling

Community members participate in recycling at Avondale Day. Increasing participation at public events can help create positive recycling habits and improve the recycling culture. Photo courtesy of OES.

Some neighborhoods have paired recycling cans and garbage cans, like this one in Downtown. Increasing the availability of recycling containers in Neighborhood Business Districts supports landfill diversion and make it simple for people to easily dispose of their waste in the appropriate place. Photo courtesy of OES.

Strategy 2

Improve public event and neighborhood business district recycling infrastructure.

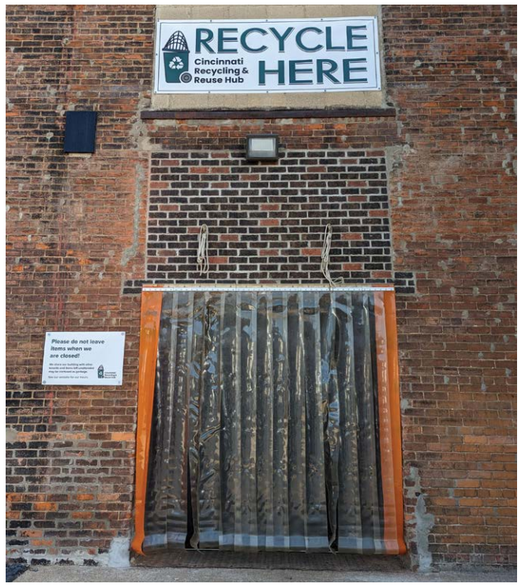
To create recycling habits, we need to provide easy access to recycling at home, work, and play via environmental design. A best practice is to provide paired recycling and garbage receptacles, clear simple signage as well as monitoring and collection. Recycling at public events—such as Taste of Cincinnati, Reds Opening Day, Blink, or watching the World Cup in the DORA District—signals to our residents and visitors that Cincinnati embodies a culture of sustainability. Workforce development is also essential so that event producers can hire skilled professionals to do this work.

Priority Actions

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Require permitted public events and events held on city property to use best available recycling practices and include recycling service costs in the permit fee	●	●	●	●	●	●	●
Provide alternatives to single-use plastic items at permitted public events and events held on city property	●	●	●	●	●	●	●
Pair garbage cans with recycling containers in all Neighborhood Business Districts and DORA districts and provide necessary services, including collection and monitoring	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Recycling



Alternative recycling and reuse outlets, like the Cincinnati Recycling and Reuse Hub, provide options by offering a one-stop drop-off for hard-to-recycle items and diverting them from the landfill. Photo courtesy of CRRH.

The Cincinnati Recycling and Reuse Hub collects items traditionally difficult to recycle from businesses and residents. Connecting these materials to commercial recyclers creates new products. Photo courtesy of CRRH.

Strategy 3

Increase use of alternative recycling and reuse outlets for residential metals, textiles, e-waste, and other emerging recyclable waste streams.

Despite keeping waste out of the landfill, recycling does require the input of resources and energy. In contrast, waste reduction, reuse, and repair all conserve energy and save natural resources, making them, in many ways, better options than recycling in the waste hierarchy. Reusable take-out containers are preferrable to single-use containers even if they do require washing. Similarly, donating or selling household items and furniture extends the "life" of these items, keeping them out of the landfill. Unfortunately, it's usually easier and cheaper to buy new, rather than fix or find something a new home. This strategy aims to level the playing field so it's just as easy to reuse as it is to replace.

Priority Actions

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Support and expand neighborhood pick-up locations that connect commercial recyclers to dropped-off recyclable materials, like the Cincinnati Recycling and Reuse Hub	●	●	●	●	●	●	●
Create a program that incentivizes commercial recyclers to collect household e-waste, textiles, and reusable items not otherwise collected curbside	●	●	●	●	●	●	●
Incentivize recycling and diversion innovation by increasing the cost of waste generation and disposal	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Recycling

Recycling Ambassadors engage with residents during educational campaigns to build knowledge for residents and capacity of the recycling and reuse workforce. Photo courtesy of Butch Gibson.

Strategy 4

Build capacity of the recycling and reuse workforce.

In addition to improving the recycling infrastructure at public events, the City must also build the appropriate workforce capacity. Currently, property managers and event producers are unable to hire skilled services, stalling any progress made in public-event recycling. We have also learned that we can increase the capacity of residents in priority communities to embrace recycling if we combine it with an employment opportunity. By training and employing residents in priority communities to provide these services, the City can both provide jobs and expand the reach of residential recycling.

Priority Actions

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Create “Recycling Valets”: workforce and small business development to provide recycling collection, monitoring, and education to multi-family dwellings, special events, and business districts with an emphasis on employing residents from priority neighborhoods	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

Organics

Goal

Sustainably divert 50% of organics (including yard trimmings and food waste) from the landfill by 2028.

BASELINE YEAR(S)

2018

DATA SOURCE(S)

Hamilton County Waste Characterization Study 2018

Strategy 1

Improve current yard-trimmings collection program and use of biochar.

The City's yard trimmings program—designed to divert organics from the landfill—has sputtered over the years due to budget cuts. Therefore, compliance with the source-separated yard trimmings program has declined, and landfill diversion has stalled. Education and outreach will help the City get this vital program back on track. Additionally, we need to ensure each household has the appropriate carts for recycling, yard trimmings, and garbage. Lastly, the City will explore using biochar—a charcoal-like substance created from the burning of wood and similar biomass—as a kind of mulch and fertilizer for trees and gardens.

Allowing mown leaves or grass clippings to remain on the lawn is good for soil health and reduces the need to have separate collection.

Biochar is a charcoal-like substance created from the burning of wood or similar biomass and can be used as a mulch or fertilizer for trees and gardens. It is a promising option for diverting organic materials from the landfill. Photo courtesy of Sam Dunlap.

FOCUS AREA Zero Waste

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Conduct education and outreach on residential mulching (Just Mow It) to reduce grass clippings and source-separated yard trimmings for collection and composting	🟢	🟡	🟡	🔴	🟢	🟡	🟢
Support the development of local biochar processing, and the use of activated biochar for farming, tree plantings, storm water retention, etc.	🟢	🟡	🟡	🟡	🟡	🟡	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Organics

Homeadow Song Farm in Spring Grove Village utilizes small scale composting to recycle their organic material, minimizing transportation costs and helping to create quality soil amendments for backyard gardens. Photo courtesy of Homeadow Farm.

The Civic Garden Center hosts a Master Composting Class, teaching the ins and outs of composting and going beyond the basics. Photo courtesy of Civic Garden Center.

Strategy 2

Improve multi-scale composting infrastructure.

Composting is the process of recycling organic material—such as vegetative food scraps, leaves, and yard trimmings—into soil amendment for plants and soil. One of the biggest challenges the City faces in implementing a large-scale compositing operation is the high cost of transportation. To process organic material efficiently, the city's composting infrastructure needs to have several tiers:

Tier 1

The best way to minimize transportation cost is to incentivize and encourage home composting of food waste and yard trimmings.

Tier 2

Transporting compostable organics to small-scale urban agriculture operations that grow food helps farmers and communities and lowers costs for the City.

Tier 3

This tier consists of large-scale, industrial Class II composting for organics that do not readily degrade in the first two tiers. In addition to food waste and yard trimmings, the Class II facility can process food waste and compostable paper and take-out containers not acceptable in the other tiers.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Pilot and support small-scale community composting under 500 square feet	🟢	🟡	🟢	🟡	🟡	🟡	🟢
Ensure all organic material collected, including yard trimmings and food waste, is composted in a sustainable manner	🟢	🟡	🟢	🟡	🟡	🟢	🟡
Support funding, siting, and development of a regional, large-scale Class II compost facility	🟢	🟡	🟢	🟢	🟡	🟡	🟡

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Organics

Diversion of organic materials like food waste can be completed through vegetative food waste drop off sites, like this one hosted by the Common Orchard Project in Camp Washington. Photo courtesy of The Common Orchard project.

The Common Orchard Project utilizes medium-scale (less than 500 sq. ft.) sites at a neighborhood level to divert organic waste from the landfill and create compost. Photo courtesy of The Common Orchard Project.

Strategy 3

Divert food waste through prevention, reuse/recovery, and composting.

In 2021 Cincinnati sent 74,953 tons of household waste to the landfill, approximately 16.8% (12,592 tons) of which was food waste. Food waste is the biggest contributor to methane, a greenhouse gas that is up to 86 times more powerful than carbon dioxide. In the United States up to 40% of food is never eaten, resulting in a massive resource drain from the growing, processing, transporting and eventual disposal of all that unused food. Nationwide, households lose approximately $1800 per year in wasted groceries, while here in Cincinnati 33% of families are food insecure. This data speaks to an alarming gap between what is wasted and what is needed.

Cincinnati has worked to support the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Agriculture (USDA) Food Recovery Hierarchy, using prevention, reuse/recovery, and composting. However, to move forward, the City must more robustly use these tools to eliminate wasted food and divert food waste from the landfill. Additionally, the City needs to create pathways for the proper storage and timely transport of excess food for donation.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Support the development of anaerobic digesters to divert organics from the waste stream	●	●	●	●	●	●	●
Support the creation of food waste collection programs and/or establish food waste drop-off locations in city facilities, communities, and schools	●	●	●	●	●	●	●

● strong alignment ● moderate alignment ● weak alignment

See Food Focus Area for Goals, Strategies & Priority Actions related to Food Waste Prevention & Recovery.

Litter

Goal

Decrease litter and illegal dumping by 10% annually through 2028.

BASELINE YEAR(S)

2022

DATA SOURCE(S)

Keep Cincinnati Beautiful Community Appearance Index

Strategy

Increase programming and outreach for litter and illegal dumping prevention.

Litter is a problem in Cincinnati. Seventy percent of the complaints the City receives deal with litter and illegal dumping, reflecting both quality of life and environmental issues. In addition to creating blight and pollution, illegal dumping can present a health and safety issue depending on the type of material being dumped. These activities often occur in many accessible but unsecured locations like vacant lots, wooded areas, drainageways, alleys, and roadways—areas often found in communities with fewer resources for tackling such challenges. Cincinnati needs to adopt a comprehensive strategy, one that takes an inter-departmental approach, leveraging community stakeholders, organizations, and volunteers to assist priority communities in putting a stop to this chronic problem. Single-use plastics add to the problem as they contribute to unsightly litter and wasted resources, clogging drainage and waterways, and ultimately breaking down into environmentally pervasive micro-plastics.

Children participate in a neighborhood clean-up in Northside to remove litter. Photo courtesy of OES.

Priority Actions	GCP PILLARS			ADDITIONAL PRIORITIES			
	Sustainability	Equity	Resilience	Jobs	Investment	Health	Feasibility
Use policy and fees to discourage the use of single-use plastics, including plastic bags	🟢	🟡	🟡	🔴	🟡	🟡	🟡
Reduce litter and illegal dumping through public communications strategy and stronger enforcement	🟢	🟢	🟡	🟡	🟡	🟡	🟡
Conduct routine neighborhood litter clean-ups and and partnering with programs like Adopt-A-Spot	🟡	🟢	🟢	🟡	🟡	🟡	🟢

🟢 strong alignment 🟡 moderate alignment 🔴 weak alignment

Reduction of single-use plastics like water bottles can have a large impact on neighborhood litter.

No Dumping signs are present throughout the city. 70% of complaints received by the City are related to litter and illegal dumping.

ZERO WASTE EQUITY LIAISON

ZERO WASTE EQUITY LIAISON
Darryl Franklin

NEIGHBORHOOD
North Fairmount

A Word from Darryl Franklin, Zero Waste Equity Liaison

I am Darryl Franklin, Community Liaison with the Green Cincinnati Plan (GCP) on the Zero Waste Focus Group. My time with the GCP has been a unique and eye-opening experience. I have been allowed to peek into the machinations of administrative planning and I can assure you that we are in good hands.

As community liaison I was at first overwhelmed by the new terminology, new faces, and the overall planning environment. It was difficult to relay ideas and proposals to my community due to my elementary understanding of the system and its processes. After attending more focus group meetings than I can count, I realized that GCP had gathered a diverse group of committed people dedicated to addressing our climate and environmental challenges.

My interaction with the Office of Environment and Sustainability (OES) was enjoyable and educational. I met highly efficient and effective public servants who were knowledgeable and professional, but also likeable and friendly. Through these meetings I have encountered many kindred spirits working toward climate resiliency. The data gathering, analyzing, and organizing of information into coherent, and sensible talking points, made for some lively discussions and some consensus.

The emphasis on equity in the process gives the GCP the chance to redefine the equitable distribution of resources to reflect their ability to improve the environmental climate of neighborhoods previously neglected and in the most need of remediation. This is an opportunity to include all the diverse citizenry of our region in this epic challenge.

The “plan,” containing ambitious goals and strategies, can be accomplished using the systematic approach of OES and the GCP. They are gathering and developing the people, tools, and technology necessary to create an inclusive, forward-thinking, motivated workforce, inspired by the many possibilities that lie ahead. Environmental resiliency is more than just an aspirational pursuit. There are measurable steps we can take to help create a clean, livable planet. This is an opportunity for everyone to work together to make the world a better place.

Looking forward,

Darryl Franklin

Appendix

Documents in the appendix can be accessed at the link below:
https://www.cincinnati-oh.gov/oes/climate/climate-protection-green-cincinnati-plan/2023-green-cincinnati-plan-appendix/

- Cincinnati Climate Equity Indicators Report 2021
- Cincinnati Urban Heat Island Assessment
- Cincinnati Urban Tree Canopy Dashboard
- Climate and Economic Justice Screening Tool
- Climate Equity Benchmarking Analysis Report
- Climate Safe Resilience Plans
- ClimateView Cincinnati Dashboard
- GCP Equity Framework
- GCP Focus Area Action Plans
- J40 Factsheet
- Making Justice40 a Reality for Frontline Communities
- Plan Cincinnati

Glossary

Acronyms

BIL: Bipartisan Infrastructure Law

BIPOC: Black, Indigenous, and People of Color

C-PACE: Commercial Property Assessed Clean Energy

CSN: Climate Safe Neighborhoods

CSOs: Combined Sewer Overflows

DORA: Designated Outdoor Refreshment Areas

EPA: Environmental Protection Agency

GCP: Green Cincinnati Plan

GWORV: Groundwork Ohio River Valley

IIJA: Infrastructure Investment & Jobs Act

IRA: Inflation Reduction Act

J40: Justice40 Initiative

MUFPP: Milan Urban Food Policy Pact

NAACP: National Association for the Advancement of Colored People

OES: Office of Environment & Sustainability

PPAs: Power Purchase Agreements

PM: Particulate Matter

SORTA: Southwest Ohio Regional Transit Authority

USDA: United States Department of Agriculture

Glossary of Key Terms

The report acknowledges that many of the terms used in this document have complex and evolving meanings based on time, context, location, community and evolution of sustainability policy. What follows are meanings and definitions directly pulled and cited from government, academic, nonprofit or community sources as relevant to the goals of the 2023 Green Cincinnati Plan.

Brownfields: vacant and underutilized properties which are contaminated or polluted largely due to past industrial use.

Carbon Footprint: "The total amount of greenhouse gases produced to directly and indirectly support human activities, usually expressed in equivalent tons of carbon dioxide. (CO2)"[27]A person or entity's carbon footprint is the sum of all emissions of CO2 (carbon dioxide), which were induced by their activities in a given time frame. Usually a carbon footprint is calculated for the time period of a year.

Carbon Neutrality: "Achieving a state of net zero greenhouse gas emissions by balancing those emissions so they are equal (or less than) the emissions that get removed through the planet's natural absorption;"[28] can be done by purchasing a carbon offset, such as paying to plant new trees or investing in 'green' technologies such as solar and wind power. It is important to use an approach that addresses social outcomes as well as climate emissions in order to ensure that carbon neutral approaches are effective and refrain from shifting the burden to others.

Circular Food Economy: means moving towards a food system that builds natural capital and allows nature to thrive by mimicking natural systems of regeneration so that waste becomes a contaminant-free feedstock for another life cycle.[29]

Climate Adaptation: "Climate adaptation is the adjustments societies or ecosystems make to limit the negative effects of climate change or to take advantage of opportunities provided by a changing climate."[30]

Climate Migrants: people who must or choose to leave their homes because of climate-related shocks and stressors.

Climate Resiliency: climate resiliency is the capacity of social, economic, and environmental systems to cope with a hazardousevent, trend or disturbance caused by climate change; where communities respond and reorganize in ways that maintain their essential function, identity, and structure, while also maintaining the capacity for adaptation, learning, and transformation.[31] Climate-resilient pathways can be seen as iterative, continually evolving processes for managing change within complex systems.[32]

Climate Vulnerability: the extent to which social systems are susceptible to climate change impacts; all neighborhoods hold varying levels of sensitivity to climate change and risks of impact.

Displacement (residential): the process by which a household is forced to move from its residence because of conditions beyond their control. Displacement can be physical (as building conditions deteriorate) or economic (as costs rise). It pushes households out, or it might prohibit them from moving in, called exclusionary displacement.[33] [Displacement Explainer Video: https://www.urbandisplacement.org/pushedout]

Energy Poverty: a term that describes when more than 6% of a household's income is spent on utilities; high energy burdens are correlated with aging infrastructure, economic hardship, and difficulty moving out of poverty—these communities also experience acute systemic inequalities, barriers, and limited access to public and private resources.

Energy Efficiency: use of technology and practices that require less energy to perform the same function. For example, using a light-emitting diode (LED) light bulb or a compact fluorescent light (CFL) bulb that requires less energy than an incandescent light bulb to produce the same amount of light.[34]

Equity: just and fair inclusion in which all can participate, prosper, and reach their full potential. In sustainability work, equity must be recognitional, procedural, distributional, restorational, and transformational.

1. **Recognitional Equity** identifies and acknowledges injustices affecting specific populations that various institutions have created, including government.[35]
2. **Procedural Equity** addresses power structures and access to participation in decision-making. A key to this is ensuring equitable, inclsive, and meaningful engagement and asking how our engagement shifts power, builds trust, and ensures accountability, both structurally and intergenerationally.[35]
3. **Distributional Equity** addresses the distribution of burdens and benefits and deploys targeted resources to reduce inequities across different populations.[35]
4. **Restorational Equity** makes commitments to correct past harms and facilitate repair including revitalizing degraded relationships, land, and other resources.[35]
5. **Transformational equity** addresses underlying structural conditions that cause social and racial injustices while cultivating accountability, reducing harm, and preventing future unintended consequences.[35]

Focus Area Action Plans: overarching structures for organizing and intentionally implementing climate action work from 2023 to 2028, which include the following components:

- **Visions** articulate the long-term aim of the Focus Area.
- **Goals** represent the benchmarks against which progress toward the Vision will be tracked.
- **Strategies** explain how the City and its partners will move to achieve the Goals.
- **Priority Actions** describe specific steps that can be taken to enact the Strategies.

GCP Equity Framework: an evolving guide to support integration of equity in the GCP climate action planning and implementation process; built by the GCP Equity Committee through collaborative process and expert sources.

Greenhouse Gases (GHGs): gases in the earth's atmosphere that trap heat and are both naturally produced and human-made; the primary GHGs are carbon-dioxide, methane, nitrous oxide, and fluorinated gases, all of which carry varying levels of heat trapping capacity.[36]

Green Infrastructure: use of natural features or planned ecological systems to manage water by mimicking the natural water cycle. A few examples of green infrastructure include green roofs, bioswales, green medians, wetlands, parks, permeable pavement, and landscape gardens.

Green Jobs or Workforce: jobs that produce goods or provide services that benefit the environment.

IIJA/BIL: The Infrastructure Investment and Jobs Act (IIJA) (Public Law 117-58, also known as the "Bipartisan Infrastructure Law") is a $1.2 trillion once-in-a-generation investment in our infrastructure that will help grow the economy, enhance U.S. competitiveness, create good jobs, and build our safe, resilient, and equitable future. Climate related provisions include funding for electric vehicles, charging infrastructure, public transit, clean energy, energy grid improvement, water, disaster preparedness, brownfield mitigation, and more.

IRA: The Inflation Reduction Act (IRA) is a landmark United States federal law which aims to curb inflation by reducing the deficit, lowering prescription drug prices, and investing $391 billion into domestic energy production while promoting clean energy. The IRA represents the largest federal investment in climate change mitigation in history.

Landfill Diversion: the prevention and reduction of generated waste through source reduction, recycling, reuse and composting.

Priority Communities: communities where climate mitigation and efforts to close gaps are likely to be most impactful due to historic and systematic discrimination, vulnerability to climate related events and disasters, and capacity to adapt to these challenges. Determining prioritization will vary depending on the issue area of focus.

Resilience: the tenacious ability for individuals and communities to collaboratively anticipate, accommodate, and positively adapt to thrive amidst changing climate conditions through greater social cohesion, strong partnerships, and access to resources.

Social Cohesion: connection between individuals within a similar geographic area that influence their collective ability to cooperate to achieve shared well-being. The stronger the social cohesion in a given community the more they will be able to prevent and respond quickly to challenges.

Sustainability: creating and maintaining conditions to meet the needs of present generations without compromising the ability of future generations to meet their own needs; acknowledges that human survival and well-being depends on our natural environment.

Transit Corridors: stretches of transportation infrastructure that provide high-quality transit service—including but not limited to light rail, streetcar, and bus rapid transit (BRT)—while fostering a pedestrian scale in which walking and biking actively complement public transit. Transit corridors also tend to promote economic development as a secondary benefit.

Urban Tree Canopy: a measurement of the layer of leaves, branches and stems of trees that shelter the ground when viewed from above—this measurement is expressed as a percentage of ground area that is covered by tree crowns and relates to the branching spread of the trees in an urban forest.[37]

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