Charlottesville's Climate Adaptation and Resilience Plan

Roadmap to a Strong, Safe, and Healthy Future



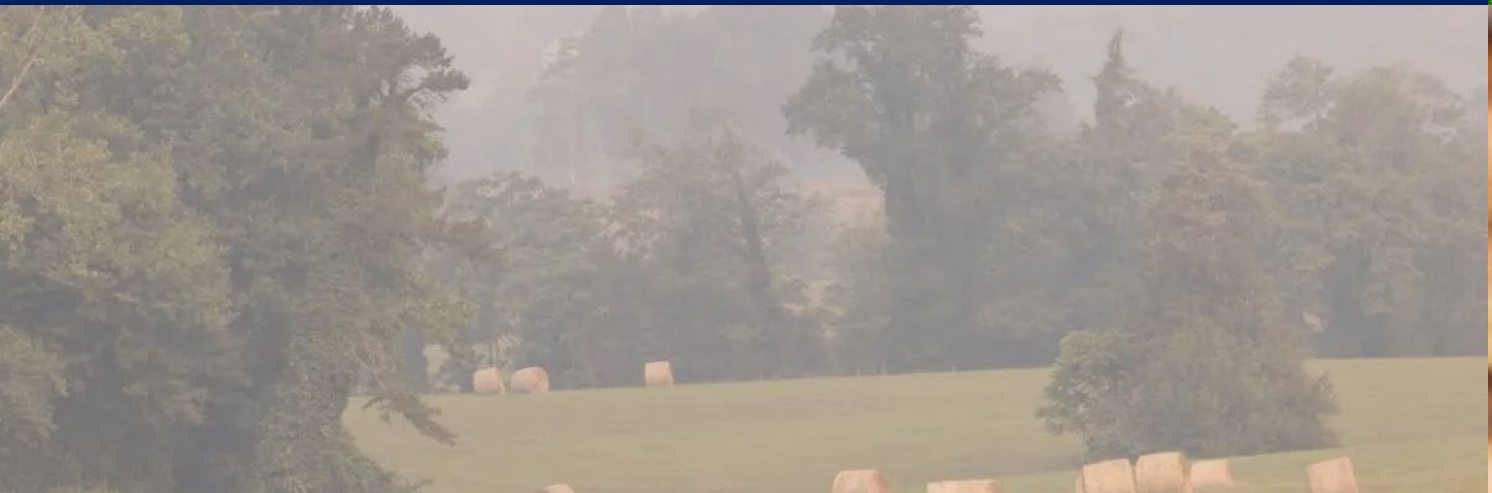
Agenda

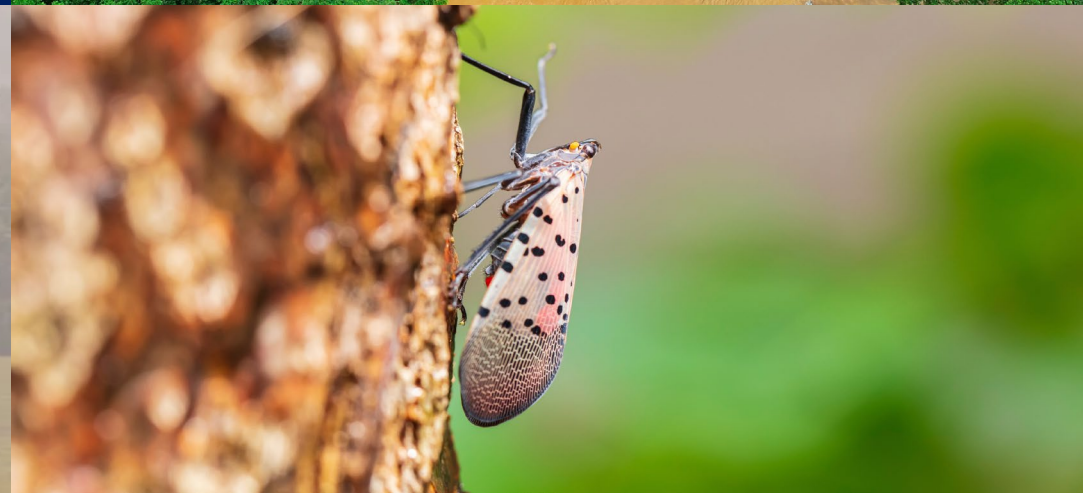
- Project History & Background
- Plan Development
- About the Plan
- Questions & Next Steps

History & Background

The why and how of resilience planning







How We Got Here

2017

Joined Global Covenant of Mayors for Climate and Energy

2019

Adoption of current emissions reduction goals

2022

Charlottesville Risk & Vulnerability Assessment

2023

Adoption of 1st Climate Action Plan

City of Charlottesville Strategic Plan Framework – Climate Outcome Area

September: Resilient Together Project Kick-Off

2026

Completed Draft of Charlottesville's Climate Adaptation & Resilience Plan

CAP and CARP: Sibling Climate Plans

Mitigation

- Reducing Greenhouse Gases
- Addressing the underlying cause
- Climate Action Plan (CAP)

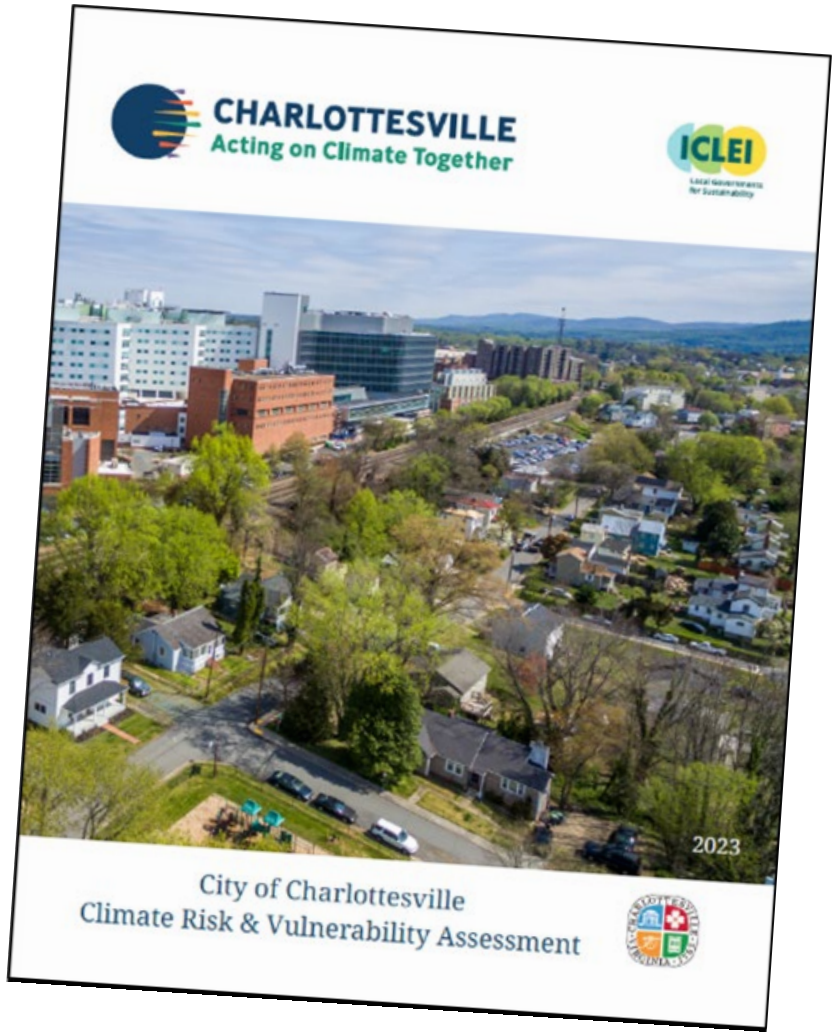
Adaptation

- Strengthening systems against the impacts of climate change
- Reacting to the symptoms
- Climate Adaptation and Resilience Plan (CARP)

The Why: Local Impacts

Regional Hazards & Risks

- Extreme Heat
- Intense Rain and Flooding
- Drought
- Severe Storms
- Shifting Seasons
  - ➢ Pests & Disease
- Wildfire & Smoke



The How: Resilient Together

Resilient Together is a joint planning and community engagement process to help our community prepare for the more intense and frequent severe weather events that we face.

Albemarle County, the **City of Charlottesville**, and the **University of Virginia** have partnered in this work. The project has engaged staff, partner institutions, community-based organizations, and the public.

RESILIENT TOGETHER

One Climate, One Community

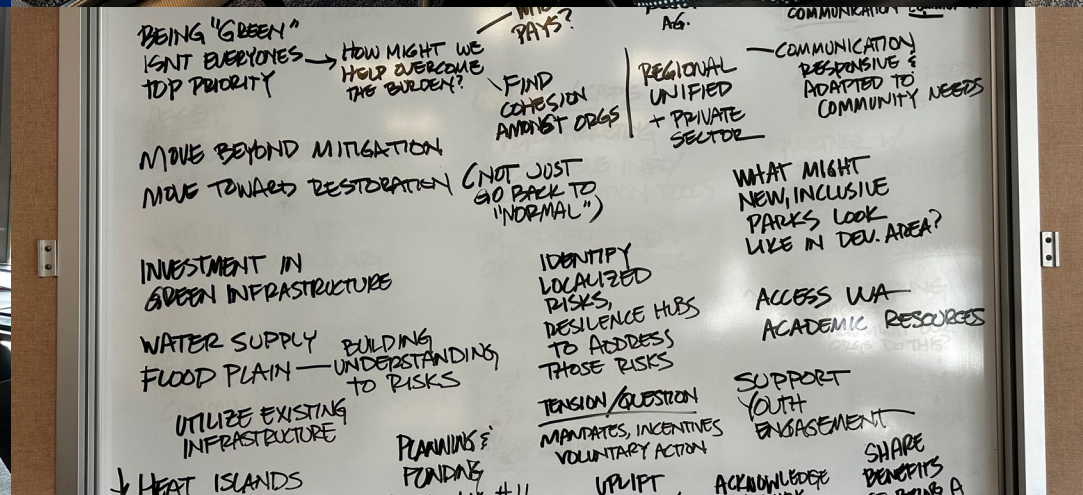
Project Vision: **a strong, safe, and healthy future for all**

Plan Development

Getting from there to here







Resilient Together: Project Outline

Prep

Prepare for successful process

Develop partnership, design process, create materials

Late 2022 – September 2023

Discover

Foster shared knowledge of the challenge

Gather, review, and share information with staff, partners, and community

October 2023 – May 2024

Define

Define guiding principles & project goals

Feedback from staff, partners

June – October 2024

Design

Design strategies for adaptation and resilience

Input from staff, partners, and community

November 2024 – March 2026

Decide

Create adaptation and resilience plans

Draft content, seek community and partner feedback, submit for adoption

April 2026 - Present

We are here!

Do

Implement

Pursue grants

Partner with local orgs, agencies, community

Monitoring & Evaluation

Future

Engagement Tracks

RT Project Team	• Led work to refine draft strategies and develop implementation projects and roadmaps • Supported all other engagement tracks
Staff & SMEs	• Participated in sector- and hazard-specific technical working groups to develop implementation projects and roadmaps
CBO Cohort Members	• Planned and conducted engagement events around community resilience building • Reviewed draft plan and offered input/feedback
Community	• Participated in engagement events to provide place-specific knowledge and input

Staff & SME Engagement

UVA

- Office for Sustainability
- Office of the Architect
- Facilities Management
- Emergency Management
- Environmental Health and Safety
- UVA Health
- UVA Transportation
- UVA Foundation

Charlottesville

- Office of Sustainability
- Emergency Management
- Neighborhood Development
- Parks & Recreation
- Utilities
- Public Works
- Human Services
- Strategic Planning
- Communications
- Economic Development
- Office of Human Rights
- Charlottesville Area Transit

Albemarle

- Facilities & Environmental Services
- Communications & Public Engagement
- Office of Equity & Inclusion
- AC Fire Rescue
- Community Development
- Human Services
- Economic Development
- Parks & Recreation

Partners

- Emergency Communications Center
- Rivanna Water & Sewer Authority
- Blue Ridge Health District
- TJPDC
- TJWSCD
- Cultivate Charlottesville
- Community Climate Collaborative
- IRC New Roots
- Market Central

Over 125 cross-organizational & community meetings to develop, refine, and finalize strategies and implementation projects. (Not inclusive of project team meetings.)

Relationship to Other City Plans & Projects

- Like the Climate Action Plan, Charlottesville's Adaptation and Resilience Plan will be proposed for adoption as an amendment to the City's Comprehensive Plan.
- Final strategies support many of the goals and strategies of the Comprehensive Plan, beyond those in Chapter 7 (Environment, Climate, and Food Equity).
- Charlottesville's CARP includes a section that details its relationship to other City planning documents, including:
  - Comprehensive Plan
  - Climate Action Plan
  - Regional Hazard Mitigation Plan
  - Flood Resilience Plan
  - Forthcoming Urban Forest Management Plan
  - Forthcoming Mobility Plan
  - Ongoing Environmental Regulatory Review Projects

About the Plan

What's in Charlottesville's CARP?

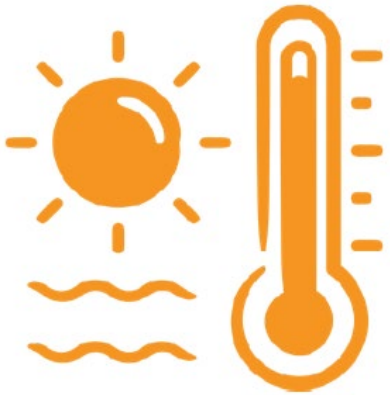






What is Climate Resilience?

Climate Resilience means strengthening our community systems to better withstand exposure to increasing climatic shocks and stressors.



Extreme Heat



Intense Rain & Flooding



Drought



Severe Storms

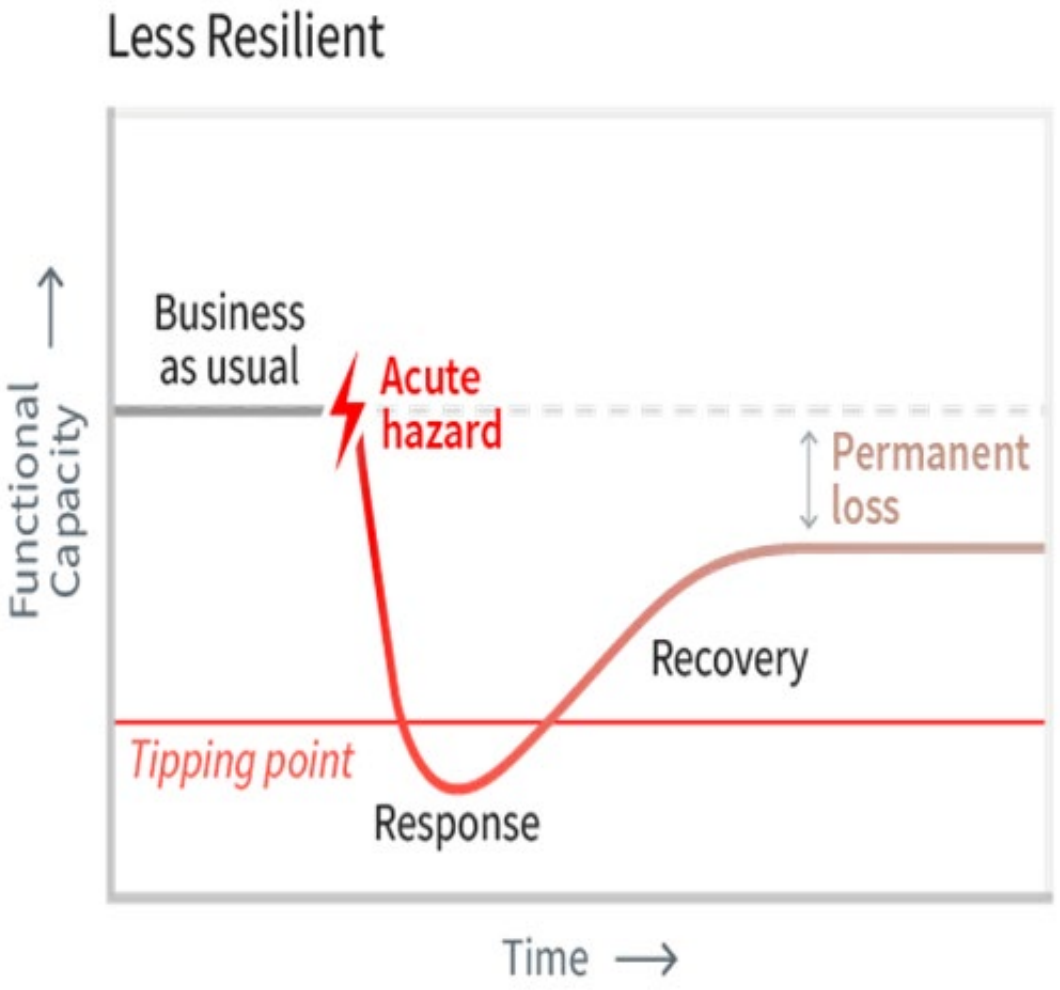


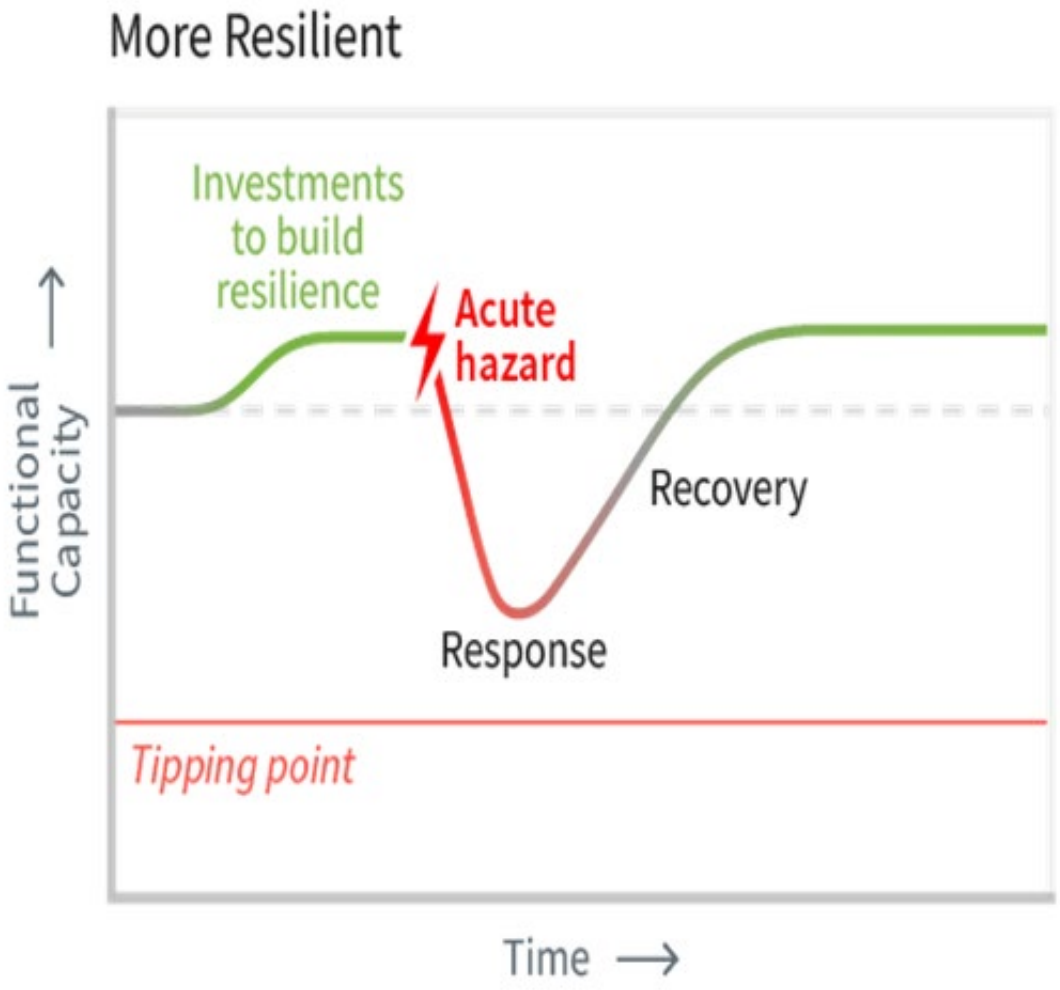
Shifting Seasonal Patterns



Wildfire & Smoke

What is Climate Resilience? (Continued)





Strategy Topic Areas

- Biodiversity
- Buildings
- Communication & Information
- Community Training & Partnerships
- Economic Resilience
- Electric Energy Infrastructure
- Emergency Response Capacity
- Food Systems
- Resilience Hubs
- State Support for Local Resilience
- Stream Corridors & Floodplains
- Transportation
- Urban Heat
- Urban Stormwater
- Water Supply & Conservation
- Wildfire & Smoke Preparedness

Strategies Topics – Hazard Alignment

Strategy Topic Area						
Biodiversity	X	X	X			X
Buildings	X	X		X		X
Communications & Information	X	X	X	X	X	X
Community Training & Partnerships	X	X	X	X	X	X
Economic Resilience	X	X	X	X	X	X
Electric Energy Infrastructure	X	X		X		X
Emergency Response Capacity	X	X		X		X
Food Systems	X	X	X	X	X	X
Resilience Hubs	X	X	X	X		X
State Support for Local Resilience	X	X	X	X	X	X
Stream Corridors & Floodplains		X	X			
Transportation	X	X		X		
Urban Heat	X					
Urban Stormwater		X	X			
Water Supply & Conservation			X			
Wildfire & Smoke Preparedness						X

Strategy & Project Development

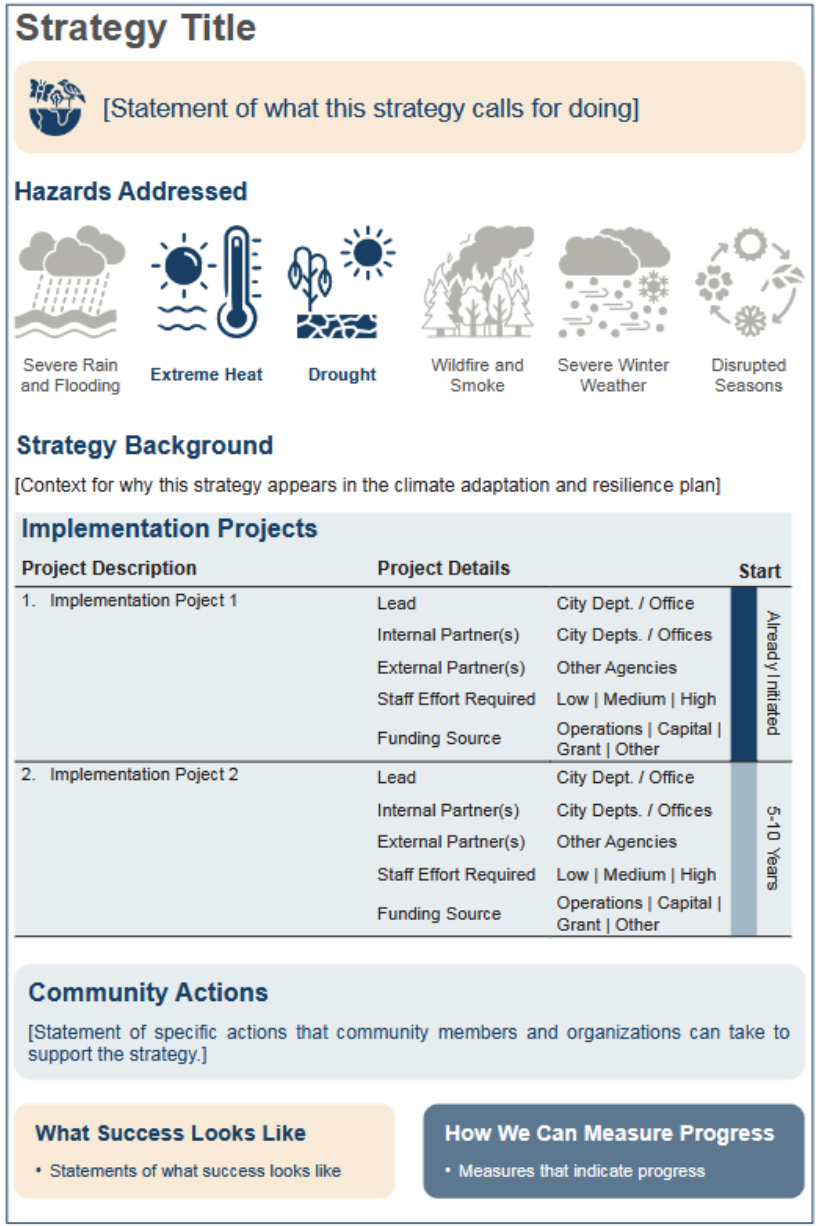
Draft Strategies	Strategy Options	Implementation Steps	Impacts
Refine locally relevant strategy options from NOAA Climate Resilience Toolkit Compare with existing local plans	What types of strategies are most appropriate for our local context and will yield the desired outcomes and impacts?	What needs to be done to implement each strategy? Who will do it? When is it feasible to start? What resources will we need?	What does success or progress look like? How will we know?

RT Project Team

Design Phase Engagement: Staff & local SMEs, Cohort, Community

Strategy Implementation Roadmaps

- Strategy
- Hazards Addressed
- Context & Background Information
- Prioritized Implementation Projects
  - Lead Department or Organization
  - Partners
  - Staff Effort Estimation
  - Funding Source
  - Implementation Timeframe
- Corresponding Community Actions
- Success Indicators



Strategy Title

[Statement of what this strategy calls for doing]

Hazards Addressed

Severe Rain and Flooding | **Extreme Heat** | **Drought** | Wildfire and Smoke | Severe Winter Weather | Disrupted Seasons

Strategy Background

[Context for why this strategy appears in the climate adaptation and resilience plan]

Implementation Projects

Project Description	Project Details		Start
1. Implementation Poject 1	Lead	City Dept. / Office	Already Initiated
	Internal Partner(s)	City Depts. / Offices	
	External Partner(s)	Other Agencies	
	Staff Effort Required	Low | Medium | High	
	Funding Source	Operations | Capital | Grant | Other	
2. Implementation Poject 2	Lead	City Dept. / Office	5-10 Years
	Internal Partner(s)	City Depts. / Offices	
	External Partner(s)	Other Agencies	
	Staff Effort Required	Low | Medium | High	
	Funding Source	Operations | Capital | Grant | Other	

Community Actions

[Statement of specific actions that community members and organizations can take to support the strategy.]

What Success Looks Like

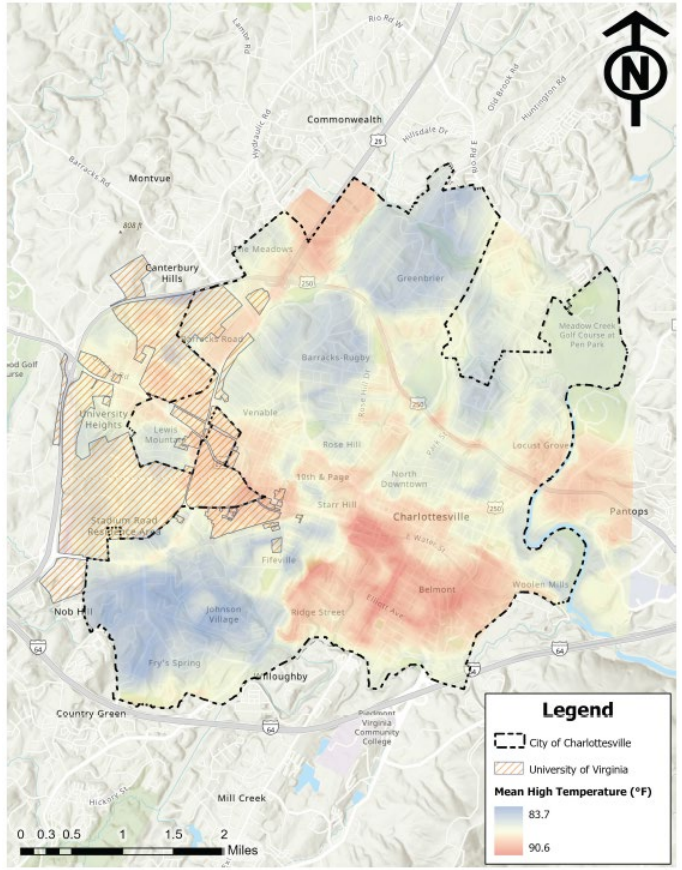
- Statements of what success looks like

How We Can Measure Progress

- Measures that indicate progress

Sample Strategy: Urban Heat

Undertake projects to reduce the urban heat island effect and increase resilience to extreme heat, prioritizing locations with residents most vulnerable to extreme heat and methods that support biodiversity.



Seven Associated Implementation Projects

- Complete a comprehensive review of all codes and policies related to the urban forest
- Install green infrastructure and shade structures
- Formalize procedure for opening cooling centers
- Drinking fountains & water stations in public areas
- Update City's tree guide to reflect future conditions
- Develop guideline for extreme heat outdoor safety
- Additional resources to support UFMP

Sample Implementation Project

Description of project. Calls out prioritization of neighborhoods with greater exposure to urban heat. Alignment with other plans/programs.

Staff and partners required for implementation; level of staff effort required

2. Install green infrastructure and shade structures along main pedestrian corridors, at transit stops, and in urban parks and other public spaces, prioritizing locations most impacted by urban heat. Engage residents in locations of greater urban heat island in the design of neighborhood-level projects. Align with the Mobility Plan, the Comprehensive Plan update, and City capital improvement programs and priorities.	Lead	NDS, OS	Already Initiated
	Internal Partner(s)	PWD, CAT, P&R	
	Staff Effort Required	High	
	Funding Source	Capital, Grants	

Potential sources of funding

Project initiation timeline

Community Actions

Community Actions

- Download the OSHA-NIOSH Heat Safety Tool to monitor unsafe heat conditions. This CDC HeatRisk Mapping tool is another tool for assessing local heat exposure with safety recommendations. Educate yourself about Heat Safety and how to recognize the signs of heat stress and heat stroke.
- A list of Charlottesville-area heat resources has been compiled here.
- Check out Charlottesville's Heat Mitigation and Adaptation Guidebook for information about what community members and developers can do to decrease Urban Heat Islands and manage extreme heat.
- The Jefferson Area Board for Aging's Senior Cool Care Program supports community members aged 60 and over with free fans and window or portable air conditioning units for those who are not eligible through the Department of Social Services. Contact the Senior Helpline at (434) 817-5244 to request support.
- The Charlottesville Utilities Department runs an Energy Saving Trees Program, giving away free native trees to Charlottesville Gas customers twice each year.
- ReLeaf C'ville is a local nonprofit that distributes trees, hosts tree plantings, and trains youth to combat urban heat and declining tree canopy in vulnerable neighborhoods through their Green Team.

Many of the tree-related actions found in the Biodiversity strategy are applicable here too!

Measuring Success

What Success Looks Like

- All community members have access to shade and urban greenery in their neighborhoods.
- All community members have access to air-conditioned spaces on the hottest days.
- The urban tree canopy remains healthy and becomes more evenly dispersed over time.
- The number of shade structures along pedestrian corridors, at transit stops, and in public parks increases over time.
- Functional water fountains are located in more public spaces.

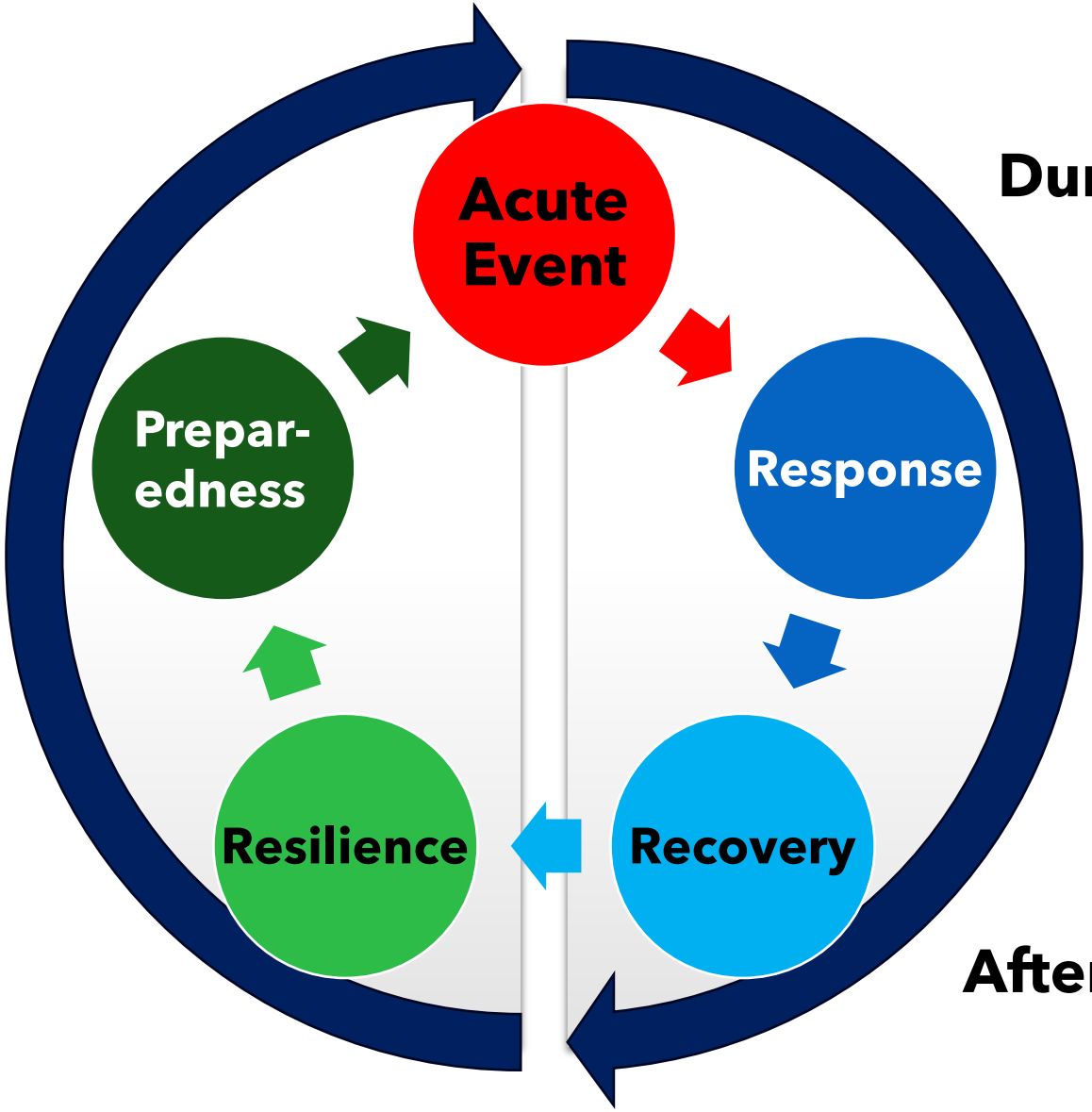
How We Can Measure Progress

- Number of shade structures or landscape-cooling features installed
- Area of shaded pedestrian corridors; percentage of total area
- Tree canopy by neighborhood
- Number of water fountains/water stations
- Metrics on cooling programs accessed, including cooling centers, Resilience Hubs, or home-based A/C programs

Working Together to Build Regional Resilience

Strategy	Priority Projects	Timeframe
Communications & Information	**Provide user-friendly, locally-relevant information about how to prepare for natural hazards and climate risks.**	1 – 3 years
	Launch a communications campaign using a diverse set of messaging tools to ensure inclusive and broad reach.	1 – 3 years
	Align emergency alert protocols across local agencies.	1 – 3 years
	Invest in improvements to real-time data reporting.	1 – 3 years
	Strengthen relationships with local media outlets.	3 – 5 years
Community Training & Partnerships	**Reconstitute a Community Emergency Response Team (CERT)**	1 – 3 years
Emergency Response Capacity	Ensure access to satellite communications, citizen band, and ham radio.	3 – 5 years
Transportation	Build systems for communication and coordination across transit agencies.	1 – 3 years
	Identify and improve vulnerable transportation infrastructure	3 – 5 years
	Increase capacity to operate transit fleets and fleet vehicles in extreme weather	3 – 5 years
	Enable resource sharing between organizations in extreme weather to maintain infrastructure and access.	5 – 10 years
Urban Heat	**Create a protocol and procedure for opening cooling (and warming) centers.**	1 – 3 years
Urban Stormwater	**Assess stormwater infrastructure adequacy to handle higher rainfall projections.**	1 – 3 years

Climate Resilience vs. Emergency Management



During the Event

Before the Event

After the Event

Next Steps

Looking Ahead: Next Steps

- Public Comment Period – open thru November 30
  - **connect.charlottesville.gov/ResilientCharlottesville/**
- Upcoming engagement opportunities:
  - Tuesday, November 17; Drop-In Session @ City Space; 12 – 2 pm
  - Wednesday, November 18; Virtual Drop-In Session (Zoom); 4 – 6 pm
  - Friday, November 20; Climate Café @ Botanical Fare; 9:30 – 11:00 am
- Integrate Feedback as needed
- January 12 – Planning Commission Public Hearing
- February 15 – City Council Public Hearing

Thank you!

Questions?

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