401 E. Water St, Charlottesville, VA 22902 www.tjpdc.org
● (434) 979-7310 ● info@tjpdc.org email

Agenda
MPO Citizens Transportation Advisory Committee
Wednesday, May 18, 2022 @ 7:00 p.m.
Water Street Center, 407 E. Water Street, Charlottesville, VA 22902

Virtually via Zoom: https://us02web.zoom.us/j/86233712909?pwd=UkdnU0VxM2JsdEorN3hZUjBoR2RZUT09
Meeting ID: 862 3371 2909
Password: 405311

Item	Time	Description
0	7:00-7:05	**Attendance and Emergency Statement**
1	7:05-7:08	**Introduction and Welcome New CTAC Member**
2	7:08-7:14	**Matters from the Public:** *Members of the Public are welcome to provide comment on any public-interest, transportation-related topic, including the items listed on this agenda – limit three minutes per speaker*
3	7:14-7:15	**Approval of Draft Meeting Minutes*** • Draft March 16, 2022 CTAC Minutes *(attachment)*
4	7:15-8:15	**Climate Mitigation Plans, City of Charlottesville** *(link)* **and Albemarle County** *(link)* • Presentations from Ms. Susan Elliott and Mr. Gabe Dayley
5	8:15-8:25	**Staff Updates** • Upcoming Agenda Items and Topics for MPO Policy Board • Draft FY23 Unified Planning Work Program *(link)* • Return to In-person Committee Meeting in July 2022
6	8:25-8:35	**Future Discussion Topics** • Discussion
7	8:35-8:41	**Additional Matters from the Public: Limit of 3 minutes per speaker** *Members of the Public are welcome to provide comment on any public-interest, transportation-related topic, including the items listed on this agenda – limit three minutes per speaker*

** A recommendation to the Policy Board and/or vote is expected for this item*

Upcoming Meetings:
MPO Policy Board (4th Wednesday): May 25 at 4:00pm
MPO Technical Committee (3rd Tuesday): May 17 at 10:00am; July 19 at 7:00am *(tentative)*
Citizens Transportation Advisory Committee (3rd Wednesday): July 20 at 7:00pm

NOTICE of ELECTRONIC MEETING:

This meeting of the Citizen Transportation Advisory Committee is being held pursuant to Code of Virginia § 2.2-3708.2, which allows a public body to hold electronic meetings when the locality in which it is located has declared a local state of emergency, and the catastrophic nature of the emergency makes it impracticable or unsafe to assemble a quorum in a single location, and the purpose of the meeting is to provide for the discharge of its lawful purposes, duties, and responsibilities.

This meeting is being held via electronic video and audio means through Zoom online meetings and is accessible to the public. There will be an opportunity for public comment during that portion of the agenda.

Notice has been provided to the public through notice at the TJPDC offices, to the media, web site posting and agenda.

The meeting minutes will reflect the nature of the emergency, the meeting was held by electronic communication means, and the type of electronic communication means by which the meeting was held.

A recording of the meeting will be posted at www.tjpdc.org within 10 days of the meeting.

Charlottesville-Albemarle Metropolitan Planning Organization
401 E. Water Street, Charlottesville, VA 22902
(434) 979-7310 phone ● www.tjpdc.org ● info@tjpdc.org email

Citizen Transportation Advisory Committee

Draft Meeting Minutes: March 16, 2022

Video of this meeting can be found at https://www.youtube.com/watch?v=8JCs4TiTYgA

VOTING MEMBERS & ALTERNATES		STAFF	
Tristan Fessel, Albemarle County	x	Sandy Shackelford, TJPDC/CAMPO	x
Stuart Gardner, MPO	x	Lucinda Shannon, TJPDC/CAMPO	x
Daniel Bailey, Albemarle County PC	x	Gretchen Thomas, TJPDC	x
Lucas Beane, City of Charlottesville	x	Christine Jacobs, TJPDC	
Donna Chen, MPO	x	Chuck Proctor, VDOT Culpeper District	
Nicholas Garber, Albemarle	x	Michael Barnes, VDOT Culpeper District	x
Patrick Healy, City of Charlottesville	x	Ryan Mickles, TJPDC/CAMPO	x
Ray Heron, City of Charlottesville	x		
Lee Kondor, Albemarle	x		
Marty Meth	x	**GUESTS/PUBLIC**	
Travis Pietila, MPO	x		
Joseph French, City of Charlottesville	x		
Karim Habbab, City of Charlottesville PC	x		

***Note**: The Governor has declared a state of emergency due to the COVID-19 pandemic and the nature of this declared emergency makes it impracticable or unsafe for the Thomas Jefferson Planning District Commission to assemble in a single location. This meeting was held utilizing electronic virtual communication with the Zoom software application, and in accordance with virtual meeting procedures and policies as outlined in Item 4.0-01 of the Virginia state budget (HB29), as effective April 24, 2020. A recording of the meeting was made available to the public on* January 25, 2022 at https://www.youtube.com/watch?v=8JCs4TiTYgA

1. CALL TO ORDER:

The MPO Citizen's Technical Advisory Committee Chair, Tristan Fessel, presided and called the meeting to order at 7:02 p.m. Ryan Mickles took attendance by roll call, and certified that a quorum was present and then read the Notice of Electronic Meeting and Commissioner and Public Protocol.

2. MATTERS FROM THE PUBLIC: None.

3. APPROVAL OF DRAFT MEETING MINUTES (MINUTE 2:24):

Motion/Action: Lee Kondor made a motion to approve the minutes, Travis Pietila seconded the motion and the motion passed unanimously.

4. 2022 ELECTION OF COMMITTEE CHAIR AND VICE CHAIR (MINUTE 3:10):

Ryan Mickles explained that there needs to be a new Chair and Vice Chair for the next fiscal year. Mr. Fessel explained the duties. Lee Kondor volunteered to be Chair. Donna Chen volunteered to be Vice Chair.

Sandy Shackelford introduced Ryan Mickles and Ruth Emerick to the committee.

Motion/Action: Marty Meth made a motion to nominate Mr. Kondor as Chair of the committee for FY23. Patrick Healy seconded the motion and the motion passed unanimously.

Motion/Action: Travis Pietila made a motion to nominate Ms. Chen as Vice Chair of the committee for FY23. Marty Meth seconded the motion and the motion passed unanimously.

5. ROUND 5 SMART SCALE TRANSPORTATION PROJECTS (MINUTE 12:13):

Mr. Mickles reviewed the Round 5 Smart Scale projects being considered by the MPO, including the Rivanna River Bicycle and Pedestrian bridge crossing.

There was some discussion about the bridge crossing and the next steps. The MPO Policy Board is set to select projects for approval in March and pre-application submittals are due on March 31. Final applications are due on August 1, 2022.

6. DEVELOPMENT OF FISCAL YEAR 23 UNIFIED PLANNING WORK PROGRAM (UPWP) (MINUTE 43:01):

Ms. Shackelford explained the UPWP and its funding. She reviewed the budget for FY23 and noted that there is rollover money that will be applied to that budget.

Mr. Mickles shared the projected programs and details about how the money will be spent.

Ms. Shackelford asked for feedback before it goes to the Policy Board for approval.

7. STAFF UPDATES (MINUTE 59:45):

Mr. Mickles discussed that meetings will potentially be returning to in-person meetings. Ms. Shackelford said there could be hybrid meetings in the short-term. TJPDC's commission will be creating a policy for future meetings. She explained that once the City of Charlottesville's emergency notice is removed in 6 months, the MPO and TJPDC will have to comply.

8. FUTURE DISCUSSION TOPICS (MINUTE 1:02:39):

Mr. Pietila asked if the MPO was looking to apply for electric vehicle program grants through the federal government.

Ms. Shackleford said she has been considering getting a speaker to come to talk to the Policy Board about options for the MPO.

Mr. Pietila asked that the committee be informed if a speaker is set up for the future.

9. ADDITIONAL MATTERS FROM THE PUBLIC (MINUTE 1:04:50): None.

The next meeting will be held on May 18, 2022 at 7:00 p.m.

The chair adjourned the meeting at 8:08 p.m.

CHARLOTTESVILLE

Acting on Climate Together

charlottesville.gov/climate

5/18/2022 Citizens Transportation Advisory Committee (CTAC)

Climate & Emission Reduction Commitments

- 2006 – US Mayors Climate Protection Agreement
  - Comprehensive Plan (2007; 2013; 2018; 2021)
  - Charlottesville City Council Vision 2025: A Green City (2009)

- 2017 – Global Covenant of Mayors Commitment

PHASE	CLIMATE ACTION (GHG REDUCTIONS)	CLIMATE ADAPTATION
PHASE 1: Inventory	Measure city-wide GHG emissions	Identify climate hazards
PHASE 2: Target	Set a GHG reduction target	Assess climate vulnerabilities
PHASE 3: Plan	Develop climate action plans to deliver on target	Develop climate adaptation plan

City of Charlottesville's Climate Protection Program

Charlottesville's Greenhouse Gas (GHG) Emission Goals:

- **Reduce GHG emissions 45% by 2030**
- **Achieve carbon neutrality by 2050**

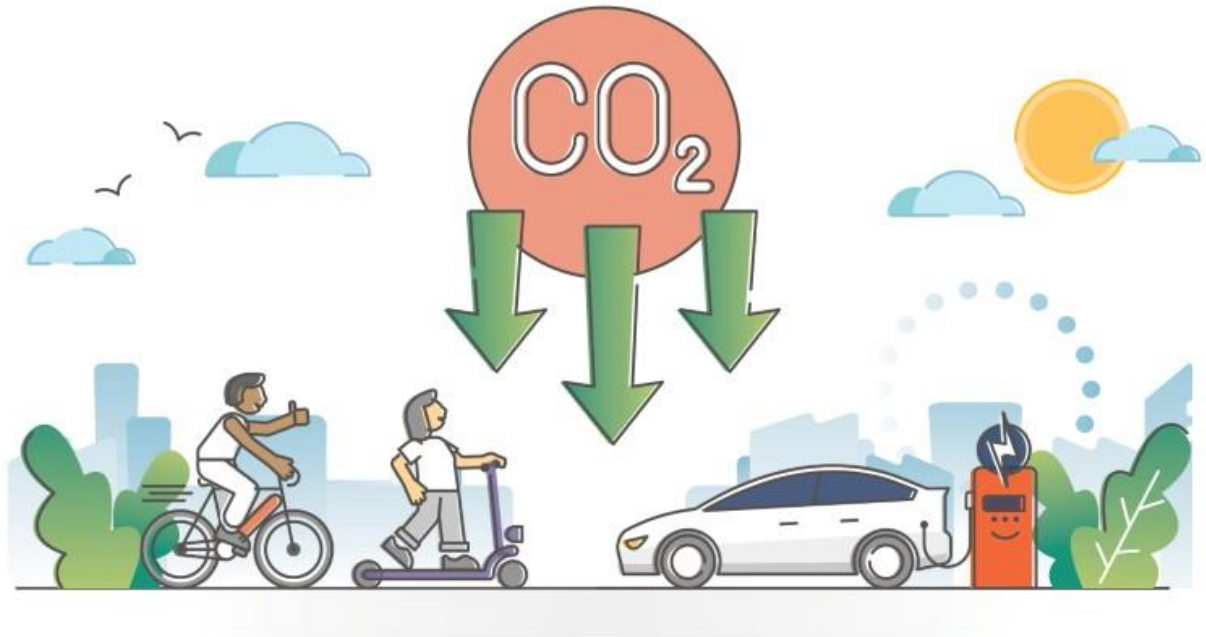
CHARLOTTESVILLE
Acting on Climate Together

City of Charlottesville's Climate Protection Program

THE CITY'S CLIMATE PROGRAM INCLUDES:

- Planning for GHG emission reductions and climate adaptation
- Advancing energy improvements and renewable energy use in buildings throughout our community
- Encouraging use of fuel-efficient and carbon-free ways of getting around town
- Supporting public options for electric vehicle charging stations
- Reducing emissions from waste through composting and landfill diversion





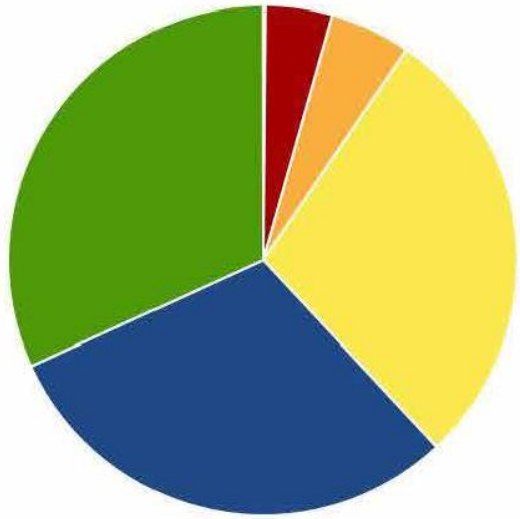
OUR COMMITMENT: By connecting our community with resources and programs that are available, accessible, and affordable, the City's Climate Program aims to support individual action to reduce the impacts of climate change and to help our community thrive.

charlottesville.gov/climate

Emissions Outcomes

Charlottesville Community GHG Emissions by Year					
	CO_2e (MT)				
Sector	**2011**	**2016**	**2017**	**2018**	**2019**
Transportation & Mobile Sources	128,835	92,648	92,218	90,938	91,205
Solid Waste	24,694	16,302	16,687	16,721	16,425
Water & Wastewater	-	271	271	271	271
Commercial Energy *	170,003	123,838	117,652	115,046	101,688
Industrial Energy	372	195	190	208	200
Residential Energy	135,405	108,393	100,986	107,699	96,389
Process & Fugitive Emissions	-	13,556	12,857	15,078	
Total	**459,309**	**355,203**	**340,861**	**345,961**	
% change from 2011		-23%	-26%	-25%	

** The Commerical Energy Sector includes Municipal and Non-Municipal Government energy consumpti*



30%
Reduction
Achieved

Charlottesville's Greenhouse Gas (GHG) Emission Goals:

- **Reduce GHG emissions 45% by 2030**
- **Achieve carbon neutrality by 2050**

Charlottesville's Greenhouse Gas Emissions are approximately:

95% Community

5% Municipal

RESIDENTIAL GHG

30%



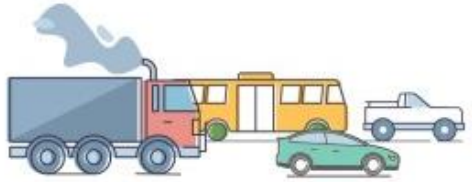
COMMERCIAL GHG

30%



TRANSPORTATION GHG

30%



WASE GHG

5%



Charlottesville's Greenhouse Gas Emissions are approximately:

RESIDENTIAL GHG	COMMERCIAL GHG	TRANSPORTATION GHG	WASTE GHG
30%	30%	30%	5%






Sector	Activity Data	Primary Sources
Residential Commercial Non-Municipal Government Industrial	Amount of Energy Use	Electricity Natural Gas
Municipal Buildings & Lighting		
Transportation	Vehicle Miles Traveled & Average Fuel Efficiency by Vehicle Class	Gasoline Diesel
Municipal Fleet >>	Fuel Consumption	
Waste	Tons of Waste to Landfill Average Material Types for Municipal Solid Waste	Organics (Food / Yard Waste)

Transportation-Related Carbon Reduction Strategies

Energy/Fuel Use Reduction

- Efficiency Standards
- Habits
  - Daisy-Chain Errands
  - Driving Styles
- Connectivity (network)
- Co-Location (land use/zoning)
- Transit (mode change)

Fuel Switching

- Mode Change (Walk/Bike)
- Non-Gasoline or Diesel

Intersecting Technologies

- e-Bikes
- Scooters
- EV Autonomous Vehicles

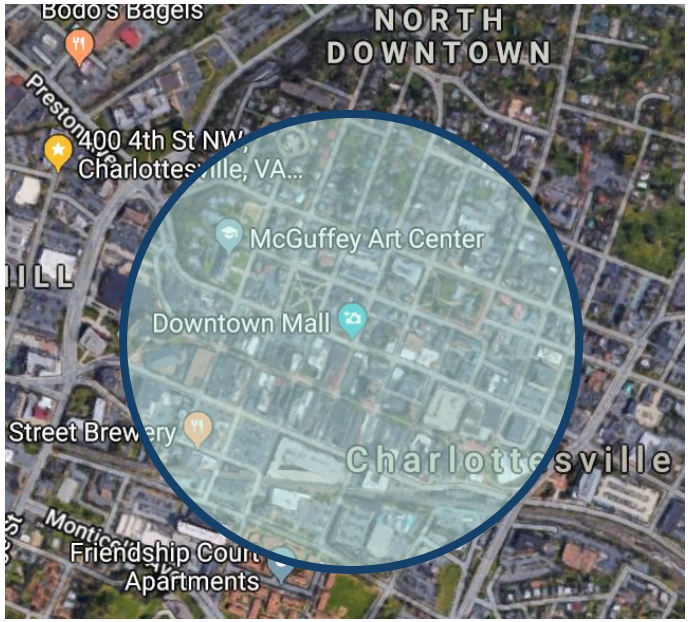
0 Mile Travel

‘The Most Efficient Mile is the One You Don’t Have to Travel’

- Daisy-Chain Trips (conservation)
- Built Environment (Land Use & Zoning)
  - Connectivity, Co-Location, Density

5 Min. Walk:







Infrastructure & Transitions

- 5 Min. Walk => Development Leveraging Investment
- Equally Support for Alternative Travel Mode Networks?

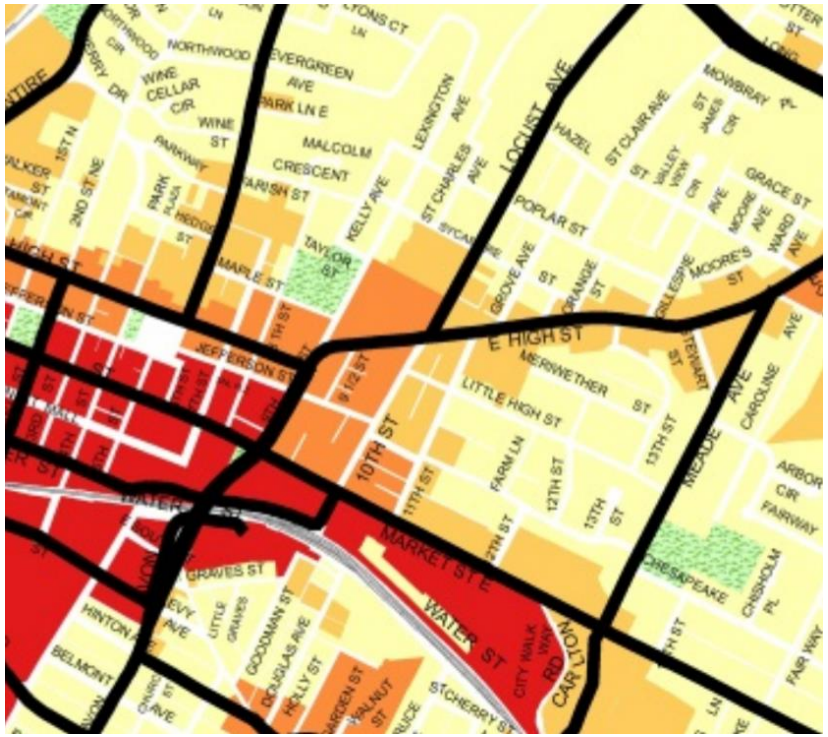
Some Considerations:

Exist?
Safe?
Comfortable?

Infrastructure

Access Hours?
Maintained?
Disrupted?
Recovered?

Operations & Maintenance



Climate Action Plan Preliminary Content



Guidelines for Implementation:

- Ensure that the transition to a low carbon future is effective, affordable, equitable and inclusive
- Prioritize actions that increase financial stability of Charlottesville households and businesses
- Prioritize actions that also have climate resilience and climate adaptation benefits
- Develop pathways of meaningful (impactful & attainable) action in both owner-occupied properties and rental properties
- Prioritize financial incentives and assistance to support low-income and mid-income households
- Take actions that front-load reductions to accelerate reaching adopted climate goals
- Direct resources and programs to address racial inequities and drive outcomes

Transportation



Represents ~30% of Charlottesville's GHG Emissions Profile. GHG emissions come from the fuels used to power our automotive vehicles. Primary fuel sources are gasoline and diesel.

Strategy: Increase Travel by Walking, Biking, and Transit

- Key Action: Leverage interconnections of pedestrian, bicycle, transit, parking and commuter networks
- Key Action: Create walkable, bikeable, and transit-served neighborhoods
- Key Action: Transportation Demand Management Planning
- Key Action: Integrate land use and transportation planning, as well as supportive zoning requirements
- Key Action: Continue planning and investment in well-connected network of trails, shared use paths, sidewalks, and bike lanes

Strategy: Support Use of High-Efficiency Vehicles

- Key Action: Support Federal and Virginia adoption of high fuel efficiency vehicle standards
- Key Action: Education/Engagement
- Key Action: Financial Incentives for purchase of electric or other alternatively fueled vehicles

Transportation



Strategy: Develop a community electric vehicle charging network

- Key Action: Develop a network of publicly-accessible EV charging stations (visitors, commuters, & renters)
- Key Action: Increase EV Charging at workplace & commuter parking locations
- Key Action: Identify EV-ready code standards for integration with zoning and city-funding processes
- Key Action: Include EV charging site standards in the Standards and Design Manual
- Key Action: Options for at-home charging when on-site parking is not available
- Key Action: Ensure emergency response protocols and training for EV charging equipment are in place

Strategy: Encourage alternative travel behaviors

- Key Action: Expand availability and access to regional trails and shared use paths for recreation and commuting
- Key Action: Encourage behaviors such as daisy-chaining trips, remote work, anti-idling, and 5-min walk approach

Municipal Sector

Transportation & Mobile Assets

Strategy: Plan and Support Transition to Zero-Carbon and Carbon-Neutral Fuel Sources for Mobile Assets

- Key Action: Alternative Fuels Transition Study, including a GHG emissions assessment (Transit)
- Key Action: Pathways to Carbon Neutrality by 2050 Assessment (Transit)
- Key Action: Evaluate and integrate EV School Buses (School Buses)
- Key Action: Green fleet policy (Fleet: fuel efficiency, EV transition, behavior/training, remote work options)
- Key Action: Develop site standards for EV charging installations to meet accessibility, safety, and energy management, and data tracking needs (Fleet, School Buses, & Transit)

Questions?
Discussion?
Recommendations?

Sign Up for Climate Action
News Flashes!
charlottesville.gov/notifyme



CHARLOTTESVILLE
Acting on Climate Together
charlottesville.gov/climate



Climate Action Plan

PHASE ONE

A plan to guide local government actions to reduce long-term contributions to climate change throughout the community

- October 2020 -





Table of Contents

Foreword by the Chair of the Board of Supervisors 1
The Community We Envision 3
Introduction 4
Rising to the Challenge and Opportunity 8
- The Challenge: Impacts of Climate Change 8
- Building on Our History of Local Stewardship 9
- Seizing the Opportunity 10

Our Commitment to Climate Action 12
- Greenhouse Gas Emission Reduction Targets 14
- Phased Approach 16
- Co-Benefits: Improving Prosperity, Health, and Quality of Life in Albemarle County 18
- Commitment to Equity 20
- Implementation in Action 22

Strategies and Actions 24
- Transportation and Land Use 26
- Buildings 32
- Renewable Energy Sourcing 36
- Sustainable Materials Management 39
- Landscape, Natural Resources, and Agriculture 42

Glossary of Key Terms & Abbreviations 46
References 48
Acknowledgments 53



Solar installation on Crozet Library rooftop.

Foreword

In the midst of the COVID-19 pandemic, the impact that human activity has on our climate became eminently clear—with school and commuter traffic absent from our roadways, within just a few short weeks, our skies became clearer, our views became grander, and our streams became cleaner. But we can't address climate change by staying home. Even the global lock-down—and its severe economic impact—didn't make a significant impact on our long-term climate trajectory. When we look at the data, we can see what is more difficult to discern on the ground—that we are experiencing here in Albemarle County increased intensity of rainfall and flooding events and more frequent heat waves. Climate change is here, now, on our doorstep. We must learn to live differently.

The Albemarle County Board of Supervisors understands that leadership at all levels of government is required in order to meet the global challenge for climate action. I am proud that Albemarle County is one of the leading localities in the United States by adopting an ambitious greenhouse gas emission reduction goal of 45% by 2030 (from 2008 levels) and zero net emissions by 2050. We cannot achieve these goals without the partnership of our residents, business community, and institutional partners.

This is the community's plan. The Albemarle County Climate Action Plan reflects the work of scores of community members attending outreach events, committing time to serving on sector work groups, and generating hundreds of comments about opportunities, ideas, and challenges that the plan must address.

This plan is just the beginning. The Albemarle County Climate Action Plan is the first phase of a multi-phase climate action planning process, and we will continue to update it, add details and new information, and work with the community to strengthen it to achieve our community vision. I hope everyone will read this plan and join us in the work ahead to forge a better future, together.

Ned L. Gallaway, Chair
Albemarle County Board of Supervisors



The Community We Envision

This Climate Action Plan is consistent with and supports Albemarle County's overall vision for the community.

The purpose of this Climate Action Plan is to reduce the community's contributions to global climate change while advancing the County's vision of a thriving, vibrant community for every resident.

In particular, the Climate Action Plan seeks to:

- *benefit the health of all residents;*
- *protect the local natural environment;*
- *stimulate the creation of green jobs to support a thriving local economy;*
- *promote education on climate action for youth and adults; and*
- *contribute to a more equitable community, with the benefits of climate action programs easily accessible and affordable for every resident regardless of socio-economic status*

Albemarle County envisions a community with...

Abundant natural, rural, historic, and scenic resources

Healthy ecosystems

Active and vibrant Development Areas

A physical environment that supports healthy lifestyles

A thriving economy, and

Exceptional educational opportunity

...for present and future generations

Introduction

Climate change is profoundly affecting Virginia—from sea level rise and increased flooding in coastal regions to longer wildfire seasons in the Appalachian Mountains. In Virginia's interior, extreme rainfall and extended heatwaves not only present public safety and health challenges, but also increase the likelihood of property damage, drought, and invasive species harming agriculture,[1] the state's largest industry[2] and an important feature of Albemarle County.[3] This has the potential for direct impacts on Albemarle County's economy and rural character.

The burning of fossil fuels, large-scale deforestation for commercial agriculture and development, and systemic degradation of forests, wetlands, and other ecosystems since the Industrial Revolution are spurring drastic changes in Earth's climate and weather patterns. The American public is increasingly aware of and concerned about global climate change—73% recognize that global warming is happening and 62% understand that global warming is primarily caused by humans.[4] World leaders have collaborated to address climate change since the early 1990s—meeting most recently for the 25th United Nations Climate Change Conference—but have struggled to reach consensus on a collective response appropriate to the seriousness of the crisis.

Just as there is a critical role for nations and international bodies in addressing climate change, there is a similarly important role for local governments. Ultimately, global climate change results from the collective accumulation of local actions. Local governments are uniquely situated in their relationship to the communities they serve—their knowledge is more rooted in their locale and they will be the first to respond to community needs in the face of a changing climate. In this way, local governments have both a responsibility and an opportunity for leadership in reducing their communities' contribution to climate change and charting a sustainable future. Albemarle County recognizes the importance of this role and embraces its responsibility to take bold steps to mitigate climate change as part of its policies, programs, and practices in service of a healthy, vibrant, just community.

As a local government, we recognize that taking steps locally to mitigate climate change can and must enhance the quality of life for everyone in the community, advance social equity for members of our community harmed by unjust practices, and benefit local health, ecosystems, and economic activity. Through climate action that builds on existing County programs, residents of Albemarle County should expect to see healthy, thriving natural areas with wildlife we know and love; an abundance of well-paying, green jobs; and educational opportunities for youth and adults. Community members should experience better health from improved infrastructure for biking and walking; greater access to affordable, locally grown food; and reduced pollution along streets and in neighborhoods. Policies and programs should contribute to an equitable and just community by narrowing disparities in outcomes for health, education, economic well-being, and the impacts of climate change on our community's most disadvantaged members. By aiming for these outcomes, the County can advance its overall vision through climate action.

In embracing its responsibility for leadership on climate action, the Albemarle County Board of Supervisors has resolved to reduce community-wide greenhouse gas emissions by 45% from 2008 levels by 2030 and to achieve zero net emissions by 2050. This Climate Action Plan provides a framework for how Albemarle County will achieve its commitment to mitigate climate change. It will serve to guide staff initiatives and inform County programs, policies, capital investments, and partnerships with the community. While it is important for the County government to lead by example, County operations account for only about 5% of community-wide emissions. Therefore, it is also crucial for the County to inspire and facilitate action by organizations, businesses, and individuals throughout the community.

The County anticipates climate action planning to be a long-term endeavor—occurring in two initial phases, with continued iterative updating as we measure progress and adapt to changing conditions. This document represents the culmination of Phase 1; it aims to present a broad framework of goals, strategies, and actions. To not delay meaningful ac-

tion, this plan identifies actions that we can begin to implement promptly, as well as actions that require planning and further assessment. Phase 2 will build on this plan through a more robust evaluation of the strategies and actions, including a deeper consideration of equitable implementation and additional community benefits. Phase 2 will also include other efforts outside of planning: implementation of priority strategies and actions, the development of a greenhouse gas emission inventory, and an assessment of community resiliency to climate change.

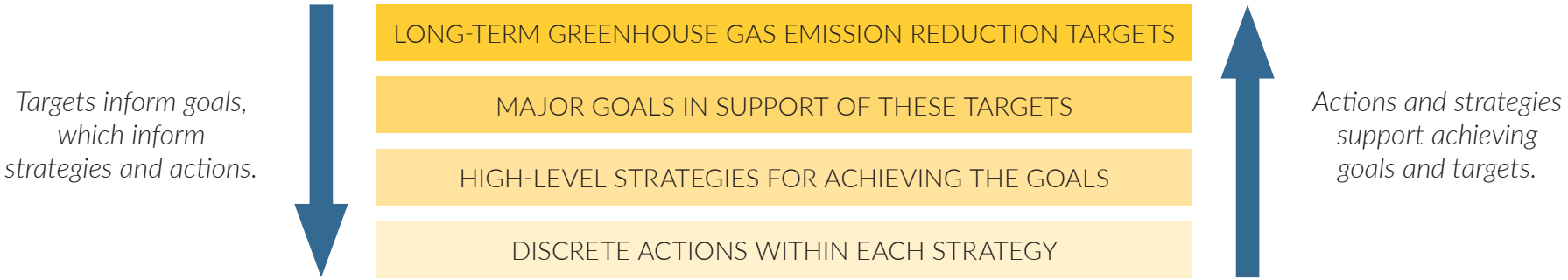
The strategies in this plan are categorized into the major sectors of the community by which greenhouse gas emissions can be reduced:

TRANSPORTATION AND LAND USE
BUILDINGS
RENEWABLE ENERGY SOURCING
SUSTAINABLE MATERIALS MANAGEMENT
LANDSCAPE, NATURAL RESOURCES, AND AGRICULTURE

While many of the actions described in this plan are unique to specific emission sectors, some types of actions are applicable to several—or even all—sectors. For example, community outreach and involvement will be essential in building capacity and achieving meaningful emission reductions in each of the sectors. Further, each sector contains actions that focus on Albemarle County's ability to lead by example through changes to policies and procedures in County operations.

We can successfully mitigate our community's contribution to climate change only if we adopt new practices throughout the County government and community. As such, this plan was developed through the collective effort of many County staff in collaboration with community partners, local experts, various stakeholder groups, and residents. In addition, the plan is linked to and complements numerous existing County and community plans. Finally, it supports Albemarle County's overall guiding vision to contribute to a healthier, more prosperous, and more equitable community for all residents.

Logical Framework of CAP Components



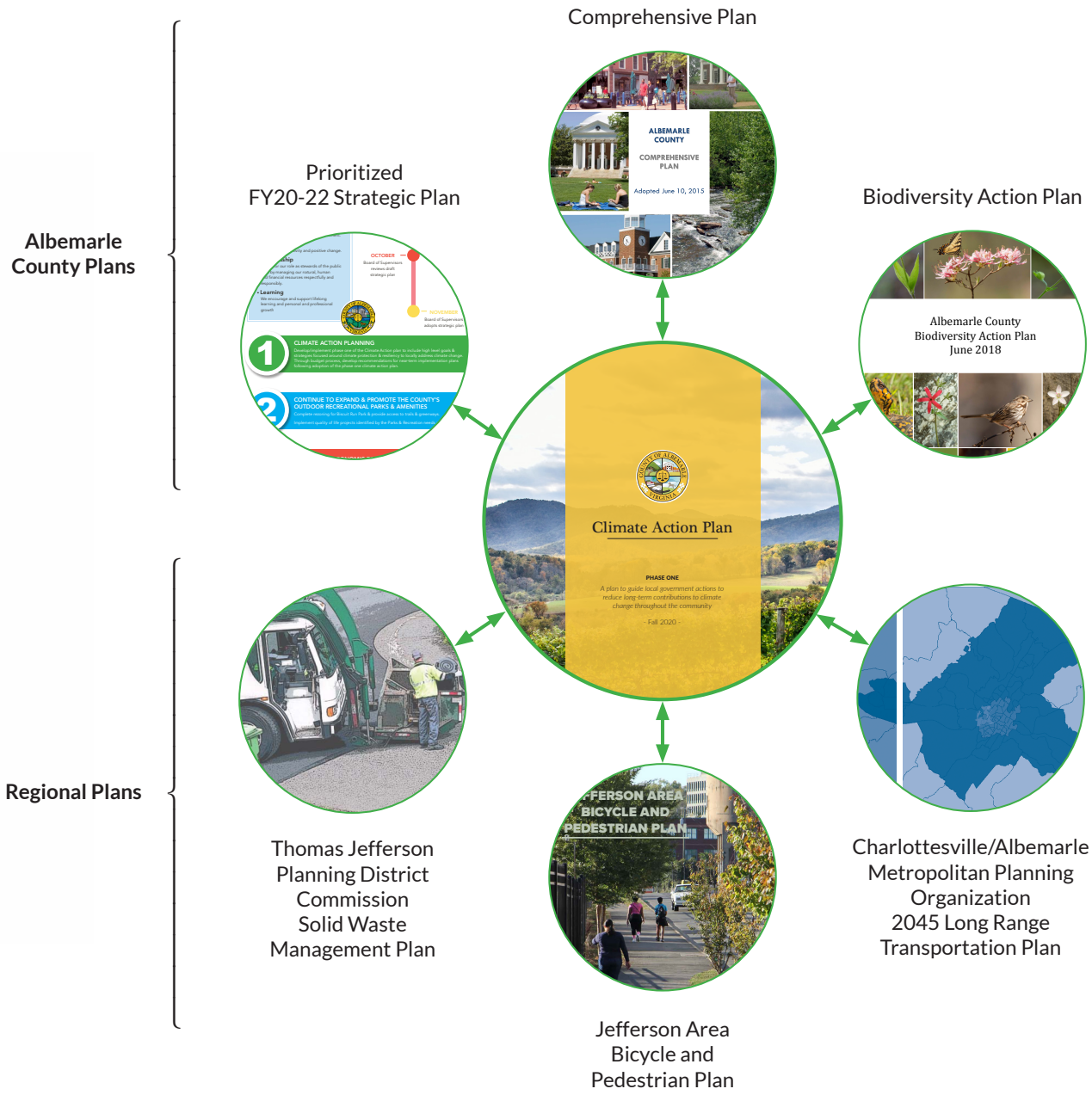
Relationship to Other County & Regional Plans

Albemarle County's Climate Action Plan echoes many of the same values and broad aspirations identified by other County plans, such as preserving our natural environment, supporting the local economy, and promoting healthy lifestyles. Most prominently, the 2015 Comprehensive Plan details numerous goals, objectives, and strategies that directly or indirectly support climate action.[5] For instance, protecting natural resources—including local watersheds, stream buffers, and wildlife habitat—contributes to three related benefits: supporting local environmental health, mitigating climate change, and enhancing resilience to climate change impacts already underway.

Similarly, all 12 principles of the Neighborhood Model, referenced throughout the Comprehensive Plan, have significant potential to support climate action along with local quality of life. For example, provision of quality, affordable housing in the Development Area "in close proximity to employment centers, community services, and transportation networks … helps reduce automobile dependence."[6] The Comprehensive Plan also makes clear that many climate-friendly policies whose primary purpose serves local livability and environmental health have a long history within local governance.

Other County plans expound in greater detail on objectives in the Comprehensive Plan, as well as related goals. For instance, the Biodiversity Action Plan details specific recommendations for maintaining quality, connected habitat to preserve and support the rich biodiversity in Albemarle County.

To address aspects of infrastructure that go beyond its borders, Albemarle County also participates in several key planning initiatives through the Thomas Jefferson Planning District Commission (TJPDC), a regional organization that spans the City of Charlottesville, Albemarle County, and several neighboring counties. Two plans produced by this commission—the Jefferson Area Bicycle and Pedestrian Plan[7] and the Charlottesville-Albemarle Metropolitan Planning Organization Long Range Transportation Plan[8]—have informed goals, strategies, and actions in the Transportation and Land Use section of the Climate Action Plan. Likewise, the regional Solid Waste Management Plan, also produced by the TJPDC, informed the Sustainable Materials Management section. In turn, we expect that Albemarle's Climate Action Plan will influence future planning of the TJPDC in these areas.


Albemarle County Plans
Regional Plans
Comprehensive Plan
ALBEMARLE COUNTY
COMPREHENSIVE PLAN
Adopted June 10, 2015
Prioritized FY20-22 Strategic Plan
OCTOBER
NOVEMBER
CLIMATE ACTION PLANNING
CONTINUE TO EXPAND & PROMOTE THE COUNTY'S OUTDOOR RECREATIONAL PARKS & AMENITIES
Biodiversity Action Plan
Albemarle County
Biodiversity Action Plan
June 2018
Climate Action Plan
PHASE ONE
A plan to guide local government actions to reduce long-term contributions to climate change throughout the community
- Fall 2020 -
Thomas Jefferson Planning District Commission Solid Waste Management Plan
FFERSON AREA BICYCLE AND PEDESTRIAN PLAN
Jefferson Area Bicycle and Pedestrian Plan
Charlottesville/Albemarle Metropolitan Planning Organization 2045 Long Range Transportation Plan

Rising to the Challenge and Opportunity

Climate change presents a unique challenge and a unique opportunity. It is a challenge in its far-reaching impacts on planet and society, and in the extent of changes to "business-as-usual" activities that it will require. Yet it also provides opportunities: to preserve the natural resources and landscapes that enrich Albemarle County, building on the County's history of local environmental stewardship; to strengthen our community by addressing historical practices and policies that have produced present disparities; and to promote good jobs, clean air, and clean water for the health and prosperity of all residents.

This Climate Action Plan seeks to respond to these challenges and opportunities by expanding beneficial policies and addressing policy gaps. Many elements of this plan—from broad goals to specific actions—are not new to the County; rather, they complement existing plans and programs, such as the Comprehensive Plan and decades-long environmental conservation an growth management priorities.

THE CHALLENGE: IMPACTS OF CLIMATE CHANGE

The effects of climate change are already here. The U.S. National Aeronautics and Space Association (NASA) puts it straightforwardly:

> *"Global climate change has already had observable effects on the environment. Glaciers have shrunk, ice on rivers and lakes is breaking up earlier, plant and animal ranges have shifted and trees are flowering sooner. Effects that scientists had predicted in the past would result from global climate change are now occurring: loss of sea ice, accelerated sea level rise and longer, more intense heat waves."*[9]

Americans are experiencing these effects now—extreme heat waves in the summer,[10] increasingly intense inland flooding from heavy rainfall and superstorms,[11] and wildfires at unprecedented frequency and scale.[12] Not only have wildfires in the states of California, Oregon, and Washington gripped national news, for example, but Virginia is also expected to see more fires in the Appalachian Mountains.[13] These trends point to a key feature of climate change: increasing weather extremes. For example, from 1948 to 2011, Virginia experienced a 33% increase in the frequency of extreme rainstorms and snowstorms and an 11% increase in precipitation during the largest annual storm.[14] From 1980 to 2014, we have seen a 20-day local increase in the length of the mosquito season.[15] Looking ahead, we can also expect the number of days per year over 95°F to grow significantly.[16] Just this summer, Charlottesville far surpassed its previous record for consecutive number of days in which the temperature hit or exceeded 90°F, setting a new record of 35 days in a row.[17]

Although various effects of climate change will be seen everywhere, the impacts and costs will not fall equally on all people. Reports from the Intergovernmental Panel on Climate Change (IPCC) predict that vulnerable populations and historically marginalized communities likely will be affected more severely by increased rainfall, flooding, heat waves, and more. Increasingly severe weather patterns resulting from climate change will exacerbate food insecurity, economic hardship, negative health outcomes, and lack of access to basic goods and services, among other challenges.[18]

For example, rural communities globally are likely to be among the most negatively impacted by climate change,[19] of local concern given the important rural character of Albemarle County. In the United States, people in poverty and people of color will experience harmful impacts of climate change most severely.[20] For instance, people in poverty are more vulnerable to heat islands during heat waves and housing burden from higher utility costs. Women, children, and the elderly will also experience comparatively greater harmful impacts to health and wellbeing.[21] For ex-

ample, women and children are already being displaced at higher rates due to floods and droughts.[22]

Governments, businesses, universities, and other institutions around the world are coming to terms with the financial risks and costs of climate change. Economically, we can expect climate change "to increasingly disrupt and damage critical infrastructure and property, labor productivity, and the vitality of our communities."[23] Scientists, economists, and policymakers agree: The costs of inaction in the face of climate change will dwarf the costs of taking climate action now.[24] CDP Global, a nonprofit that discloses the environmental impacts of business and government operations, reported in 2019 that 215 of the world's biggest companies have valued the near-term climate risks to their businesses at almost one trillion US dollars.[25] A 2019 US Defense Department report, for example, identified the vulnerabilities from climate change of 79 key military facilities and states that "the effects of a changing climate are a national security issue."[26]

Climate change is further interconnected with multiple ecological crises. Extensive research has measured biodiversity loss and ecological degradation at staggering scales over the past 50 years, driven by many of the same land and sea use practices and industrial activities that cause climate change, and further exacerbated by climate change itself.[27] Close to home, this includes dramatic losses in North American bird populations since 1970[28] and projections of increased stress and habitat loss on North American birds, including many species that live in or migrate through Albemarle County, such as the Scar-

Climate Science and Understanding

Scientists began laying the foundation for modern climate science as early as the nineteenth century, and by the mid-twentieth century had confidently linked rising average global temperatures to increasing concentrations of carbon dioxide (CO_2) in the atmosphere due to human industrial activities.

Virtually all scientists agree that global warming since the Industrial Revolution has been caused by the increase of greenhouse gas emissions in the atmosphere associated with human activities, including burning fossil fuels, deforesting land, and other unsustainable resource extraction (e.g., mining, over-fishing) that degrades ecosystems.[37] While climate science has become increasingly sophisticated in recent years, a 2019 study determined that the projections from even the earliest climate models—from the 1970s—are indistinguishable from what has occurred.[38]

Concern over the negative consequences of global climate change is not new. President Lyndon B. Johnson received a report from his Science Advisory Committee in 1965, which described the increase of atmospheric carbon dioxide concentrations due to burning fossil fuels and warned of possible "deleterious" effects of resulting climatic changes.[39] For decades, the global community has attempted to address climate change through cooperative research and international agreements to reduce greenhouse gas emissions, such as the 1992 United Nations Framework Convention on Climate Change (UNFCCC), the 1997 Kyoto Protocol, and the 2015 Paris Agreement, which calls on countries to act to limit warming to 1.5° Celsius above pre-industrial levels.[40] Unfortunately, little progress has been achieved, with the long-term trend in emissions continuing to rise and countries either failing to meet targets or setting insufficient targets in the first place.[41]

In 1988, the United Nations created the Intergovernmental Panel on Climate Change (IPCC) to assess scientific research on global warming and climate change. The IPCC has produced five major assessment reports and numerous special reports on the impacts of a changing climate, as well as opportunities for mitigation and adaptation. In 2018, the IPCC published a widely circulated special report on the likely impacts to society of global warming of 1.5°C and 2°C, based on the Paris Agreement goals. The conclusions were clear: Global warming of 1.5°C will produce dire consequences to "health, livelihoods, food security, water supply, human security, and economic growth," and the effects of a 2°C increase will likely be far worse.[42]

The 2018 IPCC special report also concluded that limiting global warming to 1.5°C above pre-industrial levels will require "far-reaching and unprecedented changes in all aspects of society,"[43] including "deep emissions reductions" and "rapid and far-reaching transitions in energy, land, urban and infrastructure… and industrial systems."[44] Although this situation poses a daunting challenge, we also believe that it provides a potent opportunity to further many of Albemarle County's existing priorities described herein and to pursue a prosperous, equitable, and just community.

lett Tanager, White-throated Sparrow, and Yellow-throated Warbler.[29] Trees are also vulnerable to climate change. Species at the southern limits of their range here in Albemarle County—such as northern red oak and white pine—could all be gone within the next century, and species at the northern limits of their range could become increasingly common.[30]

BUILDING ON OUR HISTORY OF LOCAL STEWARDSHIP

Responding to the challenge and opportunity of climate change does not occur in a vacuum. Albemarle County has a history of local environmental stewardship and conservation, through which we have preserved important natural and cultural resources. The County's Growth Management Policy, instituted in the 1971 Comprehensive Plan and reflected in all subsequent updates to the Plan, has helped to protect the local watershed and other natural resources within the County by directing growth to the Development Areas and limiting subdivision in the Rural Area.[31]

The Neighborhood Model, created to support implementation of the Growth Management Policy, identifies twelve principles that contribute to livable, vibrant urban places.[32] In addition to benefiting quality of life and local environment, these principles in combination—and many of them individually—directly and indirectly advance climate action. The County's 2015 Comprehensive Plan identifies numerous objectives that support clean air, clean water, healthy ecosystems, and high-quality local urban places, each of which also contribute to mitigating climate change.

Consider, for instance, that many objectives in the Comprehensive Plan's Natural Resources chapter detail strategies for protecting or even improving local ecosystem health (e.g., clean air, clean water) while also contributing to reducing greenhouse gas emissions or sequestering carbon. Methods of land use and development that "work with natural processes to minimize impacts on streams and groundwater"[33] often preserve the land's carbon sequestration capacity. Transportation planning that promotes "alternatives to single-occupancy vehicles, such as walking, bicycle use, ride-sharing, and public transit services," contributes to clean air locally and lower greenhouse gas emissions.[34]

Consider also the Comprehensive Plan's strategy to "use the waste hierarchy (reduce, reuse, recycle, dispose) to guide waste management policy,"[35] which provides support and context for the strategies and actions in the Climate Action Plan on managing materials sustainably. Objective 7 of the Comprehensive Plan's Community Facilities chapter identifies interlocking outcomes of sustainable materials management: "reduce waste, conserve resources, protect human and environmental health, and decrease greenhouse gas emissions."[36]

In these and other ways, many of the County's existing priorities and policies for balancing development and resource preservation also advance the goals of this Climate Action Plan.

We also acknowledge that stewardship efforts in the County have not always succeeded, and services and programs associated with County priorities don't always serve all residents equitably. In such cases, we find specific opportunities to bring the County into greater alignment with its vision, longstanding priorities of growth management and natural resource protection, goals for equity and inclusion, and climate action objectives.

SEIZING THE OPPORTUNITY

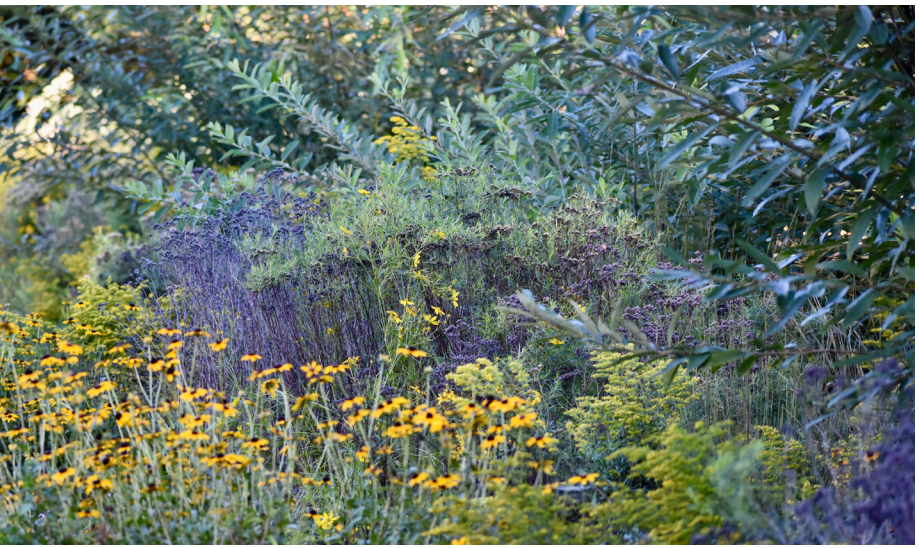
We envision this Climate Action Plan as benefiting our local community as much as it benefits the global climate. Fortunately, the two can work in tandem. Regenerative agriculture, local food production, reforesting, promoting native plants, protecting and improving our watershed, recycling and composting waste into a circular economy, improving connectivity and clean transportation modes, making our buildings more energy efficient and livable, and generating clean energy from renewable sources—all these benefit the climate and improve quality of life here in Albemarle County.

Consider the Climate Action Plan in the context of specific elements of the County's vision: Climate action has the potential not only to protect but also to strengthen the County's natural, rural, historic, and scenic resources by encouraging land management practices that regenerate soil, increase ecosystem health, and promote greater biodiversity. Land use, development, and transportation decisions that reduce the need for travel by car in urban spaces—in turn reducing greenhouse gas emissions—promote active and vibrant Development Areas and a general

physical environment that supports healthy lifestyles. Advancements in renewable energy generation, building energy efficiency, and local production and consumption of economic goods can all promote a thriving economy, in part by creating green jobs. Within each of these areas lie opportunities for education among adults and youth in our community.

In these ways, the Climate Action Plan is as much about the kind of place we want to live in here in Albemarle County as it is about reducing the community's contributions to global greenhouse gas emissions.

It's also an opportunity to collaborate with partners in the broader community, including key institutional partners; the City of Charlottesville and the University of Virginia are simultaneously developing their own plans to mitigate climate change as part of their respective sustainability programs. The County, City, and University have worked together by sharing information and providing mutual support, and the County will continue to work with these partners as it refines its Climate Action Plan and begins to implement strategies and actions.



Striving for Holistic Climate Action

As Albemarle County works to address climate change among our local community, we want to stress the importance of maintaining as holistic a view as possible about the causes and effects of climate change, as well as interrelated ecological crises that manifest locally and globally (e.g., loss of biodiversity, species extinction, ecosystem degradation). In climate policymaking, there is a risk of what some ecologists and environmentalists have described as "climate fundamentalism" or "carbon reductionism"—seeing all ecological challenges through the lens of climate change and reducing climate change to purely a numbers game of carbon emissions devoid of local context.[45] As a 2012 article in the journal *Global Environmental Politics* put it, "there has been such a focus on carbon that it has become removed from its environmental and social (and even climate) context."[46]

Within this view, for example, clearing forested land to build a new solar energy utility would make sense as long as the reduced carbon emissions from solar energy generation is greater than the carbon emissions of the lost forestland (from decomposing root systems, depleted soil, etc.).[47] This view is reductionist because it ignores the value of the forest habitat for biodiversity, local air quality, watershed quality, people's enjoyment, the rural character of Albemarle County, and numerous other seen and unseen benefits beyond carbon sequestration. Carbon reductionism also assumes that we can accurately calculate the sequestration capacity of the local forested area and compare it to the emission reductions of the solar utility. Recent research suggests that such calculations tend to grossly underestimate the total carbon sequestration capacity of healthy ecosystems.[48]

As the County pursues policies and programs to support reductions in greenhouse gas emissions, we will strive to plan and act holistically so that climate change mitigation actions support overall wellbeing in our local ecosystem, with particular attention paid to avoiding unintended negative consequences to local ecology and quality of life. In a similar way that the County will examine proposed strategies and actions in order to advance equity and mitigate unintended negative impacts on disparities in our community, the Climate Action Plan should support overall environmental health *within* the County and should avoid actions that compromise such health for the sake of greenhouse gas emissions reductions. One way that the County can enact this intention is to ensure that climate action planning reflects the priorities of other County planning documents that emphasize the importance of promoting and preserving local environmental health, such as the Biodiversity Action Plan (2018) and the Comprehensive Plan (2015).

Our Commitment to Climate Action

Effectively addressing climate change requires action at all levels of society—by individuals, businesses, organizations, and all levels of government. As a local government, Albemarle County builds infrastructure, conducts local transportation planning, makes land use decisions in accord with its growth management policy, influences building zoning and construction, maintains sizeable parks and open space, and stewards natural resources. The County can also create policies and programs that incentivize individuals, organizations, and businesses to adopt sustainable and regenerative practices. Further, the County can serve as an example to others by adopting such practices in its own operations—such as investing in more sustainable buildings, a more efficient vehicle fleet, and on-site renewable energy projects.

Albemarle County has demonstrated a commitment to natural resource protection and environmental stewardship since the 1970s, with particular emphasis on maintaining the health of the Rivanna River watershed. Local awareness about the significance of climate change emerged in the Charlottesville-Albemarle community in the mid-2000s, prompting local government action. On December 5, 2007, the County Board of Supervisors approved the Sierra Club's Cool Counties Resolution, pledging to a voluntary goal of reducing carbon dioxide emissions by 80 percent by 2050. (The Charlottesville City Council had passed a resolution the year before endorsing the U.S. Mayors Climate Protection Agreement.)

In May 2009, the County and City begin working with the University of Virginia and other local partners on an initiative that became known as the Local Climate Action Planning Process (LCAPP). The resulting LCAPP report—finalized in August 2011—articulates the motivation for taking climate action, summarizes the planning process, gives examples of existing efforts, and provides recommended actions from which the three major entities could then develop their own action plans. On September 7, 2011, the Board of Supervisors rescinded the Cool Counties Resolution but unanimously accepted the recommendations of the LCAPP Steering Committee.

On September 6, 2017, the Board of Supervisors passed a resolution to *"Reaffirm Commitment to Support Local Action to Reduce Climate Pollution."* On September 5, 2018, the Board authorized signing the *"We Are Still In" Declaration*—an open letter from over 3,800 U.S. state, tribal, local, business, and organizational leaders committing "to support climate action to meet the Paris Agreement" goals.[49] During strategic planning sessions in the fall of 2018, the Board determined that climate action planning was one of their most important priorities. Through the Prioritized FY20-22 Strategic Plan,[50] the Board directed staff to develop and implement a community-wide climate action plan consisting of high-level goals and strategies, as well as recommendations for near-term actions. This document serves to achieve that directive.

Acting at All Levels of Society

To mitigate climate change, all levels of society need to participate. Governments can plan, incentivize, and build low-carbon infrastructure, as well as enact laws and policies that will accelerate the transition to more sustainable practices by individuals and businesses. Businesses and organizations can reduce process inefficiencies, lower the amount of energy used by buildings and vehicle fleets, install solar panels, and invest in new technologies specific to their industry. For example, Walmart announced its intent to reduce 1 gigaton of greenhouse gas emissions from its supply chain by 2030—the equivalent of taking 211 million passenger cars off the road for a year ("Project Gigaton"). Finally, individuals can contribute to mitigating climate change in several ways: using more efficient forms of transportation; making sustainable food choices and reducing their food waste; and minimizing their consumption and purchasing sustainable products. The CAP is intended to provide guidance on how the actions of individuals, institutions, businesses and government entities fit together toward a collective goal.

GREENHOUSE GAS EMISSION REDUCTION TARGETS

The intent of the proposed strategies and actions in this Climate Action Plan is to reduce the amount of greenhouse gases emitted by human activities within Albemarle County and simultaneously to increase the sequestration of greenhouse gases by vegetation and soil. While any reduction of net greenhouse gas emissions within the County over time is a step in the right direction, a good plan requires quantitative targets by which to measure success.

Albemarle County's target is to reduce greenhouse gas emissions in the community by 45% from 2008 levels by 2030 and to achieve net zero emissions by 2050.[51]

Albemarle County has conducted several community-wide greenhouse gas inventories in the past to estimate the total amount of emissions produced within the boundaries of the County.[52] The County performed inventories for the years 2000, 2006, and 2008 using ICLEI-USA climate inventory software and various sources of information, including traffic data, energy usage, housing statistics, and information from solid waste haulers. 2008 was selected as Albemarle County's baseline year because it is the closest inventory year to 2010, the baseline year used by the IPCC for modeling responses to global warming of 1.5°C and 2°C.

Based on the 2008 inventory, greenhouse gas emissions in Albemarle totaled over 1.6 million tons of carbon dioxide equivalent (CO_2e).

Through a formal resolution passed on September 18, 2019, the Board of Supervisors set its greenhouse gas reduction target of reducing emissions by 45% from 2008 levels by 2030 and ultimately achieving zero net emissions by 2050. This target is consistent with the Paris Agreement goal to limit global warming to well below 2.0°C (3.6°F).

As part of Phase 2 of the climate action planning process, the County will once again calculate community-wide greenhouse gas emissions based on the latest available data and updated ICLEI software. Beginning in 2020, this inventory will be repeated every two years to track progress towards reaching the County's targets.

How Does a Community Measure Greenhouse Gas Emissions?

A community's impact on climate change can be represented by a greenhouse gas inventory. An inventory is an accounting of all greenhouse gases produced within the geographic boundaries of the community minus the amount of greenhouse gases sequestered within that community through deliberate actions. Because there are a variety of greenhouse gases and each has a different impact on the climate, the total of all gases is expressed as an equivalent amount of carbon dioxide.

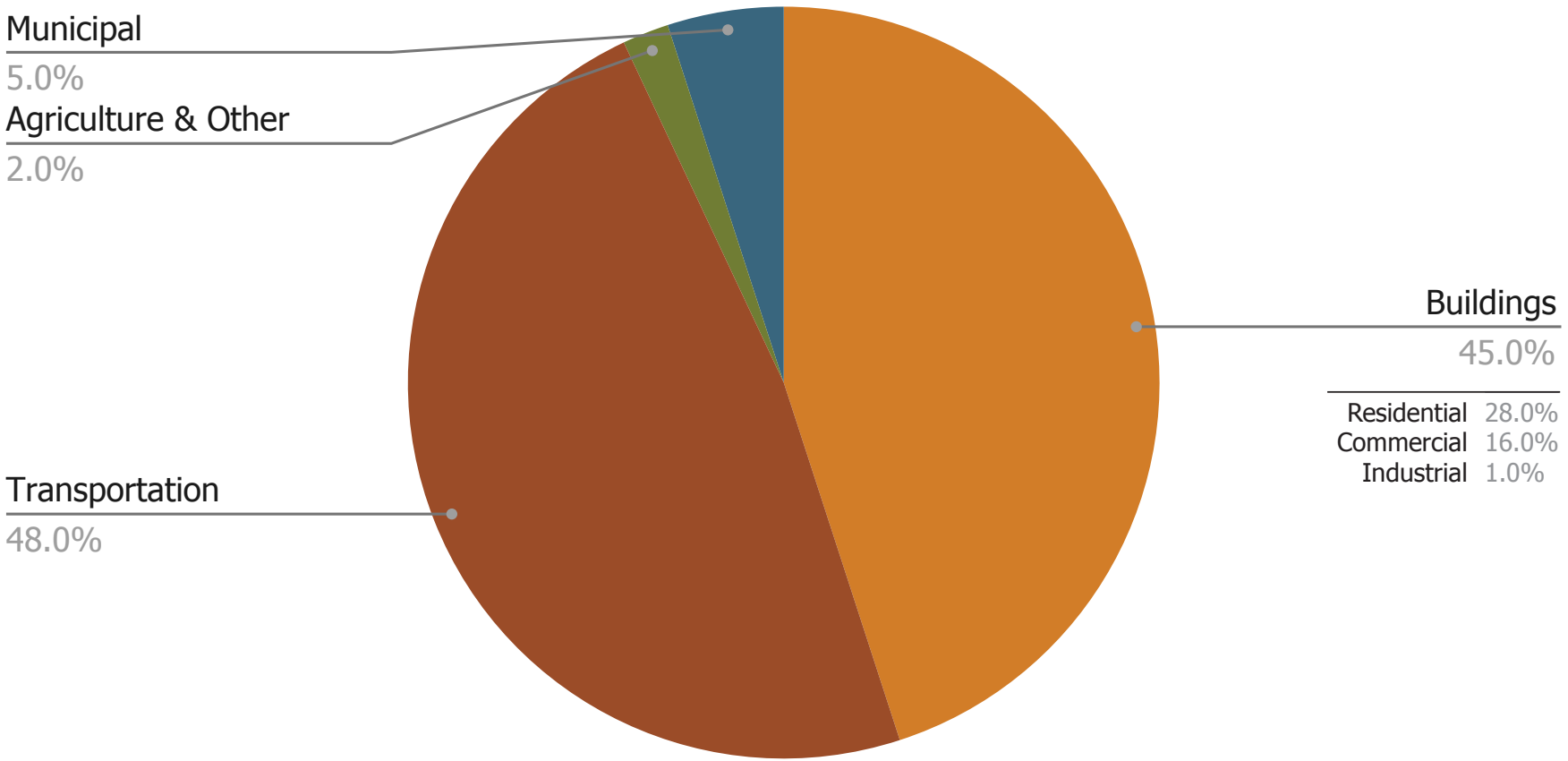
Emissions from the use of energy may be direct, such as by driving a gas vehicle, or indirect, such as by using electricity generated by a fossil-fuel power station.

Since carbon sequestration occurs naturally and continually, our greenhouse gas inventory will only consider new practices that remove carbon from the atmosphere, like planting new trees and agricultural practices that regenerate soil health.

Newly available software advances will allow an accounting of local carbon sequestration to be included in the upcoming emissions inventory. Specifically, future inventories will incorporate carbon sequestration achieved through significant improvements to land management practices and land cover, as well as carbon released due to major land development. Small-scale land use and land cover changes that are continually happening throughout the County cannot be realistically tracked and accounted for.

GREENHOUSE GAS EMISSIONS SOURCES (CO_2-e PERCENT)

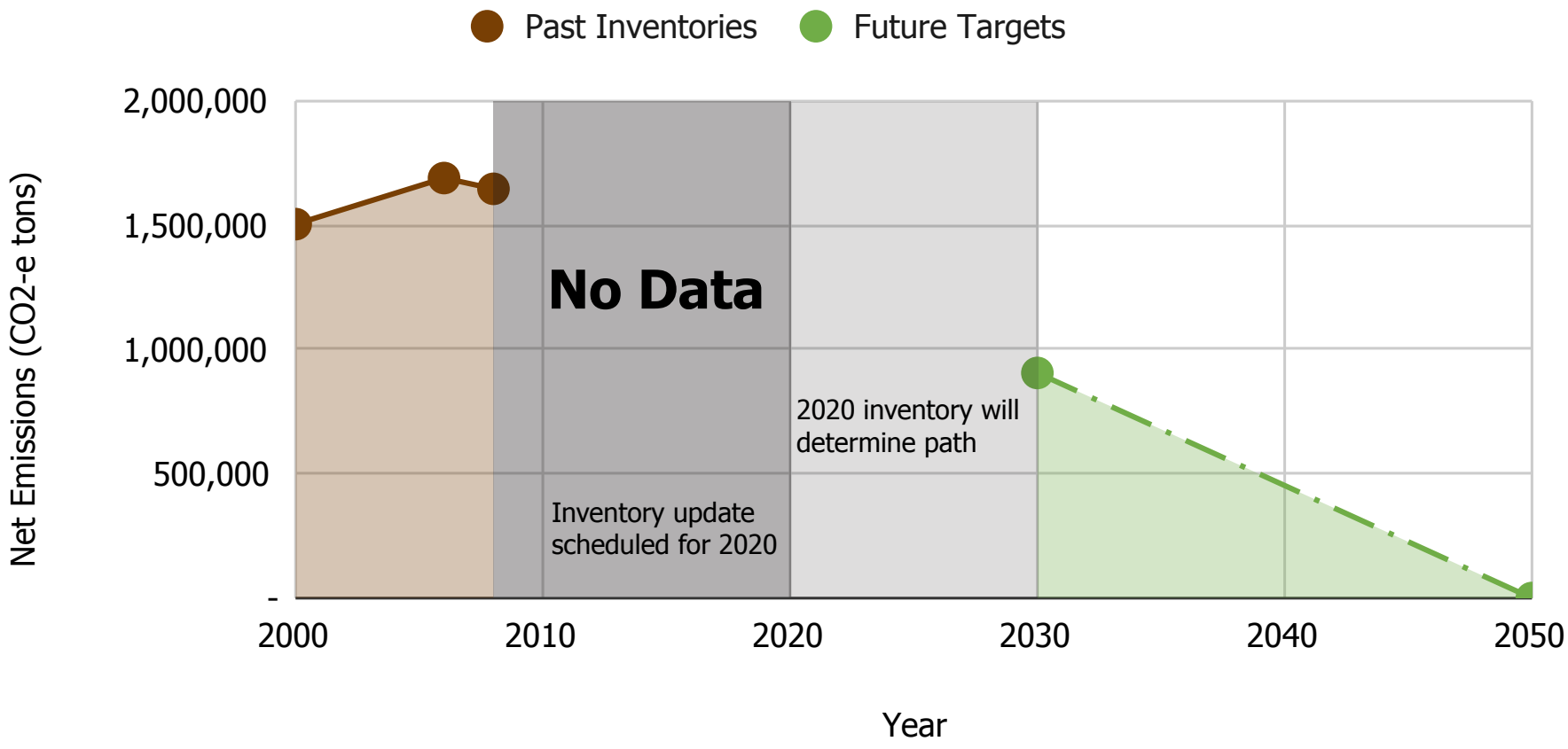
Albemarle County, 2008 Inventory



This chart illustrates the major sources of greenhouse gas emissions in Albemarle County in 2008, grouped by standard emissions inventory categories. The Buildings sector represents residential, commercial, and industrial buildings combined. Waste is not shown due to its small percentage; nevertheless, it represents an important sector for climate action.

NET GREENHOUSE GAS EMISSIONS AND TARGETS

Inventories and Targets



This chart depicts the County's net greenhouse gas emissions for the years 2000, 2006, and 2008 (in brown), along with a partial projected track for emissions reduction toward the County's targets in 2030 and 2050 (in green). The area in dark gray includes years for which the County does not have data; the 2020 inventory will allow a slope estimate for emissions from 2008 to 2020. After conducting the 2020 inventory, we will add a projected path for emissions reduction between 2020 and 2030.

PHASED APPROACH

Albemarle County is conducting its climate action planning in multiple phases. In Phase 1, we engaged with community stakeholders to develop the goals, strategies, and actions presented in this plan. In Phase 2, we will begin implementation, update our greenhouse gas emissions inventory, refine the strategies and actions herein as needed with continued community input, and begin climate resiliency planning. Beyond Phase 2, we will engage in continual monitoring, evaluation and adaptation of climate-related programming.

Phase 1: Climate Action Plan Development

This plan reflects the culmination of Phase 1 of the climate action planning process, which began in earnest in October 2018 with the formation of various working teams, consisted mostly of County staff but including key partner representatives. Teams focusing on each of the emission sectors, described in the introduction, included County staff and community stakeholders. These sector teams were responsible for developing the strategies and actions that comprise this plan based on their particular expertise and from reviewing other localities' climate action plans.

Community input was a key element of the Phase 1 process. All sector team meetings were publicized and open to the public. In March 2019, the County hosted an open house event to kick off the work by the sector teams. On almost every Monday evening during the months of May through July 2019, the County held meetings focused on discrete emission sector subjects in order to gather ideas directly from community members. We collected community feedback via verbal and written comments during public meetings, from emails sent to climate@albemarle.org, and from an online form made available from August 14 – 25, 2019.

In addition, from April to May 2020, the County invited feedback on a publicly released draft of the Climate Action Plan. We received hundreds of comments from residents and local organizations through letters, email, and two online questionnaires on the platform Public Input. Early plans for public engagement included several in-person events, all of which were canceled due to the novel coronavirus pandemic. On June 17, 2020, County staff presented the draft Climate Action Plan to the Board of Supervisors via video teleconference and received additional feedback from each individual supervisor.

From May to July 2020, County staff carefully reviewed all comments and feedback, integrating much of the feedback into this Phase 1 Plan and identifying suggestions for Phase 2. The core Climate Action Plan production team reviewed and sorted all feedback, and each sector team reviewed feedback specific to their respective sector, providing input on how best to integrate suggestions into the Plan.

At the time of publication, we have begun to implement some actions from this plan—for instance, revising County policies and practices that will reduce the carbon footprint of local government operations. In addition, we have provisioned funding to support climate-related investments in community programs and County facilities.

Phase 2: Implementation and Refinement

In Phase 2, we will (1) implement the actions identified in this plan, (2) complete biennial greenhouse gas emissions inventories to track progress, (3) refine the County's Climate Action Plan with greater specificity and detail, (4) develop the County's first climate resiliency plan, and (5) improve community engagement.

1. IMPLEMENTATION: We will shift considerable energy towards implementing the actions in this plan, initially focusing on those that have clear benefit and relatively low effort and cost. Specifically, we will:

    a. develop unambiguous and concrete targets for all actions in this plan, using SMART goals (**S**pecific, **M**easurable, **A**chievable, **R**ealistic, and **T**ime-bound);
    b. quantify each action in terms of estimated costs (time, resources) and benefits (potential reduction in greenhouse gas emissions, anticipated co-benefits);
    c. evaluate each action in terms of potential effects on social

equity with the support of an equity advisory group, create an inclusive process for engaging community stakeholders in this process, and amend actions to maximize potential benefit and minimize risk;

d. prioritize actions with consideration of the costs, benefits, and effects on equity in order to best allocate limited staff, financial, and community resources to the most constructive actions; and
e. monitor existing strategies and actions and consider new ones in order to ensure that the plan continues to be SMART amidst changing local and global circumstances, as well as to take advantage of opportunities that may arise due to new enabling legislation, emerging technologies, or partnership opportunities.

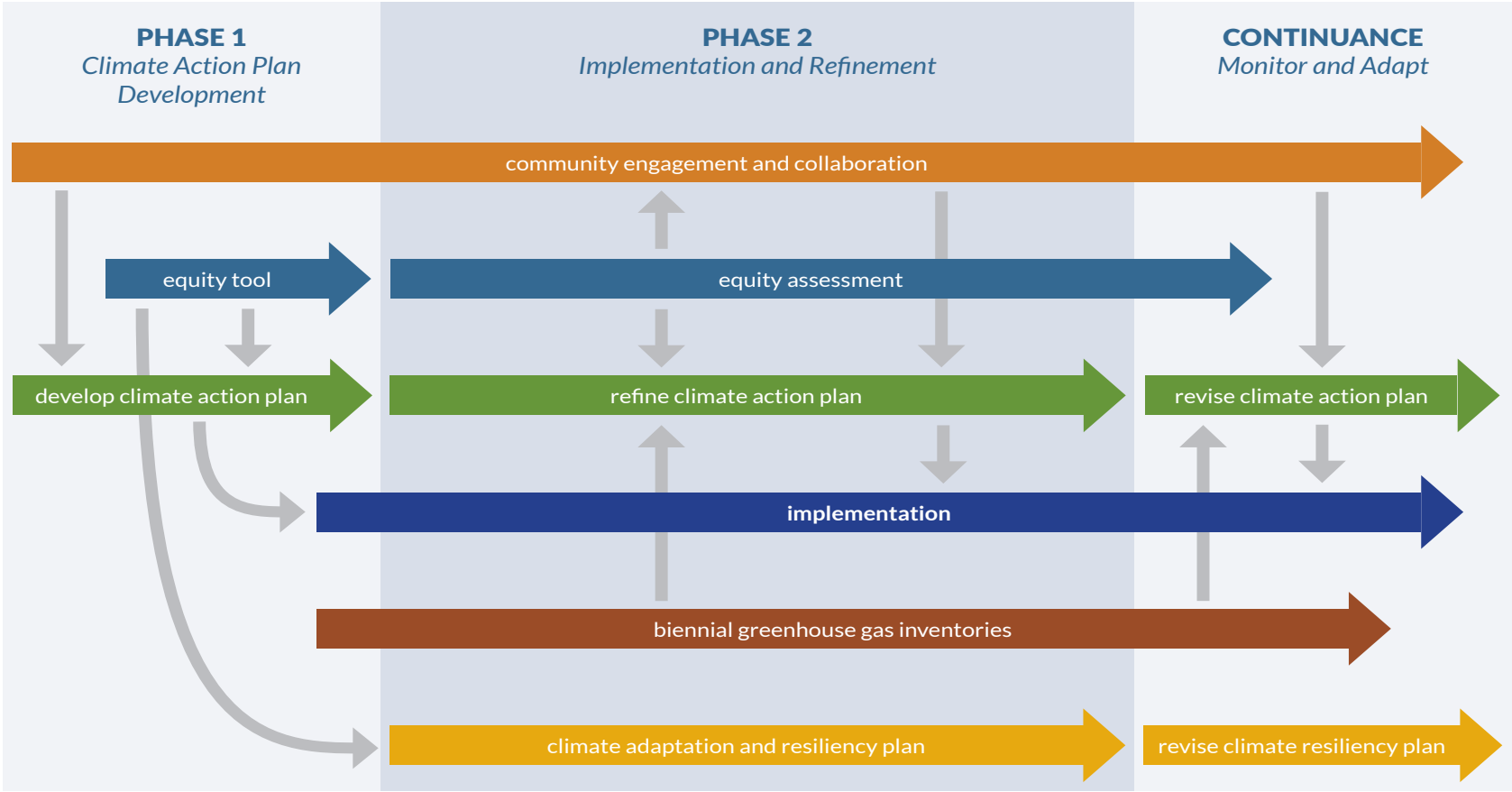
2. GREENHOUSE GAS EMISSIONS INVENTORIES: We will complete a greenhouse gas emissions inventory in 2020 and every two years following that. Each inventory will reflect a time period for which the majority of the required data can be obtained, likely from two years earlier. To the extent possible, we will make the data associated with the inventories readily available to the public.
3. CLIMATE ACTION PLAN REFINEMENT: This Phase 1 Climate Action Plan lists a broad suite of actions that the County should take over many years to meet our 2030 and 2050 emissions reduction targets. As we undertake the necessary steps to implement this plan effectively and equitably, greater detail and nuance will be added to the County's strategies and actions, along with lessons learned from implementation. We will ultimately record these refinements in a revised and updated Climate Action Plan document that can guide County action in the years and decades to come.
4. CLIMATE RESILIENCY PLANNING: We will assess how a changing climate will affect our community and how we can adapt as to reduce harmful impacts, producing a companion plan to guide County action.
5. COMMUNITY ENGAGEMENT: Throughout, we will continue to seek ways to create opportunities for community members to be involved in climate action planning, to obtain representative input, to keep the community informed of our plans and progress, and to empower individuals to take action. We will strive to engage with all sectors of the community, particularly those that have been historically underrepresented.

Continuance: Monitor and Adapt

Due to the changing nature of global issues, the scale of addressing climate change, and a greenhouse gas emission reduction target in the year 2050, climate action will almost certainly be a permanent County program. As with any complex and wide-ranging effort, the climate action plan will be updated periodically to reflect changing conditions, recent greenhouse gas emissions inventories, and refined climate action priorities.



Moorman's River, just downstream from Sugar Hollow reservoir.



Above: Visual depiction of the County's phased approach to climate action planning. Arrows in color depict major program elements across the phases. Gray arrows indicate how individual elements inform other elements.

Adaptation and Resilience

Many communities, including Albemarle County, have begun to consider how they will adapt to a changing climate—for instance, whether their infrastructure and public safety services will be prepared to respond adequately to extreme storms. Climate resilience is both the ability to absorb stresses related to climate change and to adapt community systems to be more sustainable over time. While this Climate Action Plan focuses on climate change mitigation, Albemarle County recognizes the importance of adaptation and resilience. In its Comprehensive Plan, the County has committed to studying in greater detail the local impacts of climate change and to developing a Community Resilience Plan "to prevent harm to human and biologic health."[54]

CO-BENEFITS: IMPROVING PROSPERITY, HEALTH, AND QUALITY OF LIFE IN ALBEMARLE COUNTY

The primary focus of this Climate Action Plan is to reduce greenhouse gas emissions in Albemarle County, helping to mitigate the adverse effects of climate change. However, climate action planning is not just about reducing emissions. In fact, taking smart action to mitigate the effects of climate change brings a host of other benefits that will support Albemarle County's vision for a thriving, vibrant community. The strategies and actions in this Climate Action Plan will specifically support economic prosperity, community health, and the local natural environment.

Economic Prosperity

Smart climate action planning presents numerous benefits to the local economy in Albemarle County. Job creation will be central: Projects to increase the energy efficiency of buildings, install on-site renewable energy generation, and build local renewable energy utilities will create well-paying, sustainable jobs in the growing clean energy industry. Production and consumption of locally made products—like food, furniture, and other goods—reduces greenhouse gas emissions and supports local job creation. Further, when we reduce wasteful costs from inefficient buildings or congested commutes by improving efficiency, we free up time and disposable income for more productive activities. On a broader scale, more efficient buildings and transportation infrastructure can make a community more attractive to businesses. Managing our community's waste more sustainably—through repairing goods, recycling, and composting—can also support the local economy by creating jobs, spurring innovation, and enhancing efficient resource use.[53] For example, composting can provide affordable, natural fertilizer for local farmers and gardeners to use in their operations while reducing landfill waste. Actions that protect and restore the local natural environment make Albemarle County a more attractive place to visit, supporting the local economy through tourism.

Community Health

Climate action planning will also improve the health of people who live and work in Albemarle County. Local air quality will benefit from reduced vehicle and building emissions and from planting trees in areas with less canopy, which in turn can reduce rates of asthma and other chronic diseases. Planting trees and other vegetation also reduces noise, lowers summer temperatures, increases access to natural areas, and contributes to greater biodiversity, which can improve the physical and mental health of residents. Expanding access to active modes of transportation and to fresh, locally grown food promotes healthier lifestyles.

Local Natural Environment

Actions to mitigate climate change will produce local benefits to environmental health, supporting broader ecosystem resilience. For example, preserving existing forest and planting new trees in strategic areas supports wildlife habitat, maintains a healthy watershed, improves stormwater management, reduces flood risk, and improves air and water quality. Preserving and restoring biodiversity in turn makes Albemarle County a more enjoyable place to live, work, and visit. Increasing the health of the local natural environment also helps to preserve the character of rural and wild places in the county for generations to come.

Throughout this document, additional benefits that accrue as a result of actions to mitigate climate change will be referred to as **co-benefits**. *Specific co-benefits are named within each sector description in the Strategies and Actions section—identifying broader improvements to prosperity, health, and quality of life stemming from climate actions.*

COMMITMENT TO EQUITY

Albemarle County understands that the effects of climate change will not impact all community members in the same way or to the same degree. We are committed to creating a process of climate action planning now and in the future that will serve all residents while also addressing disparities created by historic and present policy. As an objective, equity in climate action planning means pursuing outcomes that benefit everyone in the community without leaving anyone behind or worsening disparities that already exist, as well as addressing disparities where possible.

Accounting for differences in the harmful impacts of climate change is crucial for climate action planning and for realizing the kind of community that Albemarle County envisions. Further, the need to plan for climate change presents a valuable opportunity to address existing inequity in the county and to foster a stronger, healthier community for everyone. Conversely, poor climate action planning can worsen existing inequity by, for example, failing to consider current disparities in household energy burden or in access to clean energy.

Three aspects of equity pertinent to climate action planning are:

1. *structural inequality* in terms of who provides input on new programs,
2. who has *access to the benefits* of implementation, and
3. on whom *financial burden* of implementation falls.[55]

A climate action plan that does not address these dimensions of equity will neither be sustainable nor just.

Forthrightly addressing equity in climate action planning benefits everyone. "Equity aims to equip everyone, especially those who have been left behind, with the resources that allow them to contribute and prosper," observes the organization PolicyLink. "When smart, sustainable strategies are tailored to the needs of the most vulnerable communities, opportunities improve for all."[56] Put another way, "equity can mean looking at a system through the lens of its most disadvantaged members. Whatever is not working for them may well be impacting others in the system—just not as severely. The changes that improve their experience of the system will very likely feed up to others."[57] In other words, if Albemarle County's Climate Action Plan strategies and actions ensure that underserved members of the community have input on and benefit from new programs and services, the quality of such services will be higher for everyone.

In order to incorporate equity robustly into the County's Climate Action Plan, the Office of Equity and Inclusion commissioned the creation of an assessment rubric to aid addressing equity in the Phase 1 document, to guide integrating it into Phase 2 strategies and actions, and to assess progress throughout development and implementation. The equity assessment rubric, *Creating an Equitable Climate Action Plan in Albemarle County*, will be employed along with other relevant equity tools to examine existing strategies and actions through the three dimensions of equity described above (structural inequality, accessibility to benefits, and financial burden).[58] Where necessary, updates and modifications will be made to specific strategies and actions in order to maximize potential benefits to equity and minimize risks of worsening existing inequity.

Each of the following sections that discusses a specific mitigation sector includes a brief discussion of potential benefits and risks to equity associated with that sector's strategies and actions. The equity assessment rubric (available on the County website) serves as a reference for more specific questions and considerations.[59] As the County adds greater detail to strategies and actions in Phase 2 of the Climate Action Plan, more specificity will also be included about how equity can be addressed.



With all work in Phase 2 of the Climate Action Plan, it will be especially important to include the voices of marginalized and underserved communities in Albemarle County in the process of designing more detailed strategies that will serve the community as a whole. Stakeholder representation should be equitable and inclusive so that the benefits or programs and services designed to mitigate climate change are accessible and affordable. In some cases, this may require outreach and engagement to build the capacity of communities to engage meaningfully on technical issues that relate to climate action planning, as well as communications that overcome the digital divide, language barriers, and other obstacles.

Orange coneflower growing in the native plant garden at the County Office Building on McIntire Road.

IMPLEMENTATION IN ACTION

While Phase 1 of climate action planning has focused on developing the strategies and actions in this Plan, Albemarle County has already engaged actively in climate action. Building on our history of environmental stewardship and community investment, we have undertaken numerous projects that are helping to mitigate climate change, save money, protect the local environment, and increase quality of life for residents.

In this section, we highlight a few recent examples of County projects that reflect actions identified in this Plan.

Red Box: Newly constructed sidewalk along Hydraulic Road between Georgetown Road and Commonwealth Drive.

Orange Box: Local Energy Alliance Program (LEAP) technicians adding insulation as part of a low-income home weatherization project in Southwood Mobile Home Park.

Creating Walkable Urban Connections

The County recently completed two sidewalk projects that allow people to travel more easily on foot from where they live to stores and restaurants. The Barracks Road sidewalk project created a new connection from Barracks West Apartments to the existing sidewalk beginning at Georgetown Road—providing a continuous pedestrian route to the Barracks Road shopping center and other commercial destinations. Another project lies along Hydraulic Road from Georgetown Road to Commonwealth Drive. Both projects provide new connectivity between high-density residential units, commercial developments, and transit.



Reducing Energy Use by Homeowners

For several years, the County has supported the Local Energy Alliance Program's (LEAP) innovative work to improve the affordability, energy efficiency, and comfort of homes throughout the county. As part of a pilot program completed in October 2019, LEAP made upgrades to ten homes in Southwood Mobile Home Park—at no cost to the homeowners.

The program aims to reduce the high energy bills that many residents face due to poor insulation and inefficient HVAC systems in their homes. LEAP developed this pilot program in partnership with Habitat for Humanity of Greater Charlottesville and with financial support from Albemarle County. The County's $40,000 donation helped to support start-up and crew-training costs for what promises to be a lasting community benefit.





Gold Box: Crozet Library rooftop solar, seen in winter. While snow remains on parts of the roof, it melts quickly on solar panels, enabling continued energy generation.

Green Box: One of ten conservation easements recently donated to the Albemarle Conservation Easement Authority to help preserve the County's rural character.

Solar Energy at County Buildings

In recent years, the County has completed several solar panel installation projects on local government and public school buildings, beginning a transition toward powering County facilities with clean energy.

In 2016, six of our public schools were the first in Virginia to install solar arrays under a Power Purchase Agreement (PPA). The system's 3,000 panels generate 1.1 megawatts of energy—enough to power 125 average U.S. homes—and meet over 20% of the participating schools' annual electricity requirements. Under the PPA, the $2 million investment required no up-front capital expenditure. In 2019, the County also installed a 60-panel, 21.6-kilowatt solar array on the roof of the Crozet Library. This system cost approximately $45,000 and has a return on investment period of about 13 years.

The County has also invested in several projects to reduce energy use at its local government and public school buildings, based on the findings of an energy audit and through ongoing internal energy management efforts. At the 5th Street office building, we replaced outdated heating and air conditioning systems and sealed gaps in the building envelope. At the Northside Library, we achieved significant energy use reductions through no-cost improvements to the facility's building systems controls. At a total cost of $347,000 and annual savings starting at $46,000 (which will increase over time), these projects have a return on investment period of about 7.5 years.



Protecting Land

During the fiscal year ending June 30, 2020, landowners donated ten conservation easements totaling 6,955 acres to the Albemarle Conservation Easement Authority—keeping this land in the Rural Area and available for agriculture, forestry, and carbon-sequestering vegetation. These easements also eliminated the potential for 658 rural dwellings that would increase automobile traffic and emissions.



Strategies and Actions

The principal content of this Climate Action Plan are the strategies and actions that Albemarle County aims to implement over time in order to reduce net greenhouse gas emissions from the community. These strategies are organized by sectors, which represent major sources of emissions that can be reduced, opportunities to sequester carbon dioxide from the atmosphere, or a combination of both. The five sectors detailed in this Climate Action Plan are:

TRANSPORTATION AND LAND USE
BUILDINGS
RENEWABLE ENERGY SOURCING
SUSTAINABLE MATERIALS MANAGEMENT
LANDSCAPE, NATURAL RESOURCES, AND AGRICULTURE

Each sector section begins with several overarching goals and an overview of how taking action in that sector can reduce greenhouse gas emissions or sequester carbon dioxide.

We identify as co-benefits broader improvements to prosperity, community health, environmental wellbeing, and overall quality of life that the sector's actions will also support. These co-benefits reflect enhancements to individual wellbeing and local community life beyond greenhouse gas emissions reduction.

A discussion of equity addresses how strategies in each sector can contribute to equitable outcomes for the whole community, as well as potential risks to equity that may arise from poor planning or implementation.

The strategies and actions are presented in tables. Strategies identify initiatives that support one or more of the goals associated with a given sector, and actions identify specific activities that support a particular strategy. For each action, we identify the time frame of the action with three labels:

IMMEDIATELY ACTIONABLE: These actions can be implemented immediately or are already underway, will require more modest investments in time and money, and are expected to produce clear benefits in a relatively short period. These will generally be the first steps the County will take to implement the Climate Action Plan.

INITIATE PLANNING: These actions represent activities whose planning can begin now but whose implementation may take more time and may require greater financial investments. Complete implementation will occur in the medium term.

ASSESS OPPORTUNITIES: These actions, and in some cases the strategies they support, require further research in order to plan and implement. They may become possible only as opportunities arise. Conducting this research will form a central component of Phase 2 of climate action planning, and these actions will exhibit greater detail and specificity in Phase 2 documentation.



Butterfly weed growing in the native plant garden at the County Office Building on McIntire Road.





Solar panels on the roof of a resident's home in the Rural Area.

Native plant garden in front of the County Office Building on McIntire Road. Plants pictured here include prairie willow, northern bush honeysuckle, threadleaf coreopsis, and bushy St. John's wort. In addition to providing habitat and food for pollinators and other animals, the root systems of many native plants grow deeper into the soil than lawn grass, helping rebuild the health of soil and its ability to sequester carbon.

Transportation and Land Use

GOALS:

Reduce overall vehicle miles traveled.
Shift towards lower-emissions and zero-emissions vehicles.
Reduce use of single-occupancy vehicles.
Increase use of alternative modes of travel such as biking, walking and public transit.

Greenhouse gases from the transportation sector comprise the largest contribution from Albemarle County to global climate change, accounting for 48% of all emissions during the 2008 baseline year. This sector includes all trips by all people for all reasons that occur within the geographic boundaries of the county. Examples include commutes by individuals from home to work, portions of local bus routes within the county, trips by local commercial fleets, and travelers passing through on Interstate 64 and other highways.

The purpose of the strategies in this sector is to enable people to move in healthier, more efficient, less carbon-intensive ways—in effect, reducing the amount of emissions produced while maintaining (or even enhancing) mobility. As reflected in the goals listed above, this can be achieved in three primary ways: by employing healthier, less energy intensive transportation modes, such as walking or bicycling instead of driving a car; by reducing the number of single-occupancy vehicle trips, through practices such as carpooling or using public transit; and by reducing overall miles traveled through planning smarter trips and telecommuting.

Land use is integral to reducing transportation-related emissions because it significantly affects people's travel options. Smart land use planning is crucial for empowering people who live and work in Albemarle County to choose less carbon-intensive modes of transportation. For instance, a denser land use pattern with a broader variety of uses reduces the need for people to travel long distances for their needs. Providing opportunities for multi-modal travel within developments gives people greater choice in how they move around.

CO-BENEFITS

Improving transportation infrastructure and land use patterns in order to reduce greenhouse gas emissions also supports a healthy community. For example, reducing vehicle emissions and increasing access to active modes of transportation like biking and walking can improve local air quality and the health of residents. Cleaner air from fewer cars on the road can reduce rates of asthma, and improved cycling and pedestrian infrastructure can reduce rates of diabetes. In addition, improvements in public transit and infrastructure for active modes of transportation can reduce the costs of commuting and running errands for more people, while increasing travel options. Further, fewer single-occupancy vehicles on the road contributes to less traffic congestion and shorter commutes. Together, these improvements to transportation and land use can contribute to a more active, vibrant community.

EQUITY

If well-designed with awareness of historical inequities, transportation and land use initiatives have significant potential to advance equity in Albemarle County. Improved transportation infrastructure and smarter development can make employment, recreation, and basic goods and services more accessible to everyone, reducing commute times and the need to own a private vehicle. With intention, Albemarle County residents can experience positive health outcomes from increased opportunities to use active modes of transportation; residents in areas with poorer health outcomes due to historical inequities in the built environment's design have the potential to benefit in particular. Further, the semi-permanent transition to remote work among many industries due to the coronavirus pandemic highlights the importance (and potential benefits) of expanding broadband internet access equitably to everyone in the county.



Crozet Avenue, Downtown Crozet (Crozet Library on the left). Example of a complete street, with bicycle lanes, sidewalks, and greenery on both sides.

The risk of worsening existing inequities increases if careful attention is not given to how past transportation and land use decisions facilitate certain kinds of movement for some while inhibiting it for others. For instance, if housing affordability is not considered when planning new developments with mixed-use zoning, these areas may be affordable only to affluent families. Or, if removal of infrastructure for polluting modes of transportation (e.g., parking lots) is not paired with expansion of pollution-free modes that serve the same commuter routes, it may become more difficult for lower income people to access places of employment. How increases in public transit service are financed should also be considered so as not to burden low income people unduly with ridership rate increases.

TRANSPORTATION & LAND USE: STRATEGIES AND ACTIONS

STRATEGIES	ID	ACTIONS	TIME FRAME
Increase opportunities for bicycling, walking, and other alternative forms of personal transportation for daily travel.	T.1.1	Improve data collection and reporting on bicycle and pedestrian facilities, usage, and deficiencies for setting concrete improvement targets.	immediately actionable
	T.1.2	Increase the extent of sidewalks, bike lanes, and shared-use paths in the County's Development Areas, focusing on strategic, high-impact connections and filling gaps in existing networks.	immediately actionable
	T.1.3	Improve the quality of bicycle and pedestrian infrastructure in the Development Areas to make it safer and more comfortable for users.	immediately actionable
	T.1.4	Increase public information about bicycle and pedestrian safety.	immediately actionable
Through land use planning, provide an urban land-use pattern more conducive to sustainable local and regional travel, and to protecting carbon sequestration in the Rural Area.	T.2.1	Reduce amount of land dedicated to parking by prioritizing alternative transportation modes over single-occupancy vehicles in commercial and residential developments. Review and update parking requirements in the zoning ordinance to support this goal.	initiate planning
	T.2.2	Improve coordination between land use and public transit systems.	assess opportunities
	T.2.3	Incentivize denser and more mixed-use development patterns within the Development Areas, including infill development within existing low-density areas and redevelopment of existing underutilized commercial sites.	initiate planning
	T.2.4	Increase affordable housing options in areas served by a variety of transportation options.	assess opportunities
	T.2.5	Incentivize and support land conservation in the Rural Area to provide opportunities for carbon sequestration and protection of existing carbon stores.	assess opportunities
	T.2.6	Continue and expand policies and actions to direct development into the Development Areas and to reduce development in the Rural Area, such as a Transfer of Development Rights (TDR) program, in order to protect existing carbon sequestration, maintain opportunities for future increases in carbon sequestration, and to reduce carbon emissions related to transportation in a lower-density development pattern.	immediately actionable

STRATEGIES	ID	ACTIONS	TIME FRAME
Increase electric vehicle charging infrastructure available to the public.	T.3.1	Develop local ordinances and policies that encourage or require new developments to provide electric vehicle charging stations, as appropriate.	initiate planning
	T.3.2	Pursue public/private partnerships and/or state and federal grants to support an increase in the availability of electric vehicle charging infrastructure.	immediately actionable
Incentivize the purchase of lower and zero-emissions vehicles by County residents.	T.4.1	Assess a reduction of the personal property tax rate for electric vehicles.	assess opportunities
	T.4.2	Support and promote utility demand response programs to facilitate electric vehicle charging.	assess opportunities



An autonomous electric micro transit shuttle developed by Peronne Robotics in Crozet as part of a collaboration with Albemarle County and JAUNT.



Albemarle County's first electric vehicle, a Nissan Leaf. Action T.7.2 commits the County to defining a plan and timeline for replacing as much of its fleet as possible with electric and hybrid vehicles.

STRATEGIES	ID	ACTIONS	TIME FRAME
Through regional partnerships and initiatives, such as the Regional Transportation Partnership (RTP) and the Charlottesville/ Albemarle Metropolitan Planning Organization (MPO), increase the use of public transit or other transportation demand management programs to provide alternatives to single-occupancy vehicles.	T.5.1	Continue to improve coordination between public transit providers (e.g., JAUNT, CAT, UTS) to better serve Development and Rural Areas.	immediately actionable
	T.5.2	Continue planning efforts to assess increasing the frequency, quality, and reliability of transit service along key routes in the Development and Rural Areas.	immediately actionable
	T.5.3	Continue planning efforts to increase local and regional transit network coverage area for fixed route and flexible bus service in both the Development and Rural Areas.	immediately actionable
	T.5.4	Increase the usage of the TJPCD Rideshare program through improved marketing and by setting use targets.	initiate planning
	T.5.5	Build on past work to collect and analyze feedback from regional residents and employees on what factors they consider in choosing to use single-occupancy vehicles, public transit, or other alternatives.	immediately actionable
	T.5.6	Develop a more robust incentive program, perhaps as part of the Charlottesville Better Business Challenge.	initiate planning
	T.5.7	Partner with regional employers to encourage and incentivize reductions in single-occupancy vehicle commuting.	initiate planning
	T.5.8	Call for a Transportation Demand Management (TDM) plan that will be conducted jointly with the City of Charlottesville and coordinated by the Thomas Jefferson Planning District Commission (TJPDC) and the Charlottesville-Albemarle Metropolitan Planning Organization (MPO).	immediately actionable
	T.5.9	Work with the City of Charlottesville and other regional partners to incentivize increased use of public transit with discounts, load-based scheduling, and usage tracking.	initiate planning

STRATEGIES	ID	ACTIONS	TIME FRAME
Increase the overall fuel efficiency of the County vehicle fleet.	T.6.1	Modify vehicle replacement criteria to strongly weight vehicle efficiency.	immediately actionable
	T.6.2	Define a plan and timeline for replacing as much of the County fleet as possible with electric and hybrid vehicles.	immediately actionable
	T.6.3	Update the process to justify the need for new vehicles, as well as type of vehicle, in order to maintain the "right-sized" fleet.	immediately actionable
	T.6.4	Increase availability of EV infrastructure (chargers) on government properties.	initiate planning
	T.6.5	Assess the viability of acquiring electric school buses to replace diesel school buses.	assess opportunities
Improve County Government policies and procedures pertaining to employee work travel and commuting.	T.7.1	Develop a non-idling policy for vehicles having internal combustion engines.	immediately actionable
	T.7.2	Provide access to charging stations for employees using personal electric vehicles.	initiate planning
	T.7.3	Provide opportunities and incentives to employees to telecommute and to more efficiently commute to work (e.g., carpool, bike, transit passes for all County employees, etc.).	immediately actionable
	T.7.4	Encourage and support teleconferencing and carpooling to meetings.	immediately actionable
With support of partnering organizations, increase community awareness about alternative, clean modes of transportation and infrastructure projects in the county designed to facilitate ease of clean transport for residents.	T.8.1	Increase informational programs on transportation, land use, and climate change for local government and public school staff.	immediately actionable
	T.8.2	Increase access to information and resources on transportation, land use, and climate change for teachers and students in public schools.	assess opportunities

Buildings

GOALS:

Reduce overall energy use in buildings.
Increase on-site renewable energy production.

From heating and cooling to cooking and lighting, our buildings perform many energy intensive tasks. It is no surprise, then, that the energy used by the buildings within Albemarle County accounted for approximately 45% of total greenhouse gas emissions in the baseline year of 2008. Emissions associated with this sector include the greenhouse gases resulting from the production of electricity consumed by buildings and from the combustion of fossil fuels—like natural gas and heating oil—to power furnaces and water heaters.

The contribution to climate change from the county's building infrastructure can be decreased by reducing the amount of energy that buildings use and by generating renewable energy at the building site. Reducing building energy use can be achieved through simple measures, such as sealing air leaks and using more efficient light bulbs and appliances, or through more complex measures, such as upgrading a building's insulation and mechanical systems. Renewable energy produced on-site—such as through a solar energy system—will reduce the amount of energy drawn from the local electric grid, which still gets most of its energy from the combustion of coal and natural gas.[60]

Albemarle County can help spur private investments in energy efficiency and renewable energy generation in existing and new buildings by increasing community awareness, offering incentives such as rebates and financing, working with local partners to escalate assistance and services, and establishing performance measures. These actions can help building owners and tenants to make informed decisions regarding cost-effective energy upgrades, offsetting the upfront and total cost of those investments.

The County will also make direct economic investments in its local government and school buildings to reduce greenhouse gas emissions and to showcase innovations and technologies that can serve as models for the community.

CO-BENEFITS

Increasing the energy efficiency of residential and commercial buildings, as well as installing on-site renewable energy generation like solar panels, bring numerous co-benefits beyond reducing greenhouse gas emissions. Principally, updating buildings for energy efficiency and renewable energy generation creates well-paying, green jobs for people who live locally, creating employment opportunities and strengthening the local economy. Upgrading building energy efficiency also lowers utility bills while increasing building comfort level, which can benefit residents and small businesses in particular. Reductions in utility bills mean reduced energy costs in the long-term, thereby reducing the cost of living and doing business. When property owners install solar panels on homes or commercial buildings they own, they become less dependent on the regional electric utility and even contribute to the electricity generation capacity of the local electric grid. This can in turn help maintain power at times of peak energy demand and, in some cases, in the aftermath of storms that down power lines. Finally, energy efficiency and renewable energy upgrades are investments in the quality and value of buildings.

EQUITY

Improving building energy efficiency and supporting on-site renewable energy generation with equity in mind can provide important benefits for lower income populations. Studies show that households in the United States with lower income pay significantly more per square foot in home utility costs than median and higher income households, as do heads of household of color compared with white heads of household.[61] Energy efficiency and weatherization upgrades that target lower income households and support up-front investment costs have the potential to reduce home energy costs significantly for these families. Increasing affordable access to on-site renewable energy generation on residential properties, as well as energy efficiency upgrades, can help reduce household energy burden for more people and contribute to fewer emissions. Further, such projects have the potential to create green job opportunities that employ people in these communities.

However, the potential equity benefits from energy efficiency and on-site renewable energy projects require intentional design and are not an inevitable outcome. Risks of worsening inequities need to be taken into account.

For example, energy efficiency and on-site renewable energy initiatives may contribute to unchecked increases in property value and rental rate increases, in turn leading to gentrification and displacement of lower income families. Alternatively, programs may not equitably target landlords, leaving renters unable to benefit from advances in energy efficiency and renewable energy that require property work. Outreach and education about such programs are also crucial and may fail to reach historically marginalized communities due to the digital divide, language barriers, or other communication obstacles. Efforts to advance building energy efficiency and on-site renewable energy generation throughout the community will be most successful and equitable if they account for these risks in the design phase, consulting both experts and community members.

BUILDINGS: STRATEGIES & ACTIONS

STRATEGIES	ID	ACTIONS	TIME FRAME
Enable and incentivize private energy efficiency and renewable energy projects in the County Code and during the community development regulatory process.	B.1.1	Establish a County policy clarifying this strategy.	initiate planning
	B.1.2	Review the building, zoning, subdivision, land use, and tax sections of the County Code for opportunities to facilitate and incentivize the construction of more energy efficient buildings and on-site renewable energy installations like geothermal, rooftop, and parking lot solar.	initiate planning
	B.1.3	Develop regulatory processes that would incentivize “better-than-code” design and renewable investing.	assess opportunities
	B.1.4	Develop regulatory processes that would incentivize greater housing density and connectivity.	assess opportunities
	B.1.5	Support the adaptive reuse of existing buildings through flexible approaches to County Code compliance and identify additional ways to facilitate building reuse, where appropriate.	assess opportunities
Expand upon and develop partnerships with local companies and non-profit agencies to improve energy efficiency in existing homes and businesses.	B.2.1	Support organizations/programs like the Local Energy Alliance Program (LEAP) that educate, provide technical assistance, and facilitate third-party energy efficiency and renewable energy incentives.	immediately actionable
	B.2.2	Promote and support organizations like the Albemarle Housing Improvement Program and the Piedmont Housing Alliance that make energy efficiency and weatherization improvements in affordable housing stock.	immediately actionable
	B.2.3	Research opportunities to support programs that improve workforce training in fields related to clean energy and energy efficiency.	assess opportunities

BUILDINGS: STRATEGIES & ACTIONS (CONTINUED)

STRATEGIES	ID	ACTIONS	TIME FRAME
Promote private energy efficiency and renewable energy investments by the private sector.	B.3.1	Develop energy efficiency and renewable energy standards for developer-constructed affordable housing units.	assess opportunities
	B.3.2	Consider a property tax exemption or partial rebate to encourage owners of existing commercial and residential buildings to make energy efficiency investments.	assess opportunities
	B.3.3	Assess financing mechanisms such as the Property Assessed Clean Energy (C-PACE) program and a Clean Energy Loan Fund program and implement, if appropriate.	initiate planning
Increase community awareness about energy conservation and renewable energy.	B.4.1	Develop a multi-media informational campaign; as appropriate, partner with other local government agencies, educational institutions, non-profits, and utilities. Promote community-based programs like the Community Climate Collaborative (C3) Better Business and Residential Challenges.	initiate planning
	B.4.2	Promote and encourage building design, construction, and performance rating and certification systems.	initiate planning
	B.4.3	Support community efforts to share information about conservation, energy efficiency, and renewable energy topics. Prioritize conservation, then efficiency of energy devices, then energy sourcing.	initiate planning
	B.4.4	Develop agreements with utility companies and other stakeholders to more effectively collect and share energy use data.	assess opportunities
	B.4.5	Increase informational programs on building energy efficiency, renewable energy generation, and climate change for local government and public school staff.	initiate planning
	B.4.6	Increase access to information and resources on building energy efficiency, renewable energy generation, and climate change for teachers and students in public schools.	initiate planning
Partner with utility companies to expand energy efficiency, renewable energy, and energy storage options for property owners and tenants.	B.5.1	Support and promote utility demand response programs, which enables customers to use less energy during peak hours, thereby offsetting the need for utilities to satisfy peak energy demand using fossil fuels.	assess opportunities

STRATEGIES	ID	ACTIONS	TIME FRAME
	B.5.2	Support the provision of "on-bill" financing whereby customers can pay for efficiency and renewable energy investments over time as part of their monthly bills.	assess opportunities
	B.5.3	Support and promote programs within the 2020 Virginia Clean Economy Act and Governor's Executive Order #43; including Regional Greenhouse Gas Initiative (RGGI), Renewable Energy Portfolio Standards, Power Purchase Agreements, net metering, and shared/multi-family solar.	initiate planning
Establish formal policies to further GHG emissions reduction efforts at local government and school buildings.	B.6.1	Establish formal goals for GHG emissions reductions for local government and school buildings.	immediately actionable
	B.6.2	Establish a Green Buildings Policy to include operations, new construction, and renovations.	immediately actionable
Make targeted investments in energy efficiency, renewable energy, and energy storage projects at existing local government and school buildings.	B.7.1	When replacing roofs or constructing new buildings, include any penetrations necessary to accommodate solar arrays if analysis indicates the roof is appropriate for solar installation (south-facing, load analysis, no light obstructions, etc.)	initiate planning
	B.7.2	Analyze the existing portfolio of buildings for opportunities to add on-site renewable energy, and define a plan and timeline for installing on-site renewable energy in feasible locations.	immediately actionable
	B.7.3	Adopt a policy whereby operational savings associated with energy efficiency project are reinvested into future renewable energy projects.	immediately actionable
	B.7.4	Assess energy efficiency opportunities and invest in those projects with the best fiscal/GHG return on investment (ROI).	initiate planning
	B.7.5	Replace equipment at/beyond its expected useful life with high efficiency equipment, such as geothermal systems.	initiate planning
	B.7.6	Develop a plan for routinely performing "tune-ups" of building mechanical systems (known as retro-commissioning).	assess opportunities
	B.7.7	Partner with utility companies to research energy storage systems and make recommendations for County facilities, including vehicle-to-grid and battery storage options for demand control, emergency back-up power, and grid resiliency.	assess opportunities
Advocate for Virginia legislative actions to support energy efficiency.	B.8.1	Align County Board of Supervisor's legislative priorities with those of other agencies influencing the state legislature, e.g. Virginia Association of Counties and Virginia Municipal League.	initiate planning

Renewable Energy Sourcing

GOAL:

Increase renewable energy generation capacity to the electrical grid system.

The electrical grid is an interconnected network for delivering electricity from producers to consumers across a region. The portion of the regional grid within Albemarle County is regulated by the Virginia State Corporation Commission and operated by two investor-owned companies—Dominion Power and Appalachian Power Company—and two member-owned cooperatives—Central Virginia Electric Cooperative and Rappahannock Electric Cooperative. While over half the energy produced in Virginia is derived from burning natural gas, less than 1% currently comes from solar and wind.[62]

There are presently no utility-scale renewable energy systems located in Albemarle County. However, the Albemarle County Board of Supervisors has provided a path forward for utility-scale solar projects in the county via a Special Use Permit and has approved its first project.

The County will support the development of local renewable energy by improving local land use policies and practices, supporting Virginia legislation that facilitates expansion in the renewable energy sector, pursuing utility-scale investments to provide energy for County operations, and supporting the programs and initiatives of local utilities and renewable energy developers when there are public benefits. In supporting renewable energy projects at the utility scale, the County will also strive to maintain a holistic perspective that accounts for potential climate benefits and the health of our local ecosystem. In doing so, we will prioritize roof tops, parking lots, brownfields, landfills, and post-industrial or other open lands over forested or ecologically valuable lands for siting utility-scale renewable energy installations.

CO-BENEFITS

Renewable energy sourcing on a utility scale brings a number of benefits, some of which are shared with the installation of on-site renewable energy generation (see Buildings). Renewable energy utility construction and maintenance creates jobs in the clean energy sector that are inherently based locally or regionally. Local community renewable generation (e.g., solar gardens) can increase the electricity-generation capacity of the regional grid and bolster the resilience of the electric grid when demand is high or when storms damage transmission lines. In some cases, renewable energy generation can provide a supplemental income source for large landowners who lease part of their property to a local utility to build and operate renewable energy systems.

EQUITY

Potential benefits to equity from utility-scale renewable energy generation can include the creation of green jobs and, in the case of community solar, energy independence. As power generation transitions from polluting and emissions-producing fossil fuels to clean, renewable energy, many good jobs will be created. Policies can encourage and incentivize equity in project bids so that businesses owned by women and people of color are equitably represented. Where local communities can start community-scale renewable energy generation, they may be able to gain greater energy independence and resilience in the face of power outages from weather events and demand spikes due to climate change.

Access to renewable energy among historically marginalized communities is key to realizing the benefits equitably. “Decisions regarding where renewable energy is built, who has access to it, and who is hired to construct it, affect whether the energy system is equitable.”[63] If support for renewable energy projects focuses on areas where affluent populations are likely to benefit first, existing inequities will be worsened. Consulting historically marginalized communities will be crucial to an equitable renewable energy transition, given a long history of siting pollution-heavy utilities close to lower income communities and communities of color, adversely affecting health and quality of life.[64]

RENEWABLE ENERGY SOURCING: STRATEGIES & ACTIONS

STRATEGIES	ID	ACTIONS	TIME FRAME
Enable and incentivize utility-scale renewable energy projects in the County Code and during the community development regulatory process.	R.1.1	Establish a County policy clarifying this strategy to enable and incentivize utility-scale renewable energy projects, incorporating holistic analysis of local impacts on equity and environment.	immediately actionable
	R.1.2	Review the building, zoning, subdivision, land use, and tax sections of the County Code for opportunities to better facilitate and incentivize renewable energy projects. Encourage and prioritize the use of roof tops, parking lots, brownfields, landfills, and post-industrial or other open lands over forested or ecologically valuable lands.	assess opportunities
Partner with utilities and renewable energy companies to increase local renewable energy and energy storage initiatives.	R.2.1	Develop a policy to support utility-scale renewable energy projects.	initiate planning
	R.2.2	Support and promote programs within the 2020 Virginia Clean Economy Act and Governor's Executive Order #43; including Regional Greenhouse Gas Initiative (RGGI), Renewable Energy Portfolio Standards, Power Purchase Agreements, net-metering, and shared/ multi-family solar.	initiate planning
	R.2.3	Conduct a study in cooperation with renewable energy companies to identify locations for utility scale projects in Albemarle County. Prioritize the use of roof tops, parking lots, brownfields, landfills, and post-industrial or other open lands over forested or ecologically valuable lands.	assess opportunities
	R.2.4	Provide financial incentives to promote private renewable energy investments.	assess opportunities
Invest in utility-scale renewable energy and energy storage to meet energy needs of local government operations as allowed under Virginia code.	R.3.1	Assess issuing a Request for Proposal (RFP) for a renewable Power Purchase Agreement (PPA).	initiate planning
	R.3.2	Partner with utility companies to research energy storage systems and make recommendation for County-owned facilities including vehicle-to-grid and battery storage options.	assess opportunities

RENEWABLE ENERGY SOURCING: STRATEGIES & ACTIONS (CONTINUED)

STRATEGIES	ID	ACTIONS	TIME FRAME
Promote and facilitate investment in utility-scale renewable energy by the private sector.	R.4.1	Assess financing mechanisms applicable to utility-scale renewable energy.	assess opportunities
	R.4.2	Assess funding opportunities to support a Clean Energy Loan Fund program applicable to utility-scale renewable energy.	assess opportunities
Increase community awareness about utility-scale renewable energy.	R.5.1	Develop a multi-media informational campaign; as appropriate, partner with other local government agencies, educational institutions, non-profits, and utilities.	initiate planning
	R.5.2	Support community efforts to share information about utility-scale renewable energy.	initiate planning
	R.5.3	Increase informational programs on renewable energy generation and climate change for local government and public school staff.	initiate planning
	R.5.4	Increase access to information and resources on renewable energy generation and climate change for teachers and students in public schools.	initiate planning
Advocate for Virginia legislative actions to support utility-scale renewable energy.	R.6.1	Align County Board of Supervisor's legislative priorities with those of other agencies influencing the state legislature, e.g. Virginia Association of Counties and Virginia Municipal League.	initiate planning



Rooftop solar installation at Baker-Butler Elementary School in Albemarle County.



Rooftop solar installation at Mary Carr Greer Elementary School in Albemarle County.



Rooftop solar installation at Brownsville Elementary School in Albemarle County.

Sustainable Materials Management

GOALS:

Increase the percentage of recyclable materials put to positive use and diverted from landfills.
Increase the percentage of organic materials diverted from landfills and composted.

Sending "waste" to landfills or incinerators provides few benefits and much harm, and it wastes potentially valuable resources. In contrast, recycling, composting, and other forms of circular economy create value for people and markets, as well as reducing pollution and waste. Recyclable materials that people send to landfills take up valuable space, produce pollution, and go unused when they might otherwise contribute to value in new products. Similarly, composting organic waste—food scraps, yard clippings—creates new life as organic fertilizer, rather than decomposing in a landfill and producing methane gas—a greenhouse gas whose global warming potential is 84 times that of carbon dioxide over a 20-year period.[65]

Landfill gas—about half methane and half carbon dioxide—is a byproduct of the anaerobic decomposition of organic material in landfills—an entirely avoidable source of emissions.[66] In 2018, landfill gas contributed about 15% of "human-related methane emissions" in the United States.[67] Albemarle County's greenhouse gas emissions related to solid waste include those generated by its two decommissioned landfills, as well as various solid waste management operations. In addition, the accounting of greenhouse gas emissions includes those associated with the trash generated by all county homes and businesses—even though this trash is transferred outside the county.

The strategies in this sector generally involve reducing the amount of emissions-generating materials going into landfills, particularly organic materials such as food and yard waste. With 30%-40% of all food wasted in the United States,[68] reducing food waste offers big opportunities.

CO-BENEFITS

Enhancing the quantity and quality of recycling and composting provides important local benefits to community health and cleanliness, local ecosystem health, and the local economy. Recycling and composting are economies of scale, which means that they become more viable as more people participate. Growing participation supports local businesses and increases the scale and quality of their operations, thereby contributing to a virtuous cycle. Diverting recyclable and compostable "waste" from landfills has the straightforward benefit of reducing landfill growth, as well as limiting dumping and litter. Properly managing landfill gas can also reduce smog, which contributes to health problems like asthma.

Encouraging a culture of reducing, reusing, and recycling in the local community can have the added benefit of boosting local thrift, repair, and reuse of household items, contributing to growth in the so-called "circular economy" and spurring innovation in the process.

Composting encourages local food production by facilitating home gardening and by providing affordable, organic fertilizer to small farmers. As a fertilizer, composting can also support local ecosystem health by reducing the use of chemical fertilizers that contribute to toxic runoff.

EQUITY

Albemarle County can advance equity in materials management by improving the reach and quality of recyclables, compost, and landfill collection services, specifically targeting residents who currently lack convenient access to any such service. Secondary benefits of improved recycling, composting, and trash collection infrastructure are improved environmental health and cleanliness in neighborhoods, commercial areas, and recreational areas. Prioritizing locations where these services are most lacking is important for benefiting equity.

Risks of worsening current inequities primarily involve accessibility and financial burden. Expanded composting and recycling services should be easily accessible to all residents, and program design must account for the risk of inaccessibility to residents of multi-family buildings. In addition, the County recognizes the importance of financing composting and recycling programs in ways that do not add undue financial burden on residents and businesses, particularly lower-income residents and small businesses.

SUSTAINABLE MATERIALS MANAGEMENT: STRATEGIES & ACTIONS (CONTINUED)

STRATEGIES	ID	ACTIONS	TIME FRAME
Increase the availability, convenience, and efficiency of trash and recycling collection.	S.1.1	Establish a model trash and recycling center at the Ivy Material Utilization Center.	immediately actionable
	S.1.2	Study the feasibility of curbside recycling by the County.	immediately actionable
	S.1.3	Identify if there is a need to locate additional paper/cardboard balers in Albemarle County.	immediately actionable
	S.1.4	Establish a pilot residential recycling center in Scottsville.	assess opportunities
	S.1.5	Work with RSWA to explore improving the customer experience through operational changes. Provide comprehensive recycling and disposal services to reduce the potential for mishandling or dumping.	assess opportunities
	S.1.6	Study the feasibility of locating residential trash, recycling, and composting centers within a particular distance or time limit to population centers. Ensure equitable access for underserved communities to future sites is considered.	assess opportunities
Research economic and regulatory tools to improve waste metrics reporting and motivate residents to recycle.	S.2.1	Amend Chapter 13 of the County ordinance to require large trash haulers to report the weight or volume of trash and recycling and their vehicle-miles-traveled.	initiate planning
	S.2.2	Assess a pay-as-you-throw model of trash pricing, in which fees are based on the amount of trash.	assess opportunities
	S.2.3	Assess requiring recycling at particular land uses—such as large multifamily developments and commercial/industrial properties.	assess opportunities
	S.2.4	Assess requiring recycling collection areas at new developments meeting particular criteria.	assess opportunities
	S.2.5	Explore Government Green Purchasing Policy for local government and public schools.	initiate planning
	S.2.6	Research and make recommendations on co-generation waste-to-energy options and impacts.	assess opportunities

STRATEGIES	ID	ACTIONS	TIME FRAME
Increase the availability and convenience of organic material collection and composting.	S.3.1	Study the feasibility of residential curbside yard waste and food scraps composting.	immediately actionable
	S.3.2	Make composting available in all public schools and County office buildings.	initiate planning
	S.3.3	Make food scrap and yard waste composting available at residential trash and recycling centers.	initiate planning
	S.3.4	Develop food waste reduction goals and incentivize compost at restaurants, grocery stores, and other large generators.	assess opportunities
Use media outreach, public information campaigns, and school programs to encourage behavioral changes towards consumption and waste.	S.4.1	Provide information about waste streams, recycling processes, and the benefits of reducing, reusing, recycling and composting. Encourage and promote waste hierarchy, circular economy, and reducing material waste.	initiate planning
	S.4.2	Survey the public to gauge support for waste management initiatives or service changes. Ensure equity considerations are part of public survey.	assess opportunities
	S.4.3	Encourage the donation or reuse of unneeded clothing; provide information on alternatives to sending fabric to landfill.	assess opportunities
	S.4.4	Increase informational programs on sustainable materials management and climate change for the community, residents, and businesses.	initiate planning
	S.4.5	Increase access to information and resources on sustainable materials management and climate change for local government, public school staff, and students.	initiate planning

Left: Compost drop-off at McIntire Recycling Center, which serves both County and City residents.

Right: Assorted recycle bins at McIntire Recycling Center.





Landscape, Natural Resources, and Agriculture

GOALS:

Protect and restore natural carbon sinks.

Promote practices on managed land that trap carbon and minimize carbon emissions.

While the other sections of this Climate Action Plan focus on reducing future greenhouse gas emissions, this section explores the potential to remove carbon from the atmosphere by changing the way we manage land throughout Albemarle County. *Carbon sequestration* is the term for capturing and storing carbon from the atmosphere—carbon that would otherwise be trapping heat in the atmosphere as carbon dioxide. Carbon sequestration can supplement the reduction of new greenhouse gas emissions to reduce the overall level of greenhouse gases in the atmosphere.

The County's role in sequestering carbon is to change its own land management practices and to work with partners to encourage, enable, and incentivize individuals and businesses throughout the community to change their practices.

All plants—from agricultural crops to urban trees—grow by pulling carbon dioxide out of the atmosphere using photosynthesis. The carbon that is integrated into the plant matter may ultimately be consumed (crops or feed), bound up in long-lived tree or forestry products, or assimilated into the soil as organic matter. Different land management practices—including farming, forestry, and landscaping—can result in very different amounts of on-property carbon capture and storage. Historic practices have resulted in a net reduction of carbon stored in the soil and landscape. However, changing farming, forestry, and backyard practices can lead to a net capture of carbon.

In order to assess accurately our progress in sequestering carbon, we will create—as part of greenhouse gas inventories—a model approximating how carbon is currently stored in various elements of the landscape. We will also track various sequestration programs and changes to the landscape in order to understand how sequestration changes over time. This will require a long-term commitment to maintaining and continually updating a large array of geographical data.

CO-BENEFITS

Sustainable land management and agricultural practices bring a host of benefits beyond sequestering carbon and preventing the unnecessary release of carbon dioxide and other greenhouse gases into the atmosphere. In Albemarle County, protecting local ecosystems will preserve the landscape and character of the Rural Area. Further, practices like replanting deforested areas (reforestation) and restoring native grasslands can increase wildlife habitat and biodiversity, a crucial benefit as many species' habitats are shrinking as a result of climate change and the human activities causing it. Community gardening can contribute to local food production and consumption, encouraging healthy lifestyles and strengthening local communities. Regenerative agricultural practices on farms increase soil health and protect water quality from chemical fertilizers, which in turn promotes the long-term sustainability of agriculture in the area, as well as a rural tourism economy. Finally, planting trees in urban areas can improve local air quality, lower summer temperatures, and improve the health of residents, in addition to sequestering carbon from the atmosphere.

EQUITY

Smart landscape management, protection of natural resources, and sustainable agricultural practices have the potential to allow all residents to enjoy a healthier environment and to have access to areas with local biodiversity. Equitable forest protection and reforestation throughout the county, for example, can improve local air, water, and environmental quality for all residents, especially for people living in places with higher pollution. In addition to benefiting the natural environment, encouraging and supporting neighborhood community gardens can contribute to increased food security, lower food costs, and healthier diets in areas far from grocery stores.

For local environmental stewardship to advance equity, the location and prioritization of projects like reforestation and tree planting are paramount. Urban tree canopies tend to be highly unequal, with tree canopy and income positively correlated. If improvements to local environmental health—including conservation and tree canopy increases—occur in more affluent areas but not in areas with lower income and historically marginalized populations, these inequities will persist. Attention to the effect on housing affordability of environmental improvements should also be monitored.

STRATEGIES

Incentivize the protection and restoration of natural areas on private land, focusing on retaining existing forest cover on the landscape.



A view of one of the native plant gardens in front of the entrance to the County Office Building on McIntire Road. Pictured here: scaly blazing star, purple lovegrass, butterfly weed, gray goldenrod, wild bergamot, orange coneflower, and whorled milkweed.

ID	ACTIONS	TIME FRAME
L.1.1	Maintain and increase the County's land-conservation programs and related efforts, with a focus on keeping large forested properties intact and in forested land cover, to protect and increase carbon sequestration, as well as to protect water quality and habitat.	immediately actionable
L.1.2	Increase parkland acquisition on forested land, to maintain and increase carbon sequestration while providing recreational and educational opportunities.	initiate planning
L.1.3	Connect landowners with existing funding sources, conservation assistance programs, and succession planning resources to minimize parcelization and fragmentation of farms and forested properties.	immediately actionable
L.1.4	Use (and modify as necessary) tax programs—such as the County's land use real estate tax deferral program—as incentives to maintain and expand forested land cover and natural areas for carbon sequestration and associated values such as water quality and habitat.	initiate planning
L.1.5	Include the carbon trapping potential of land as part of the ranking methodology for the County's Acquisition of Conservation Easements (ACE) program, and offer additional points for landowners willing to commit to carbon-informed land management.	initiate planning
L.1.6	Provide general educational resources for landowners regarding the benefits of protecting, restoring, and appropriately managing natural areas.	immediately actionable
L.1.7	Assess the feasibility of new programs or ordinances to further incentivize natural resource protection, restoration, and management.	assess opportunities
L.1.8	Study ways to incentivize the establishment of wetland mitigation banks and nutrient credit banks in the County.	assess opportunities
L.1.9	Provide County staff to consistently track and monitor carbon sequestration and land cover/land use patterns in the County to assess progress.	assess opportunities
L.1.10	Work with partners and property owners to manage invasive species on private properties. Ensure equitable access for property owners of a full range of incomes and property sizes.	assess opportunities
L.1.11	Promote small forests ("Victory Forests") instead of lawns on large lot subdivision parcels and other large rural residential parcels. Ensure equitable access for property owners of a full range of incomes and property sizes.	immediately actionable
L.1.12	Join national and international campaigns for planting trees.	immediately actionable
L.1.13	Incentivize and support the protection, enhancement, and restoration of vegetated riparian buffers and wildlife habitat corridors for multiple benefits, including carbon sequestration.	immediately actionable

LANDSCAPE, NATURAL RESOURCES, AND AGRICULTURE: STRATEGIES AND ACTIONS (CONTINUED)

STRATEGIES	ID	ACTIONS	TIME FRAME
Increase tree cover and native vegetation in urban areas, particularly adjacent to streets and parking areas.	L.2.1	Promote the use of trees, shrubs, rain gardens, and native meadows in lieu of turf grass in landscape design and property management; encourage native species for additional benefits.	assess opportunities
	L.2.2	Evaluate a requirement that overall tree canopy is not reduced by development in the Development Areas. Pursue increases in tree canopy in new and existing developed areas.	assess opportunities
	L.2.3	Provide education, resources, and assistance to landowners.	assess opportunities
	L.2.4	Promote greater use of green roofs.	assess opportunities
	L.2.5	Encourage native Virginia Piedmont plantings along highway corridors and in solar energy generation facilities.	assess opportunities
	L.2.6	Reduce paved/impervious surfaces to mitigate heat islands.	assess opportunities
	L.2.7	Use Master Plans and Small Area Planning process to evaluate existing tree canopy, set future tree canopy targets, and to identify County-owned properties, potential public spaces, and other areas for increased urban-forest area in the Development Areas.	initiate planning
Promote carbon best management practices on agricultural and silvicultural land.	L.3.1	Provide education, resources, assistance, and incentives to property owners and agricultural producers regarding rotational grazing methods, cropland management, agroforestry, and other best management practices that both improve soil health and increase carbon sequestration.	initiate planning
	L.3.2	Encourage and incentivize retention of forest cover and carbon-informed management of managed forestland.	initiate planning
	L.3.3	Encourage a transition towards clean-energy farming and landscaping equipment.	assess opportunities

STRATEGIES	ID	ACTIONS	TIME FRAME
Promote best carbon management practices on County-owned properties and as part of County projects and initiatives.	L.4.1	Locate priority sites for evaluating the carbon trapping potential of the landscape on County properties.	immediately actionable
	L.4.2	Evaluate the carbon trapping potential of the landscape when planning and managing County properties and projects.	initiate planning
	L.4.3	On priority sites on County-owned land, engage in native forest and grassland plantings for combined sequestration and habitat demonstration projects.	initiate planning
	L.4.4	Reduce carbon emissions associated with maintaining County parks, building grounds, and other properties.	assess opportunities
	L.4.5	Manage invasive species on County properties.	assess opportunities
	L.4.6	Protect, restore, and appropriately manage natural areas on County-owned land.	initiate planning
Create opportunities for all residents to participate in initiatives that would contribute towards local carbon sequestration.	L.5.1	Partner with local organizations to sponsor volunteer activities such as tree plantings and control of invasive species.	assess opportunities
	L.5.2	Enable and promote community gardens, and promote local food production and distribution networks for carbon sequestration, energy-conservation benefits, and equitable access to local, fresh food.	assess opportunities
	L.5.3	Increase informational programs on sustainable land management, native Virginia Piedmont species and habitats, and regenerative agriculture for local government and public school staff.	initiate planning
	L.5.4	Increase access to information and resources on sustainable land management, native Virginia Piedmont species and habitats, and regenerative agriculture for teachers and students in public schools.	assess opportunities
	L.5.5	Continue to fund the Albemarle Conservation Assistance Program to provide support to residents for carbon-sequestration projects and other environmental improvement projects on residential land.	immediately actionable
	L.5.6	Provide information resources for County residents on land-management techniques and tree-species selection for successful carbon sequestration.	immediately actionable

Glossary of Key Terms & Abbreviations

Board of Supervisors (Board)	The elected governing body of Albemarle County
carbon dioxide (CO_2)	A greenhouse gas having the most influence on global climate change
climate action plan (CAP)	A plan describing how a local government, or any other body, will reduce their contribution to global climate change
carbon dioxide equivalent (CO_2(e))	The amount or concentration of carbon dioxide that would cause the same level of global warming as that from an amount of all types of greenhouse gases
greenhouse effect	The trapping of the sun's energy in the atmosphere
greenhouse gas (GHG)	A gas that contribute to the greenhouse effect by absorbing infrared radiation (e.g., carbon dioxide, methane, and nitrous oxide)
ICLEI – Local Governments for Sustainability	A global network of local governments dedicated to sustainability, resilience, and climate action
ICLEI-USA	US chapter of ICLEI; national network of local governments dedicated to sustainability, resilience, and climate action
Intergovernmental Panel on Climate Change (IPCC)	A United Nations body that assesses the science related to climate change

Local Climate Action Planning Process (LCAPP)	A previous community-wide climate planning process among Albemarle County, Charlottesville City, and University of Virginia, culminating in a 2011 report
mitigation	Lessening the contribution to climate change by reducing the amount of greenhouse gas emissions
net emissions	The balance of greenhouse gas emissions considering both the generation and sequestration of greenhouse gases
net zero	The amount of greenhouse gases emitted is balanced by an equivalent amount of greenhouse gases sequestered
Paris Climate Agreement	An international agreement by which participating countries endeavor to limit global warming to well below 2°C, ideally to 1.5°C
reforestation	Natural or intentional replenishing of forests or tree coverage in places depleted by deforestation
resiliency	The ability to cope with impacts and to change in order to be better prepared in the future
sequestration	The capture and long-term storage of greenhouse gases, for instance by vegetation and soils
vehicle miles traveled (VMT)	A term used in transportation planning as a measure of the amount of all travel for all vehicles in a given area over a given time period.

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47. It further assumes that the energy produced from the new solar farm replaces an equivalent amount of fossil fuel generated energy, which only occurs if overall energy demand remains constant.

48. Healthy ecosystems are complex systems with trophic cascades and dynamic feedback loops; linear causality in one direction is rare. This makes the isolation of variables required for quantitative measurement challenging, if not impossible. For example, trophic cascades are influential interactions that affect whole ecosystems in ways that are not perfectly linear. Albemarle County's *Biodiversity Action Plan* (2018) offers a simple example of a local trophic cascade with implications for local ecosystem health and carbon sequestration: Large numbers of white-tailed deer threaten local forests by overconsuming young trees. Historically, wolves limited deer populations, which in turn maintained one aspect of forest equilibrium. Human hunting and removal of wolf populations contributed to unchecked deer populations, which now inhibits tree growth (and forest carbon sequestration capacity) in some areas of the County. (See *Biodiversity Action Plan*, Albemarle County, June 2018, 39, https://www.albemarle.org/home/showdocument?id=950.) For a discussion of this phenomenon in the context of climate change and climate policy, see Charles Eisenstein, *Climate: A New Story* (Berkeley, CA: North Atlantic Books, 2018), 29-36.

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Community members gather to discuss climate action in the County, City, and UVA. Fall 2019.

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Unified Planning Work Program (UPWP)

Fiscal Year 2023
July 1, 2022 – June 30, 2023
DRAFT

Thomas Jefferson Planning District Commission
Charlottesville/Albemarle MPO

VDOT Virginia Department of Transportation

DRPT Virginia Department of Rail and Public Transportation

U.S. Department of Transportation Federal Highway Administration

FTA Federal Transit Administration

Preface

Prepared on behalf of the Charlottesville-Albemarle Metropolitan Planning Organization (CA-MPO) by the staff of the Thomas Jefferson Planning District Commission (TJPDC) through a cooperative process involving the City of Charlottesville and the County of Albemarle, Charlottesville Area Transit (CAT), Jaunt, University of Virginia (UVA), the Virginia Department of Transportation (VDOT), the Department of Rail and Public Transportation (DRPT), the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA).

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Table of Contents

PREFACE **2**

TABLE OF CONTENTS **3**

INTRODUCTION **4**

Purpose of the Unified Planning Work Program 4
Purpose of the Metropolitan Planning Organization 4
Relationship of UPWP to Long Range Transportation Planning 5
MPO Transportation Infrastructure Issues and Priorities 6
Public Participation/Title VI and Environmental Justice 6
Funding 7

HIGHLIGHTS OF FY22 UPWP **9**

FY23 UPWP ACTIVITIES BY TASK **11**

Task 1: Administration 11
Task 2: Long Range Transportation Planning 12
Task 3: Short Range Planning 15
Task 4: Contracted Projects and Studies 17

CA-MPO IN FY23 ..... **19**

PUBLIC PARTICIPATION PROCESS **20**

Review and Approval of Tasks 20
Online Posting 20
State Review 20
Review of Final FY23 UPWP 20

GLOSSARY OF ACRONYMS **21**

APPENDIX **233**

Attachment A: Tasks Performed by VDOT
Attachment B: Memorandum of Understanding
Attachment C: FTA Section 5303/PL Funding Breakdown
Attachment D: Resolution

INTRODUCTION

Purpose of the Unified Planning Work Program

The Unified Planning Work Program (UPWP) for transportation planning identifies all activities to be undertaken in the Charlottesville-Albemarle Metropolitan Planning Organization (CA-MPO) area for fiscal year 2022. The UPWP provides a mechanism for coordination of transportation planning activities in the region and is required as a basis and condition for all federal funding assistance for transportation planning by the joint metropolitan planning regulations of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

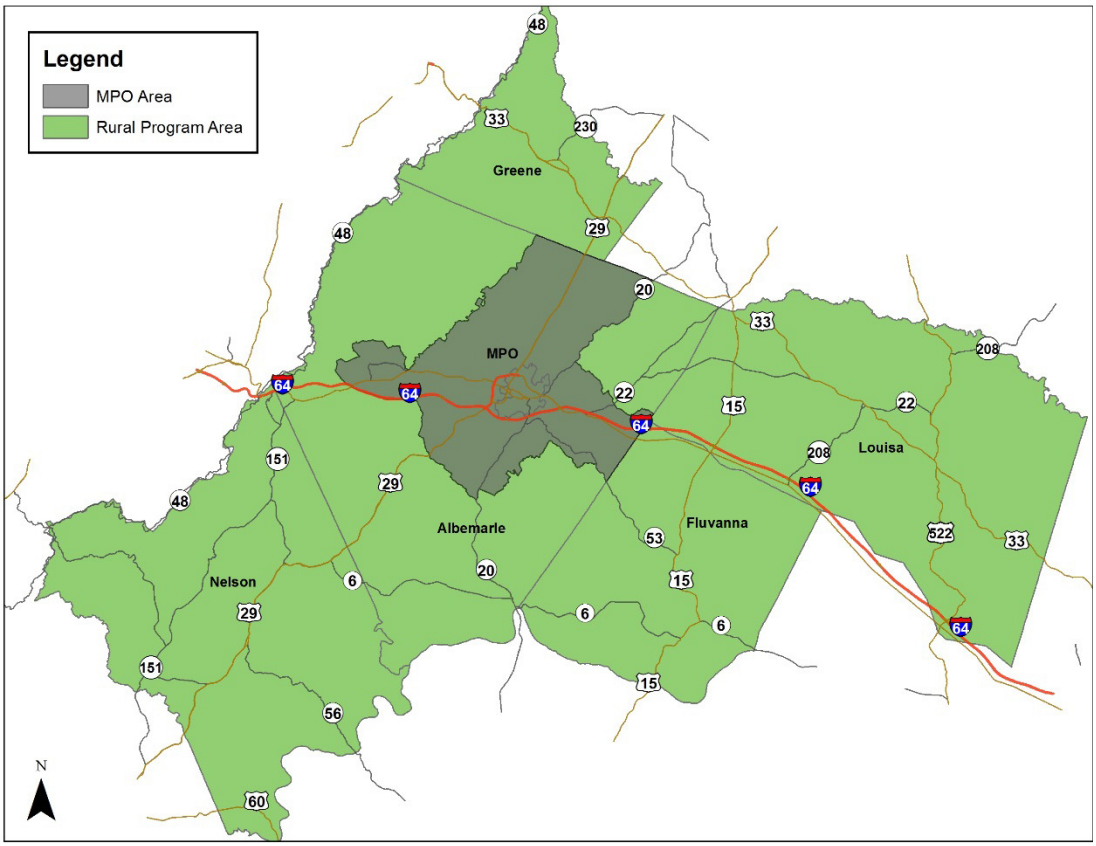
Purpose of the Metropolitan Planning Organization

CA-MPO provides a forum for conducting continuing, comprehensive, and coordinated (3-C) transportation decision-making among the City of Charlottesville, County of Albemarle, University of Virginia (UVA), Jaunt, Charlottesville Area Transit (CAT), Department of Rail and Public Transportation (DRPT) and Virginia Department of Transportation (VDOT) officials. In 1982, Charlottesville and Albemarle officials established the MPO in response to a federal mandate through a memorandum of understanding signed by the Thomas Jefferson Planning District Commission (TJPDC), Jaunt, VDOT and the two localities. The same parties adopted a new agreement on July 25, 2018 (Attachment B).

The MPO conducts transportation studies and ongoing planning activities, including the Transportation Improvement Program (TIP), which lists road and transit improvements approved for federal funding, and the 25-year long range plan for the overall transportation network, which is updated every five years. Projects funded in the TIP are required to be in the long-range plan.

The policy making body of the CA-MPO is its Board, consisting of two representatives from the City of Charlottesville and two representatives from Albemarle County. A fifth representative is from the VDOT Culpeper District. Non-voting members include DRPT, CAT, Jaunt, UVA, the Federal Highway Administration (FHWA), the Federal Aviation Administration (FAA), the Federal Transit Administration (FTA), and the Citizens Transportation Advisory Committee (CTAC). CA-MPO is staffed by the TJPDC, which works in conjunction with partner and professional agencies, to collect, analyze, evaluate and prepare materials for the Policy Board and MPO Committees at their regularly scheduled meetings, as well as any sub-committee meetings deemed necessary.

The MPO area includes the City of Charlottesville and the portion of Albemarle County that is either urban or anticipated to be urban within the next 20 years. In 2013, the MPO boundaries were updated and expanded to be more consistent with 2010 census data. The Commonwealth's Secretary of Transportation approved these new boundaries in March 2013. A map of the MPO area appears on the next page:



Relationship of UPWP to Long Range Transportation Planning

The MPO develops its UPWP each spring. It outlines the transportation studies and planning efforts to be conducted during the upcoming fiscal year (July 1 – June 30). The transportation studies and planning efforts outlined in the UPWP are guided by the regional transportation vision, goals, issues, and priorities developed through the extensive long-range planning process. Federal law requires the MPO to address eight basic planning factors in the metropolitan planning process. These eight planning factors are used in the development of any plan or other work of the MPO, including the Work Program, and are as follows:

- *Economic Vitality:* Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- *Safety:* Increase the safety of the transportation system for motorized and non-motorized users;
- *Security:* Increase the security of the transportation system for motorized and non-motorized users;
- *Accessibility/Mobility:* Increase the accessibility and mobility of people and freight;
- *Environmental Quality:* Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- *Connectivity:* Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- *Efficiency:* Promote efficient system management and operation; and,
- *Maintenance:* Emphasize the preservation of the existing transportation system.

MPO Transportation Infrastructure Issues and Priorities

In addition to the eight planning factors identified by FHWA and FTA, the issues listed below (in no particular order) have been identified by the MPO, its transportation planning partners, and the public throughout the metropolitan planning process. These issues are interconnected components of effective regional transportation planning, and collectively create the planning priorities facing the CA-MPO that will be addressed through the Work Program tasks and deliverables.

The following issues call for a need to:

- Expand and enhance transit, transportation demand management strategies including ridesharing services, and parking strategies to provide competitive choices for travel throughout the region;
- Improve mobility and safety for the movement of people and goods in the area transportation system;
- Improve strategies to make the community friendly to bicycles and pedestrians, particularly the mobility and safety of bicyclists and pedestrians, as well as access to transit, rail and transit/rail facilities;
- Take more visible steps to better integrate transportation planning with local government land use plans, with a goal of creating patterns of interconnected transportation networks and long-term multimodal possibilities such as non-vehicular commuter trails, intercity rail, and right-of-way corridors for bus ways;
- Ensure that new transportation networks are designed to minimize negative impacts on the community and its natural environment, and to save money;
- Encourage public involvement and participation, particularly addressing environmental justice and Title VI issues;[1]
- Improve the understanding of environmental impacts of transportation projects and identify opportunities for environmental mitigation; and,
- Seriously consider budget shortfalls and its impediments to transportation projects and work to tap alternative sources of funding.

Public Participation/Title VI and Environmental Justice

The MPO makes every effort to include minority, low-income, and limited-English speaking populations in transportation planning. Throughout this document there are several tasks that specifically discuss the MPO's efforts to include these populations. In addition to the UPWP, the MPO also maintains a Public Participation Plan and a Title VI/Environmental Justice Plan. Both plans specify that the MPO must post public notices in key locations for low-income, minority and limited-English speaking populations. Both plans state that the MPO must make all official documents accessible to all members of our community. The Title VI/Environmental Justice Plan also outlines a complaint process, should a member of these specialized populations feel as though they have been discriminated against. These documents work in tandem with the UPWP to outline the MPO's annual goals and processes for regional transportation planning.

[1] The 1994 Presidential Executive Order directs Federal agencies to identify and address the needs of minority and low-income populations in all programs, policies, and activities.

Funding

Two federal agencies fund the MPO's planning activity. This includes FHWA's funds, labeled as "PL," and FTA, labeled as "FTA." The FHWA funds are administered through VDOT, while FTA funds are administered through the DRPT. Funds are allocated to the TJPDC, to carry out MPO staffing and the 3c's process. The CA-MPO budget consist of 10% local funds, 10% state funds, and 80% federal funds.

VDOT receives federal planning funds from FHWA for State Planning and Research. These are noted with the initials "SPR." The total budget for SPR items reflects 80% federal funds and 20% state funds. *Attachment A* shows the tasks to be performed by VDOT's District Staff, utilizing SPR funds. VDOT's Transportation and Mobility Planning Division (TMPD), located in the VDOT Central Office, will provide statewide oversight, guidance and support for the federally-mandated Metropolitan Transportation Planning & Programming Process. TMPD will provide technical assistance to VDOT District Planning Managers, local jurisdictions, regional agencies and various divisions within VDOT in the development of transportation planning documents for the MPO areas. TMPD will participate in special studies as requested. DRPT staff also participates actively in MPO studies and committees, although funding for their staff time and resources is not allocated through the MPO process.

The following tables provide information about the FY22 Work Program Budget. These tables outline the FY22 Program Funds by Source and by Agency. The second table summarizes the budget by the three Work Program tasks: Administration (Task 1), Long Range Planning (Task 2), and Short-Range Planning (Task 3). More detailed budget information is included with the descriptions of the task activities.

FY23 Work Program: Funding by Source

Funding Source	Federal	State	Local	Total
	80%	*10%*	*10%*	*100%*
FY-23 PL Funding	$156,046	$19,505	$19,506	$195,057
FY-21 PL Passive Rollover	$28,370	$3,546	$3,546	$35,462
FY-22 PL Active Rollover	$56,000	$7,000	$7,000	$70,000
FY-23 PL Total	$240,416	$30,051	$30,052	$300,519
FY-23 FTA Funding	$102,026	$12,754	$12,754	$127,534
FY-22 FTA Active Rollover	$21,330	$2,666	$2,666	$26,662
FY-23 FTA Total	$123,356	$15,420	$15,420	$154,196
PL+FTA Total	***$363,772***	***$45,471***	***$45,472***	***$454,715***
VDOT SPR	$136,000	$17,000	$17,000	$170,000
Total FY23 Work Program	***$499,772***	***$62,471***	***$62,472***	***$624,715***

FY23 Work Program: Funding by Task

Funding Source	Task 1	Task 2	Task 3	Total
	12.98%	*65.27%*	*21.76%*	*100%*
PL+FTA Total	***$59,000***	***$296,789***	***$98,926***	***$454,715***
FY-23 PL Funding	$37,500	$108,557	$49,000	$195,057
FY-22 PL Active Rollover	$0	$35,462	$0	$35,462
FY-21 PL Passive Rollover	$0	$70,000	$0	$70,000
PL Total	**$37,500**	**$214,019**	**$49,000**	**$300,519**
FY-23 FTA Funding	$21,500	$56,108	$49,926	$127,534
FY-22 FTA Active Rollover	$0	$26,662	$0	$26,662
FTA Total	**$21,500**	**$82,770**	**$49,926**	**$154,196**
VDOT SPR	**$50,000**	**$60,000**	**$60,000**	**$170,000**
Total FY23 Work Program	***$109,000***	***$356,789***	***$158,926***	***$624,715***

Highlights of FY22 UPWP

The CA-MPO conducted several projects and initiatives in FY22. Below are highlights from that year, helping to give context for the FY21 activities.

SMART SCALE
The SMART SCALE process scores and ranks transportation projects, based on an objective analysis that is applied statewide. The legislation is intended to improve the transparency and accountability of project selection, helping the Commonwealth Transportation Board (CTB) to select projects that provide the maximum benefits for tax dollars spent. In FY22, CA-MPO staff implemented a new process to increase public engagement opportunities for SMART SCALE projects prior to preparing applications. CA-MPO staff worked with County, City, and VDOT staff to identify project applications early, and conducted an engagement process around one project that was identified as needing additional outreach. CA-MPO staff also coordinated with County, City, and VDOT staff to conduct an information session to share the planned project applications throughout the MPO area with the public and receive preliminary feedback. CA-MPO worked to prepare and submit pre-applications for projects that will be developed into full applications that will be completed in FY23.

North 29 Corridor Study
In FY22, MPO and PDC staff coordinated with VDOT to retain consultants to support an analysis of the northern portion of Route 29 in coordination with the Rural Transportation Work Program. Consultants examined the operation of key intersections throughout the corridor and recommended alternatives that could be implemented to improve operations based on their analysis.

Regional Transit Planning
MPO staff has continued their involvement in overseeing the Regional Transit Partnership. In FY22, staff continued their support of two DRPT grants to study transit service and operations within the MPO region. The feasibility study and implementation plan to expand transit service in Albemarle County was completed, and was successfully leveraged into an application for a demonstration grant to pilot micro-transit services in two areas of Albemarle County. The second study is to develop a Charlottesville Area Regional Transit Vision Plan and is still under development. This projects kicked off in FY21 and will continue into early FY23.

Transportation Improvement Program (TIP)
MPO staff maintained the FY21-FY24 TIP in collaboration with VDOT, DRPT, and the various MPO committees, finalizing the updated plan that was completed by the CA-MPO in FY22.

National Transportation Performance Measures
Performance Based Planning and Programming requirements for transportation planning are laid out in the Moving Ahead for Progress in the 21st century (MAP-21), enacted in 2012 and reinforced in the 2015 FAST Act, which calls for states and MPOs to adopt targets for national performance measures. Each MPO adopts targets for a set of performance measures, in coordination with the Virginia Department of Transportation (VDOT) and the Virginia Department of Rail and Public Transit (DRPT), and these measures are used to help in the

prioritization of TIP and Long-Range Transportation Plan projects. In FY22, the MPO Policy Board voted to support the statewide safety targets, which are reviewed every year.

Long Range Transportation Plan Scoping
MPO Staff began developing the scope for the next update to the Long Range Transportation Plan which will be undertaken beginning in FY23. As part of this scoping process, staff was able to successfully apply and be awarded a Growth and Accessibility Planning Technical Assistance grant through the Office of Intermodal Planning and Investment to develop a project prioritization process to incorporate into the process of developing the plan.

Title VI/Public Participation
In FY22, MPO Staff updated the Title VI plan in conformance with feedback received from VDOT. In FY23, staff will work to implement to new policies and processes that were identified as being required in that plan.

FY23 UPWP Activities by Task

Task 1: Administration

Total Funding: $59,000
PL Funding: $37,500
FTA Funding: $21,500

A) Reporting and Compliance with Regulations
PL Funding: $14,000
FTA Funding: $8,000
There are several reports and documents that the MPO is required to prepare or maintain, including:

- FY23 Unified Planning Work Program Implementation;
- FY24 Unified Planning Work Program Development;
- Monthly progress reports and invoices; and,
- Other funding agreements.

TJPDC staff will also provide for the use of legal counsel, accounting and audit services for administering federal and state contracts.

End Products:

- Complete annual Unified Planning Work Program (UPWP) process;
- Administer Grants and other funding;
- Execute project agreements, along with related certifications and assurances; and,
- Complete invoicing, monthly billing, and progress reports.

B) Staffing Committees
PL Funding: $14,000
FTA Funding: $8,000
TJPDC staff is responsible for staffing the MPO Policy Board and Committees. These efforts include preparation of agendas, minutes, and other materials for the committees listed below. The MPO continues to urge localities to appoint committee representatives from minority and low-income communities.

The CA-MPO staffs the following groups:

- MPO Policy Board;
- MPO Technical Committee;
- Regional Transit Partnership (RTP); and,
- Additional committees as directed by the MPO Policy Board.

End Products:

- Staff committees;
- Maintain memberships on committees;
- Issue public notices and mailings; and,
- Maintain committee information on the TJPDC/MPO Website.

C) Information Sharing

PL Funding: $9,500
FTA Funding: $5,500

The MPO functions as a conduit for sharing information between local governments, transportation agencies, state agencies, other MPOs, and the public. MPO staff will provide data and maps to State and Federal agencies, localities and the public, as needed. Staff will also contribute articles to TJPDC's newsletters and Quarterly Report. The CA-MPO will continually monitor and report on changes to Federal and State requirements related to transportation planning and implementation policies. Staff will attend seminars, meetings, trainings, workshops, and conferences related to MPO activities as necessary. Staff will assist local, regional and State efforts with special studies, projects and programs. One ongoing project is a regional housing analysis that will include use of transportation data around housing centers and travel time to key destinations. Staff will also conduct ongoing intergovernmental discussions; coordinate transportation projects; and attend/organize informational meetings and training sessions. MPO staff will attend additional meetings with local planning commissions and elected boards to maintain a constant stream of information with local officials to include transportation, transit and environmental topics.

End Products:

- Continue to review and update facts and figures;
- Provide technical data, maps and reports to planning partners;
- Attend local planning commission meetings as needed;
- Attend City Council and Board of Supervisors meetings as needed;
- Ensure adequate communication between Planning District Commission and MPO Policy Board;
- Analyze available data to identify whether MPO boundaries may expand into additional counties after the 2020 census;
- Continue coordination of ongoing meetings with staff from Charlottesville, Albemarle and UVA regarding bicycle and pedestrian projects
- Participate and maintain membership with the Virginia Association of MPOs (VAMPO);
- Participate and maintain membership with the American Association of MPOs (AMPO); and,
- Hold annual joint-MPO Policy Board meeting with the Staunton-Augusta-Waynesboro MPO and propose meetings with Lynchburg MPO.
- Maintain the TJPDC's social media; and,
- Maintain the MPO Website.

Task 2: Long Range Transportation Planning

Total Funding: $296,789
PL Funding: $214,019
FTA Funding: $82,770

A) 2050 Long Range Transportation Plan

PL Funding: $161,335
FTA Funding: $33,000

The CA-MPO will begin its development of the 2050 Long Range Transportation Plan (LRTP) in FY23. CA-MPO is planning to utilize rollover funding from FY21 and FY22 to procure a

consultant to support the development of the plan. In addition, CA-MPO staff was able to successfully apply for and receive a technical assistance grant through the Office of Intermodal Planning and Investment (OIPI) to support the development of a project prioritization process to be incorporated into the plan methodology. The development of the LRTP is anticipated to take two years.

End Products:

- Complete the existing conditions analysis to update area demographic data, understand transportation network operations and deficiencies, and compile existing studies and plans that have been completed within the MPO region since the previous LRTP;
- Collaborate with MPO stakeholders to review existing transportation system goals/objectives/measures and revise as needed;
- Develop a public engagement strategy and process to be implemented during the plan update;
- Develop a Scope of Work for consultant support, and procure consultants;
- And continue to work with the OIPI-procured technical consultants to develop a project prioritization process to be incorporated into the project prioritization process.

B) OneMap – Regional Bicycle and Pedestrian Infrastructure Map

PL Funding: $20,000
FTA Funding: $8,108

The OneMap project is an initiative that was identified during the development of the Jefferson Area Bicycle and Pedestrian Plan adopted in 2019. The purpose of OneMap is to develop a shared naming system for bicycle and pedestrian infrastructure, agreed upon definitions, and mapping format to develop a singular regional map showing all of the bicycle and pedestrian transportation infrastructure throughout the MPO region, including infrastructure in Albemarle County, the City of Charlottesville, and UVA. Developing OneMap has been taken up by both Charlottesville and Albemarle GIS and planning staff at different points since its original conception, but has lacked dedicated resources to complete.

End Products:

- An assessment of data to-date that has been compiled by localities and UVA;
- The compilation of all data into a uniformed format;
- Ongoing coordination meetings to determine purpose and goals for use of OneMap information;
- Processes to regularly update the information included in OneMap; and
- The development of a strategy for sharing the OneMap information either publicly or with stakeholders for ongoing use.

C) CA-MPO Boundary Analysis

PL Funding: $14,684
FTA Funding: $7,000

The 2020 Census data necessitates a need to review the MPO boundary and determine if any adjustments need to be made based on the most recent data and potential changes in rule-making for how MPO boundaries are determined. Staff will analyze the population data to determine if activity since the previous census merits adjustments to the MPO boundaries, meet with stakeholders to determine stakeholder preferences for adjustments if merited, and provide any

needed documentation to the Governor's office for consideration.

End Products:

- A map of the eligible boundary area based on 2020 Census data;
- A report summarizing a request to change the MPO boundaries, if merited by a review of data;
- Updates with the MPO Committees with findings;
- Coordination meetings with stakeholders if adjustments are merited;
- Formal request for action from the Governor's Office; and
- Any revisions to policies or by-laws needed based on outcomes from the boundary analysis.

D) Transit Governance Study

PL Funding: $0
FY23 FTA Funding: $5,000
FY22 Rollover FTA Funding: $26,662

The Thomas Jefferson Planning District Commission applied for a Technical Assistance grant from the Department of Rail and Public Transportation to conduct a governance study of the regional transit system. The governance study follows the completion of the Regional Transit Vision Plan and is intended to provide recommendations on the appropriate governance structure needed to implement the recommendations identified during the visioning process.

End Products:

- A review of the existing transit agencies and operations that participate in the regional transit system in the Thomas Jefferson Planning District;
- A review of the existing Regional Transit Authority legislation and an analysis of its strengths and weaknesses;
- A review of funding opportunities and recommended funding scenarios to support the implementation of recommendations identified in the Regional Transit Vision Plan; and
- Alternative governance structures that could be developed to oversee the implementation of recommendations identified as part of the regional transit visioning process.

E) On-call Services

PL Funding: $18,000
FTA Funding: $3,000

MPO, VDOT, and local staff will be available to conduct transportation studies, data collection, and planning efforts as requested by our planning partners, including projects focusing on transportation system improvements to improve mobility, safety, and security for area pedestrians, bicyclists, and motorists. All studies will ensure a working partnership with the surrounding area's businesses and neighborhoods. Costs will be incurred to identify and initiate contractual arrangements. MPO staff will also undertake the development of an on-call consultant program to provide efficient access to technical consultants as needed.

- Transportation study or planning effort, as requested, that can be used as a basis for implementing short-term and long-term transportation solutions; and
- Development of desired services that an on-call consultant program can provide; and
- A contract or contracts with consultant(s) procured to provide on-call services to the

MPO, TJPDC, and/or partner localities.

Task 3: Short Range Planning

Total Funding: $98,926
PL Funding: $49,000
FTA Funding: $49,926

A) Transportation Improvement Program (TIP)

PL Funding: $18,000
FTA Funding: $7,000

There are a number of federal-aid highway programs (i.e. administered by FHWA) which, in order to be eligible for use by the implementing agency, must be programmed in the TIP. Similarly, there are funds available under federal-aid transit programs (i.e. administered by FTA) which, in order to be used, must also be programmed in the TIP. In fact, any federally-funded transportation projects within the MPO must be included in the TIP, including transit agency projects. Project descriptions include: implementing agency; location/service area; cost estimates; funding sources; funding amounts actual or scheduled for allocation; type of improvement, and; other information, including a required overall financial plan.

The TIP is updated every three years, and this fiscal year, MPO staff will need to prepare the FY24-FY27 TIP to be adopted by the Policy Board in FY23.

End Products:

- Process the Annual Obligation Report;
- Process TIP amendments and adjustments;
- Monitor the TIP as necessary, ensuring compliance with federal planning regulations; and
- Prepare the FY24-FY27 TIP for adoption by the Policy Board.

B) SMART SCALE Planning and Support

PL Funding: $15,000
FTA Funding: $12,000

MPO staff will continue to work with VDOT, DRPT, City and County staff to identify appropriate funding sources for regional priority projects. In FY22, MPO staff conducted robust stakeholder and public engagement on one SMART SCALE project that was identified by the MPO Policy Board and prepared pre-applications for projects to be submitted in SMART SCALE Round 5. In FY23, staff will develop final applications for the MPO and TJPDC projects within the MPO region.

End Products:

- Gather information needed for SMART SCALE final applications;
- Coordinate sharing of economic development, and other relevant information, between the localities in support of SMART SCALE applications;
- Submit final funding applications;
- Review performance of applications submitted in Round 5 and review projects for consideration in Round 6; and
- Attend the Quarterly Transportation Meetings hosted by OIPI to ensure that MPO and locality staff have appropriate information about all funding programs.

C) Travel Demand Management (TDM), Regional Transit Partnership (RTP), and Bike/Ped Support

PL Funding: $4,000
FTA Funding: $8,500

The RideShare program, housed by the TJPDC, is an essential program of the MPO's planning process. The RTP has been established to provide a venue for continued communication, coordination, and collaboration between transit providers, localities and citizens. These programs, along with continued support for bike and pedestrian travel, support regional TDM efforts. TDM has been, and will continue to be, included in the long-range transportation planning process.

End Products:

- Continue efforts to improve carpooling and alternative modes of transportation in MPO;
- Staff Regional Transit Partnership meetings;
- Address immediate transit coordination needs;
- Formalize transit agreements;
- Improve communication between transit providers, localities and stakeholders;
- Explore shared facilities and operations for transit providers;
- Provide continued support to coordinating bike/ped planning activities between the City of Charlottesville, Albemarle County, UVA and with the rural localities;
- Continue to assess the need for a Regional Transit Authority; and
- Per the Strategic Plan, integrate TDM into all MPO recommendations and projects.

D) Performance Targets

PL Funding: $2,000
FTA Funding: $1,000

MPOs are asked to participate in the federal Transportation Performance Management process by coordinating with the state to set targets for their regions based on the state targets and trend data provided by the state. The CA-MPO will need to set and document the regional safety and performance targets adopted.

End Products:

- Prepare workbook and background materials for MPO committees and Policy Board to review;
- Facilitate discussion of performance targets with the MPO committees and Policy Board;
- Complete all documentation notifying the state of the adopted safety and performance targets; and
- Update the TIP when the FY23 safety and performance targets are adopted.

E) Regional Transit and Rail Planning

PL Funding: $0
FTA Funding: $5,000

MPO, VDOT, and local staff will be available to conduct transportation studies and planning efforts as requested by our planning partners, including projects focusing on transportation

system improvements to improve mobility, safety, and security for area pedestrians, bicyclists, and motorists. All studies will ensure a working partnership with the surrounding area's businesses and neighborhoods. Costs will be incurred to identify and initiate contractual arrangements.

End Products:

- Provide technical support and staffing to ensure the successful completion of two grants awarded by DRPT: the completion of the Regional Transit Visioning Plan and the Regional Transit Governance Study, if awarded; and
- Prepare and submit planning and implementation grant applications for transit and rail projects as opportunities are identified.

F) CTAC, Public Participation, and Title VI

PL Funding: $10,000
FTA Funding: $16,426

TJPDC staff will participate in and help develop community events and educational forums such as workshops, neighborhood meetings, local media, and the MPO web page. Staff will also participate in and act upon training efforts to improve outreach to underserved communities, such as low-income households, people with disabilities, minority groups, and limited English-speaking populations, including maintenance and implementation of the agency Title VI Plan. The TJPDC will continue to staff the Citizens Transportation Advisory Committee, which is an important conduit for receiving feedback and input on the efficacy of public outreach and engagement efforts.

End Products:

- Utilize a broad range of public engagement strategies to disseminate information on transportation planning efforts and processes;
- Develop programs to better inform the public about transportation planning and project development;
- Demonstrate responsiveness to public input received during transportation planning processes;
- Review Title VI/Environmental Justice Plan as needed;
- Review Public Participation Plan as needed;
- Implement processes in compliance with Title VI Plan, Environmental Justice Plan, and Public Participation Plan;
- Review information on website for accessibility and understandability;
- Continue to investigate methods to increase participation from historically underserved communities;
- Provide proper and adequate notice of public participation activities; and
- Provide reasonable access to information about transportation issues and processes in paper and electronic media.

Task 4: Contracted Projects and Studies

A) Coordinate and support the following projects:

- If awarded, coordinate, manage, and implement the Regional Transit Governance Study for the CAMPO and TJPDC region.
- Coordinate, manage, and implement the completion of the Regional Transit Visioning Plan for the CAMPO and TJPDC region, which will be completed early in FY 23.

B) **Explore opportunities for contracted project and studies.**
Topical areas may include:

- Environmental impacts of the local transportation system and mitigation strategies.
- Improving coordination with locality staff and elected officials.
- Implementing recommendations from the Albemarle Service Expansion Feasibility Study.

CA-MPO in FY23

Along with ongoing, required MPO tasks, staff anticipates work on the following efforts, some of which will carry-over from FY22.

SMART SCALE

- Explore ways to improve the success of funding for projects
- Strengthen applications submitted in Round 5 for final submission
- Monitor any changes and updates to the SMART SCALE process
- Integrate any changes in State process into MPO and local projects to strengthen funding applications

LRTP 2045

- Conduct annual review of Plan and performance targets as set forth in MAP-21
- Continue to coordinate procedures and efforts with neighboring MPOs

MPO Boundary Adjustment

- Follow outcomes from the 2020 Census and prepare for discussions regarding adjustments to the CA-MPO boundaries.

Other Studies

- Assess connections with other regions and MPOs
- Continue evaluation of the region's transit network and participate in creation of the transit strategic plan

Public Participation Process

Review and Approval of Tasks

MPO Policy Board:

- Initial Draft provided March 24th, 2022
- Final Approval May 25th, 2022

Online Posting

Posted as part of MPO meeting agenda for March 24th, 2022
Posted on TJPDC.org: May 2nd, 2022 for 15 day public comment period

State Review

Draft submittal for VDOT review/comment: March 7th, 2022
Draft submittal for DRPT review/comment: March 7th, 2022

Review of Final FY23 UPWP

MPO Technical Committee: May 17th, 2022
Citizen Transportation Advisory Committee (CTAC): May 18th, 2022
MPO Policy Board: May 25h, 2022

Glossary of Acronyms

The following transportation-related acronyms are used in this document:

3-C Planning Process	Federal Planning Process which ensures that transportation planning is continuing, comprehensive, and coordinated in the way it is conducted
AADT	Annual Average Daily Traffic
BRT	Bus Rapid Transit
CAT	Charlottesville Area Transit
CTAC	Citizens Transportation Advisory Committee
CTB	Commonwealth Transportation Board
DRPT	Virginia Department of Rail and Public Transportation
EV	Electric Vehicle
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year (refers to the state fiscal year July 1 – June 30)
GIS	Geographic Information System
JAUNT	Regional transit service provider to Charlottesville City, and Albemarle, Fluvanna, Louisa, Nelson, Buckingham, Greene and Orange Counties
LRTP	Long Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century (legislation governing the metropolitan planning process)
MPO	Metropolitan Planning Organization
NHS	National Highway System
PL	FHWA Planning Funding (used by MPO)
RideShare	Travel Demand Management (TDM) services housed at TJPDC that promote congestion relief and air quality improvement through carpool matching, vanpool formation, Guaranteed Ride Home, employer outreach, telework consulting and multimedia marketing programs for the City of Charlottesville, and Albemarle, Fluvanna, Louisa, Nelson, and Greene Counties.
RLRP	Rural Long Range Transportation Plan
RTA	Regional Transit Authority
RTP	Rural Transportation Program
SAFETEA-LU	Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (legislation that formerly governed the metropolitan planning process)
SOV	Single Occupant Vehicle
SPR	FHWA State Planning and Research Funding (used by VDOT to support MPO)
SYIP	Six Year Improvement Plan
TAZ	Traffic Analysis Zone
TDP	Transit Development Plan (for CAT and JAUNT)
TDM	Travel Demand Management
TIP	Transportation Improvement Program
TJPDC	Thomas Jefferson Planning District Commission

TMPD	VDOT Transportation and Mobility Planning Division
UPWP	Unified Planning Work Program (also referred to as Work Program)
UTS	University Transit Service
UVA	University of Virginia
VDOT	Virginia Department of Transportation
VMT	Vehicle Miles Traveled
Work Program	Unified Planning Work Program (also referred to as UPWP)

Appendix

Attachment A: Tasks Performed by VDOT
Attachment B: Memorandum of Understanding (2019)
Attachment C: FTA Section 5303/PL Funding Breakdown
Attachment D: Resolution

ATTACHMENT – A (PLACEHOLDER)

Charlottesville/Albemarle Urbanized Area
FY-2023 Unified Planning Work Program
VDOT Input

State Planning and Research (SPR) Funds Available	$ TBD

MEMORANDUM OF UNDERSTANDING ON METROPOLITAN TRANSPORTATION PLANNING RESPONSIBILITIES FOR THE CHARLOTTESVILLE-ALBEMARLE METROPOLITAN PLANNING AREA

This agreement is made and entered into as of _____, 2018 by and between the Commonwealth of Virginia hereinafter referred to as the State**,** the Charlottesville-Albemarle Metropolitan Planning Organization hereinafter referred to as the MPO; and the City of Charlottesville, the Charlottesville Area Transit Service, Albemarle County and JAUNT, Inc. hereinafter referred to as the Public Transportation Providers; and the Thomas Jefferson Planning District Commission serving as planning and administrative staff to the MPO, hereinafter referred to as the Staff.

WHEREAS, joint responsibilities must be met for establishing and maintaining a continuing, cooperative, and comprehensive (3-C) metropolitan transportation planning and programming process as defined and required by the United States Department of Transportation in regulations at 23 CFR 450 Subpart C, and

WHEREAS, the regulations at 23 CFR 450.314 direct that the MPO, State, and Public Transportation Provider responsibilities for carrying out the 3-C process shall be cooperatively determined and clearly identified in a written agreement.

NOW, THEREFORE, it is recognized and agreed that, as the regional transportation planning and programming authority in cooperation with the Staff, State and Public Transportation Provider, the MPO shall serve as the forum for cooperative development of the transportation planning and programming activities and products for the Charlottesville-Albemarle metropolitan area. It is also agreed that the following articles will guide the 3-C process. Amendments to this agreement may be made by written agreement among the parties of this agreement.

Article 1
Planning and Modeling Boundaries

The MPO is responsible as the lead for coordinating transportation planning and programming in the Charlottesville-Albemarle metropolitan transportation planning area (MPA) that includes the City of Charlottesville and a portion of Albemarle County. A map providing a visual and itemized description of the current MPA will be included on the MPO website. It is recognized that the scope of the regional study area used with the travel demand model may extend beyond the MPA. The boundaries of the MPA shall be subject to approval of the MPO and the Governor. The MPA shall, at a minimum, cover the U.S. Bureau of the Census' designated urbanized area and the contiguous geographic area expected to become urbanized within the 20 year long range plan forecast period. The boundaries will be reviewed by the MPO and the State at least after

each Census decennial update, to adjust the MPA boundaries as necessary. Planning funds shall be provided to financially support the MPO's planning activities under 23 CFR 450 and 49 CFR 613, and the latest applicable metropolitan planning funding agreement with the State for the metropolitan planning area. All parties to this agreement shall comply with applicable state and federal requirements necessary to carry out the provisions of this agreement.

Article 2
MPO Structure & Committees

The MPO shall consist of, at a minimum, a Policy Board and a standing advisory group, the MPO Technical Committee. The MPO shall establish and follow rules of order and record. The Policy Board and MPO Technical Committee each shall be responsible for electing a chairman with other officers elected as deemed appropriate. These committees and their roles are described below. Redesignation of an MPO is required when an existing MPO proposes to make substantial changes on membership voting, decisionmaking authority, responsibility, or the procedure of the MPO.

(A) The Policy Board serves as the MPO's policy board, and is the chief regional authority responsible for cooperative development and approval of the core transportation planning activities and products for the urbanized region including:

- the MPO budget and Unified Planning Work Program (UPWP); and
- the performance based Constrained Long Range Transportation Plan (CLRP); and
- the performance-based Transportation Improvement Program (TIP) including all regionally significant projects regardless of their funding source; and
- the adoption of performance measure targets in accord with federal law and regulations that are applicable to the MPO metropolitan planning area; and
- the reporting of targets and performance to be used in tracking progress toward attainment of critical outcomes for the MPO region [450.314]; and
- the Public Participation Plan

The Policy Board will consider, analyze as appropriate, and reflect in the planning and programming process the improvement needs and performance of the transportation system, as well as the federal metropolitan planning factors consistent with 23 CFR 450.306. The Policy Board and the MPO will comply and certify compliance with applicable federal requirements as required by 23 CFR 450.336, The Policy Board and the MPO also shall comply with applicable state requirements such as, but not limited to, the Freedom of Information Act requirements which affect public bodies under the Code of Virginia at 2.2-3700 et sequel.

Voting membership of the Policy Board shall consist of the following representatives, designated by and representing their respective governments and agencies:

- One representative participating on behalf of the State appointed by the Commonwealth of Virginia Secretary of Transportation, and
- Locally elected officials representing each County, independent City, Town or other appropriate representation within the metropolitan transportation planning area.

The individual voting representatives may be revised from time to time as designated by the respective government or agency. State elected officials may also serve on the MPO. Nonvoting members may be added or deleted by the Policy Board through a majority of all voting members. Voting and nonvoting designated membership of the Policy Board will be identified and updated on the MPO's website with contact information.

(B) The MPO Technical Committee provides technical review, supervision and assistance in transportation planning. Members are responsible for providing, obtaining, and validating the required latest official travel and socio-economic planning data and assumptions for the regional study area. Members are to ensure proper use of the data and assumptions by the MPO with appropriate travel forecast related models. Additional and specific responsibilities may be defined from time to time by the Policy Board. This committee consists of the designated technical staff of the Policy Board members, plus other interests deemed necessary and approved by the Policy Board. The designated voting and nonvoting membership of the MPO Technical Committee will be updated by the Policy Board, and will be identified online with contact information.

(C) Regular Meetings – The Policy Board and MPO Technical Committee shall each be responsible for establishing and maintaining a regular meeting schedule for carrying out respective responsibilities and to conduct official business. Meeting policies and procedures shall follow regulations set forth in 23 CFR §450.316. The regular meeting schedule of each committee shall be posted on the MPO's website and all meetings shall be open to the public. Any meetings and records concerning the business of the MPO shall comply with State Freedom of Information Act requirements.

Article 3
Unified Planning Work Program (UPWP)

Transportation planning activities anticipated within the Charlottesville-Albemarle Metropolitan Planning Area during the next one or two year period shall be documented and prepared annually by the Staff and the MPO Technical Committee in accord with 23 CFR 450.308 and reviewed and endorsed by the Policy Board. Prior to the expenditure of any funds, such UPWP shall be subject to the approval of the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and the State for funding the activities. Any changes in

transportation planning and related activities, regardless of funding source, shall be accomplished by amendments to the UPWP and adoption by the Policy Board according to the same, full procedure as the initial UPWP.

Article 4
Participation Plan

The Policy Board shall adopt and maintain a formal, written Public Participation Plan. The Participation Plan shall provide reasonable opportunity for involvement with all interested parties in carrying out the metropolitan area's transportation planning and programming process, providing reasonable opportunities for preliminary review and comment especially at key decision points. Initial or revised participation plan procedures shall undergo a minimum 45 day draft public review and comment period. The Participation Plan will be published and available on the MPO's website. The State may assist, upon request of the MPO and on a case by case basis, in the provision of documents in alternative formats to facilitate the participation of persons with limited English proficiency or visual impairment.

The MPO also shall, to the extent practicable, develop and follow documented process(es) that at least outline the roles, responsibilities and key points for consulting with adjoining MPOs, other governments and agencies and Indian Tribal or federal public lands regarding other planning activities, thereby ensuring compliance with all sections of 23 CFR 450.316. The process(es) shall identify procedures for circulating or providing ready access to draft documents with supporting materials that reference, summarize or detail key assumptions and facilitate agency consultations, and public review and comment as well as provide an opportunity for MPO consideration of such comments before formal adoption of a transportation plan or program.

Article 5
Inclusion and Selection of Project Recommendations

Selection of projects for inclusion into the financially Constrained Long-Range Plan (CLRP)

Recommended transportation investments and strategies to be included in the CLRP shall be determined cooperatively by the MPO, the State, and Public Transportation Provider(s). The CLRP shall be updated at least every five years, and address no less than a 20 year planning horizon. Prior to the formal adoption of a final CLRP, the MPO shall provide the public and other interested stakeholders (including any intercity bus operators) with reasonable opportunities for involvement and comment as specified in 23 CFR 450.316 and in accordance with the procedures outlined in the Participation Plan. The MPO shall demonstrate explicit consideration and response to public input received during the development of the CLRP.

Development of the Transportation Improvement Program (TIP)

The financially constrained TIP shall be developed by the MPO with assistance from the State and Public Transportation Provider(s). The TIP shall cover a minimum four year period and shall be updated at least every four years, or more frequently as determined by the State to coincide and be compatible with the Statewide Transportation Improvement development and approval process.

The State shall assist the MPO and Public Transportation Provider(s) in the development of the TIP by: 1) providing the project listing, planned funding and obligations, and 2) working collaboratively to ensure consistency for incorporation into the STIP. The TIP shall include any federally funded projects as well as any projects that are regionally significant regardless of type of funding. Projects shall be included and programmed in the TIP only if they are consistent with the recommendations in the CLRP. The State and the Public Transportation Provider(s), assisted by the state, shall provide the MPO a list of project, program, or grouped obligations by year and phase for all the State and the public transportation projects to facilitate the development of the TIP document. The TIP shall include demonstration of fiscal constraint and may include additional detail or supporting information provided the minimum requirements are met. The MPO shall demonstrate explicit consideration and response to public input received during the development of the TIP.

Once the TIP is compiled and adopted by the Policy Board the MPO shall forward the approved TIP, MPO certification, and MPO TIP resolution to the State. After approval by the MPO and the Governor, the State shall incorporate the TIP, without change, into the STIP. The incorporation of the TIP into the STIP demonstrates the Governor's approval of the MPO TIP. Once complete, the STIP shall be forwarded by the State to FHWA and FTA for review and approval.

Article 6
Financial Planning and Programming, and Obligations

The State, the MPO and the Public Transportation Provider(s) are responsible for financial planning that demonstrates how metropolitan long-range transportation plans and improvement programs can be implemented consistent with principles for financial constraint. Federal requirements direct that specific provisions be agreed on for cooperatively developing and sharing information for development of financial plans to support the metropolitan transportation plan (23 CFR 450.324) and program (23 CFR 450.326), as well as the development of the annual listing of obligated projects (23 CFR 450.334).

Fiscal Constraint and Financial Forecasts

The CLRP and TIP shall be fiscally constrained pursuant to 23 CFR 450.324 and 450.326 respectively with highway, public transportation and other transportation project costs inflated to reflect the expected year of expenditure. To support the development of the financial plan for the CLRP, the State shall provide the MPO with a long-range forecast of expected state and federal transportation revenues

for the metropolitan planning area. The Public Transportation Provider(s), similarly, shall provide information on the revenues expected for public transportation for the metropolitan planning area. The financial plan shall contain system-level estimates of the costs and the revenue sources reasonably expected to be available to adequately operate and maintain the federal aid highways and public transportation. The MPO shall review the forecast and add any local or private funding sources reasonably expected to be available during the planning horizon. Recommendations on any alternative financing strategies to fund the projects and programs in the transportation plan shall be identified and included in the plan. In the case of new funding sources, strategies for ensuring their availability shall be identified and documented. If a revenue source is subsequently found removed or substantially reduced (i.e., by legislative or administrative actions) the MPO will not act on a full update or amended CLRP and/or TIP that does not reflect the changed revenue situation.

Annual Obligation Report

Within 90 days after the close of the federal fiscal year the State and the Public Transportation Provider(s) shall provide the MPO with information for an Annual Obligation Report (AOR). This report shall contain a listing of projects for which federal highway and/or transit funds were obligated in the preceding program year. It shall include all federally funded projects authorized or revised to increase obligations in the preceding program year, and at a minimum include TIP project description and implementing agency information and identify, for each project, the amount of Federal funds requested in the TIP, the Federal funding that was obligated during the preceding year, and the Federal funding remaining and available for subsequent years. The MPO shall publish the AOR in accordance with the MPO's public participation plan criteria for the TIP.

Article 7
Performance-Based Metropolitan Planning Process Responsibilities

The MPO

The MPO, in cooperation with the State and Public Transportation Provider(s), shall establish and use a performance-based approach in carrying out the region's metropolitan transportation planning process consistent with 23 CFR 450.306, and 23 CFR 490. The MPO shall integrate into the metropolitan transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in applicable transportation plans and transportation processes, as well as any plans developed under 49 U.S.C. Chapter 53 by providers of public transportation required as part of a performance-based program. The MPO shall properly plan, administratively account for and document the MPO's performance based planning activities in the MPO UPWP.

The MPO shall develop, establish and update the federally required transportation performance targets that apply for the MPO metropolitan planning area in coordination with the State(s) and the Public Transportation Provider(s) to the maximum extent practicable. The Policy Board shall adopt federal targets of the MPO after reasonable opportunity for and consideration of public review and comment, and not later than 180 days after the date on which the relevant State(s) and Public Transportation Provider(s) establish or update the Statewide and Public Transportation Provider(s) performance targets, respectively. No later than 21 days of the MPO deadline for the selection of new or updated targets, for each federally required performance measure, the MPO shall formally notify the state(s) and Public Transit Provider(s) of whether the MPO: 1) has selected "to contribute toward the accomplishment" of the statewide target selected by the state, or 2) has identified and committed to meet a specific quantitative target selected by the Public Transportation Provider(s) or the MPO for use in the MPO's planning area of Virginia.

In the event that a Virginia MPO chooses to establish a MPO-specific federal highway or transit performance measure quantitative target, then the Virginia MPO shall be responsible for its own performance baseline and outcome analyses, and for the development and submittal of special report(s) to the State for the MPO-specific highway and/or transit performance measure(s). Reports from the Virginia MPOs that choose their own MPO-specific highway or transit target(s) will be due to the State no later than 21 days from the date that the MPO is federally required to establish its performance target for an upcoming performance period. The special report(s) for each new or updated MPO-specific highway target shall be sent from the Virginia MPO to the VDOT Construction District Engineer. The special report(s) for each new or updated MPO-specific transit target shall be sent from the Virginia MPO to the Department of Rail and Public Transportation. The special report(s) shall include summary documentation on the performance analyses calculation methods, baseline conditions, quantitative target(s), and applicable outcome(s) regarding the latest performance period for the MPO-specific performance measure(s). For the Virginia MPOs which agree to plan and program projects "to contribute toward the accomplishment" of each of the statewide performance measure targets, the State will conduct the performance analyses for the MPO's metropolitan planning area in Virginia and provide online summaries for each measure such that no special report to the State will be due from these MPOs.

If a Virginia MPO chooses to contribute to achieving the statewide performance target, the MPO shall, at minimum, refer to the latest performance measure analyses and summary information provided by the State, including information that was compiled and provided by the State on the metropolitan planning area's performance to inform the development of appropriate performance targets. The MPO may use State performance measures information and targets to update the required performance status reports and discussions associated with each MPO CLRP and/or TIP update or non-administrative modification. The MPO's

transportation performance targets, recent performance history and status will be identified and considered by the MPO's Policy Board in the development of the MPO CLRP with its accompanying systems performance report required per 23 CFR 450.324, as well as in the development of the TIP with its accompanying description of the anticipated effect of the TIP toward achieving the performance targets, linking their TIP investment priorities to the performance targets as required per 23 CFR 450.326. The MPO CLRP and its accompanying systems performance report, and/or the MPO TIP and its accompanying description of the anticipated effect of the TIP, shall directly discuss or reference the latest State performance measure status information available and posted online by the State regarding the metropolitan planning area at the time of the MPO's Technical Committee recommendation of the draft MPO long range plan or draft TIP.

The State

Distinct from the roles of the metropolitan Public Transportation Provider(s) with federal performance measures on transit (transit is the subject of the next section), the State is the lead party responsible for continuous highway travel data measurement and collection. The State shall measure, collect highway data and provide highway field data for use in federal highway related performance measure analyses to inform the development of appropriate federal performance targets and performance status reports. MPO information from MPO-specific data analyses and reports might not be incorporated, referenced or featured in computations in the Virginia statewide performance data analyses or reports. The State shall provide highway analyses for recommending targets and reporting on the latest performance history and status not only on a statewide basis but also on the Virginia portions of each of Virginia's MPO metropolitan planning areas, as applicable. The findings of the State's highway performance analyses will inform the development or update of statewide targets.

Information regarding proposed statewide targets for highway safety and non-safety federal performance measures will be presented to the Commonwealth Transportation Board (CTB) at the CTB's public meetings and related documents, including, but not limited to, presentations and resolutions, will be made publicly available on the CTB website. The MPO and Public Transportation Provider(s) shall ensure that they inform the State of any special data or factors that should be considered by the State in the recommendation and setting of the statewide performance targets.

All statewide highway safety targets and performance reports are annually due from the State to FHWA beginning August 31, 2017 and each year thereafter. The MPO shall report their adopted annual safety performance targets to the State for the next calendar year within 180 days from August 31st each year. The statewide highway non-safety performance two and/or four year targets are due for establishment from the State initially no later than May 20, 2018 for use with the state biennial baseline report that is due by October 1, 2018. The subsequent state biennial report, a mid-period report for reviews and possible target

adjustments, is due by October 1, 2020. Thereafter, State biennial updates are cyclically due by October 1st of even numbered years with a baseline report to be followed in two years by a mid-period report. Using information cooperatively compiled from the MPOs, the State and the Public Transportation Providers, the State shall make publicly available the latest statewide and (each) MPO metropolitan planning area's federally required performance measure targets, and corresponding performance history and status.

The Public Transportation Provider(s)

For the metropolitan areas, Public Transportation Providers are the lead parties responsible for continuous public transit data measurement and collection, establishing and annually updating federal performance measure targets for the metropolitan transit asset management and public transportation agency safety measures under 49 U.S.C. 5326(c) and 49 U.S.C. 5329(d), respectively, as well as for updates that report on the public transit performance history and status. The selection of the performance targets that address performance measures described in 49 U.S.C. 5326(c) and 49 U.S.C. 5329(d) shall be coordinated, to the maximum extent practicable, between the MPO, the State and Public Transportation Provider(s) to ensure consistency with the performance targets that Public Transportation Providers establish under 49 U.S.C. 5326(c) and 49 U.S.C. 5329(d). Information from the Public Transportation Provider(s) on new or updated public transit asset management and safety performance targets, and data-reports on the public transit performance history and status relative to the targets is necessary for use and reference by the affected State(s) and the MPO(s). The Public Transportation Provider(s) that receive federal funds shall annually update and submit their transit asset management targets and data-reports to the FTA's National Transit Database consistent with FTA's deadlines based upon the applicable Public Transportation Provider's fiscal year. The Public Transportation Provider(s) shall notify, and share their information on their targets and data-reports electronically with the affected State(s) and MPO(s) at the time that they share the annual information with FTA, and coordinate, as appropriate, to adequately inform and enable the MPO(s) to establish and/or update metropolitan planning area transit target(s) no later than 180 days thereafter, as required by performance-based planning process.

IN WITNESS WHEREOF, the parties have executed this agreement on the day and year first written above.

Chair
Charlottesville-Albemarle
Metropolitan Planning Organization

WITNESS BY _____
DATE 7/25/18

_____

Secretary of Transportation
Commonwealth of Virginia

WITNESS BY _____
DATE _____

_____

City Manager
City of Charlottesville for
Charlottesville Area Transit

WITNESS BY _____
DATE 1/2/2019

_____

Executive Director
Jaunt, Inc.

WITNESS BY _____
DATE 12/10/2018

_____

Executive Director
Thomas Jefferson
Planning District Commission

WITNESS BY _____
DATE 8-3-18

County Executive
Albemarle County

WITNESS BY Cheryl Skeen
DATE 12/17/2018

Attachment C: FTA Section 5303 and PL Funding Breakdown

FY23			
	PL	FTA	Total
Task 1: Administration	**$37,500**	**$21,500**	**$59,000**
Reporting and Compliance with Regulations	$14,000	$8,000	$22,000
Staffing Committees	$14,000	$8,000	$22,000
Information Sharing	$9,500	$5,500	$15,000
Task 2: Long Range Transportation Planning	**$214,019**	**$82,770**	**$296,789**
2050 LRTP	$161,335	$33,000	$194,335
OneMap	$20,000	$8,108	$28,108
MPO Boundary Analysis	$14,684	$7,000	$21,684
Transit Governance Study	$0	$31,662	$31,662
On-call Services	$18,000	$3,000	$21,000
Task 3: Short Range Transportation Planning	**$49,000**	**$49,926**	**$98,926**
TIP	$18,000	$7,000	$25,000
SMART SCALE	$15,000	$12,000	$27,000
RTP, TDM, and Bike/Ped Support	$4,000	$8,500	$12,500
Performance Targets	$2,000	$1,000	$3,000
Regional Transit & Rail Planning	$0	$5,000	$5,000
CTAC/Public Outreach/Title VI	$10,000	$16,426	$26,426
TOTAL	**$300,519**	**$154,196**	**$454,715**

Charlottesville-Albemarle Metropolitan Planning Organization
POB 1505, 401 E. Water Street, Charlottesville, VA 22902 www.tjpdc.org
(434) 979-7310 phone ● info@tjpdc.org email

Resolution of Approval for the CA-MPO's
Fiscal Year 2023 Unified Planning Work Program (UPWP)

WHEREAS, The Unified Planning Work Program (UPWP) provides a mechanism for coordinating transportation planning activities in the region, and is required as a basis and condition for all federal funding assistance for transportation planning by the joint metropolitan planning regulations of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA); and

WHEREAS, the CA-MPO provides a forum for conducting a continuing, comprehensive, and coordinated (3-C) transportation decision-making process among the City, County, UVA, JAUNT, CAT, DRPT and VDOT officials; and

WHEREAS, the UPWP identifies all activities to be undertaken in the Charlottesville-Albemarle Metropolitan Planning Organization (CA-MPO) area for fiscal year 2023; and

WHEREAS, the MPO Technical Committee reviewed the draft UPWP at their regular meeting, on May 17th, 2022; and

WHEREAS, the Citizen Transportation Advisory Committee (CTAC) reviewed the draft UPWP at their regular meeting, on May 18th, 2022; and

WHEREAS, staff from the Virginia Department of Transportation (VDOT) and Department of Rail and Public Transportation (DRPT) reviewed and provided amendments to the draft UPWP; and

WHEREAS, the draft UPWP was posted on the CA-MPO website and the public was provided with an opportunity to comment on the plan consistent with the Public Engagement Plan adopted on July 28th, 2021.

NOW, THEREFORE BE IT RESOLVED that the Charlottesville-Albemarle Metropolitan Planning Organization (MPO) approves the Fiscal Year 2023 Unified Planning Work Program and associated budget.

Adopted this 25th day of May, 2022 by the Charlottesville-Albemarle Metropolitan Planning Organization.

ATTESTED:

Ned Gallaway
Chair
Charlottesville-Albemarle MPO

Christine Jacobs
Executive Director
Charlottesville-Albemarle MPO