

# Charles County



# Climate Action Plan

## WELCOME

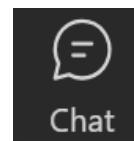
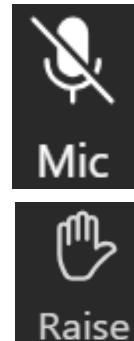
Stakeholder Meeting: Business,  
Industry, and Agriculture



# Housekeeping

## Let's Talk About It Climate Action Planning in Charles County

-  This meeting is being recorded. By staying in this session, you consent to being recorded.
-  All participants will be automatically muted when the webinar begins. Please raise your hand to ask a question and we will unmute your microphone
-  Please use the chat function to ask questions during the session.
-  If you experience technological issues during the meeting, please message **Nicole Rodi** via chat or email, **Nicole.rodi@mbakerintl.com**.



**To Participate in Interactive Polling Visit:**

**[www.menti.com](https://www.menti.com)**

**Enter:  
7606 1653**

**Scan QR Code Below**



**Click the Link in the Chat**

- ✓ Introductions: 10 mins.
- ✓ Climate Action Plan (CAP) Background: 10 mins.
- ✓ GHG and Vulnerability Analysis Overview: 10 mins.
- ✓ Draft Strategies Presentation and Discussion: 55 mins.
- ✓ Resources and Meeting Adjourn: 5 mins.

# Meet the Team

Let's Talk About It  
Climate Action Planning in Charles County



## Climate Action Plan Project Manager



Metropolitan Washington  
Council of Governments

## Contracting Authority



Project Team  
Lead

Greenhouse Gas  
Analyses

Resilience  
Analyses

Financial Analyses

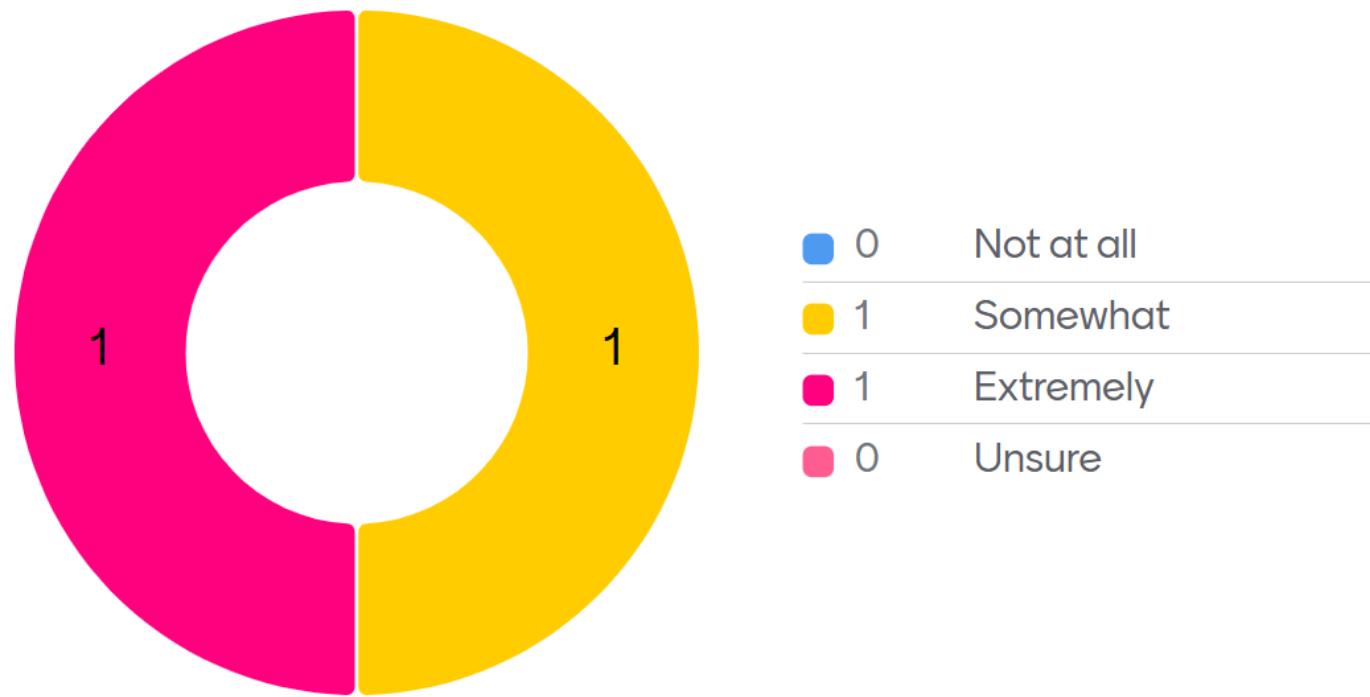
Community  
Engagement

**HELLO**  
my name is...

**Please enter your  
name and  
organization(s) /  
affiliation(s) in the  
chat.**

Getting to Know Each Other

To what extent do you believe climate change is already affecting Charles County?



Getting to Know Each Other

What industry or sector best represents your business / operation / group?

Agriculture

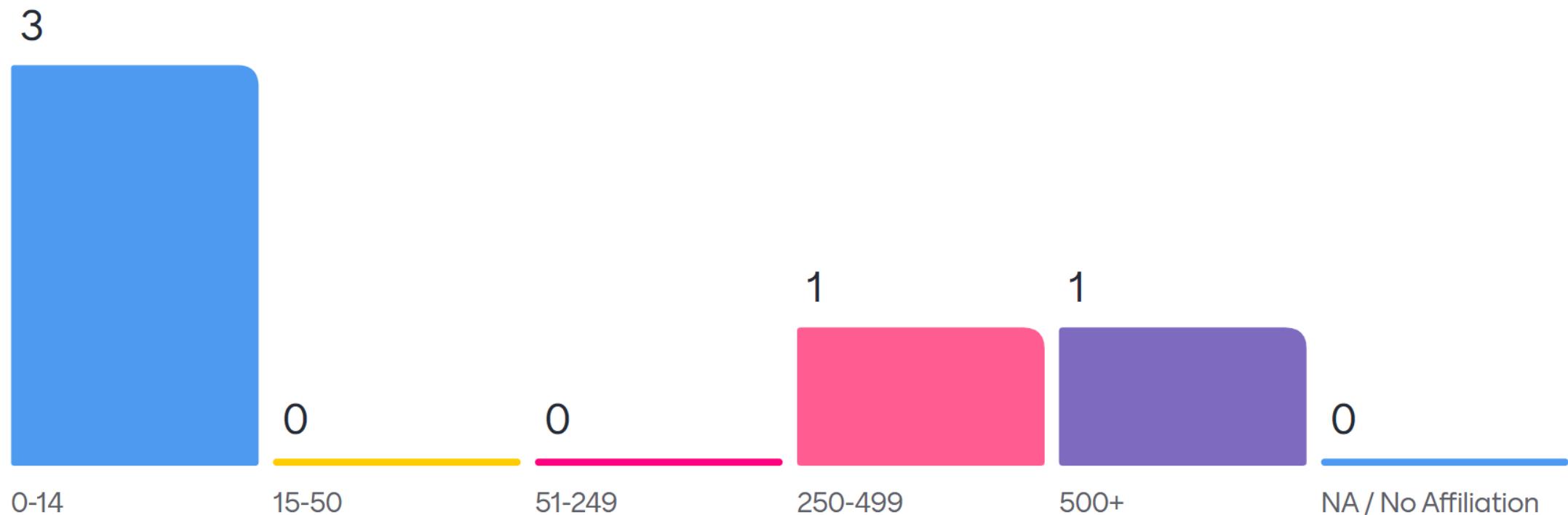
State Gov.

Agriculture

Private Sector.

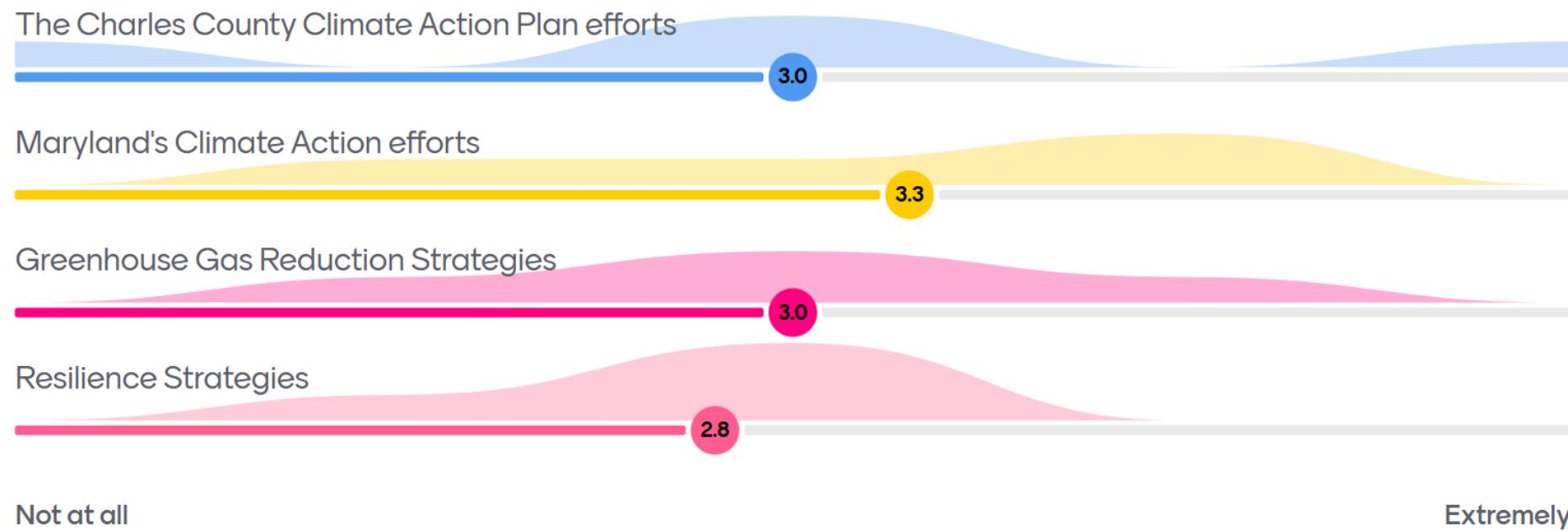
Getting to Know Each Other

## How many employees does your business / operation / group have?



Climate Awareness & Engagement

## How familiar are you with the following



# What is Climate Action Planning?

Let's Talk About It  
Climate Action Planning in Charles County

The **Climate Action Plan (CAP)** serves as a comprehensive roadmap to guide Charles County through a process of reducing its Greenhouse Gas (GHG) emissions, mitigate and respond to climate change, improve the environment, and protect communities.

## What is in a CAP?

- Vision / Goals
- Existing & Future Conditions
- Policy & Program Recommendations (Strategies)
- Provides Actionable Strategies for Incorporation into existing processes / documents, e.g., zoning and comp plan

CAP Strategy Analyses Include  
**High-Level** Evaluation of the following:



**Timeline:** Short, Mid, Long



**Cost:** Low, Med., High, and Potential Funding Sources



**Responsible Parties**



**Impact:** Low, Med., High Potential Tracking Metrics

1

## Community-Wide Resilience and GHG Mitigation Action Plan

Residential and Commercial buildings, Industrial facilities, all Vehicles in Community, etc.

**To view the community strategies, visit:**

<https://www.charlescountymd.gov/home/showpublisheddocument/28512>



2

## Government Operations Resilience and GHG Mitigation Action Plan

- Facilities the County or other units of government manage to provide essential public services e.g., buildings, fleet vehicles, wastewater treatment
- Other non-governmental critical services facilities (medical, power, etc.)



**To view the government operations strategies, visit:**

<https://www.charlescountymd.gov/home/showpublisheddocument/2851>



**1 Develop Inventories**  
Analyze Existing Conditions



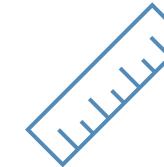
**2 Develop Business As Usual (BAU) Forecasts**  
Future Conditions Based on What we "Know" Today



**3 Stakeholder & Public Outreach**  
To Develop CAP Goals & Strategies



**4 Establish Implementable, Time-Oriented Strategies**  
Analyze Goals and Strategies



**5 Establish Metrics**  
To Track Progress



**6 Develop CAP Document**  
To Define an Actionable Approach



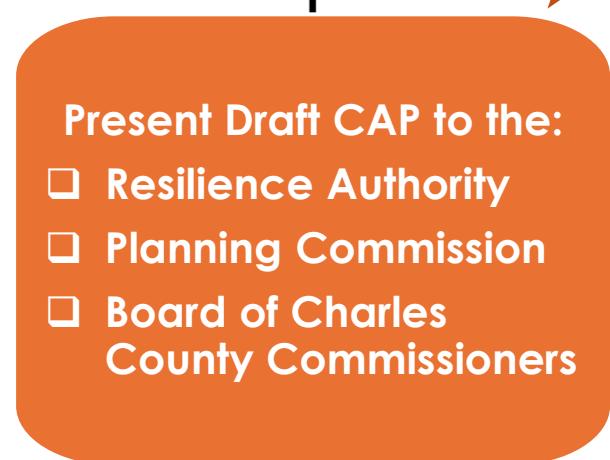
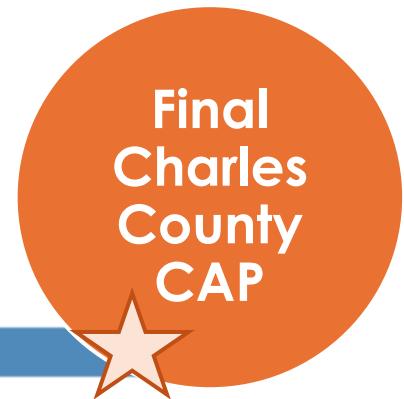
**7 An On-Going Effort**  
Regular Progress Updates through our Communications Platforms



**Spring**

**Summer**

**Fall**



Join at [menti.com](https://menti.com) | Use vote code **5410 9764**

Climate Awareness & Engagement

What initiatives has your business / agency / group implemented related to climate action?

All responses to your question will be shown here

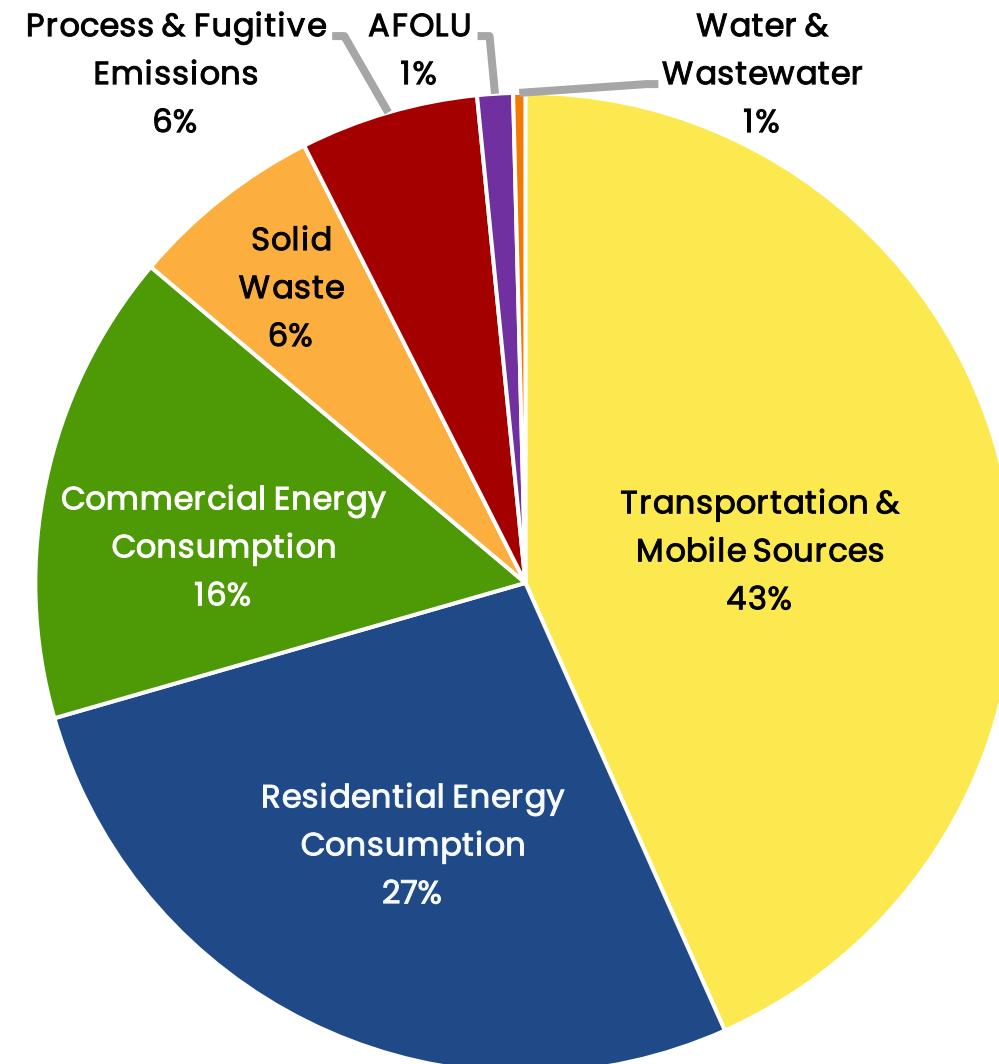
Each response can be up to 200 characters long

Turn on voting to let participants vote for their favorites

# Where do GHG Emissions Come From?

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Climate Action Planning in Charles County

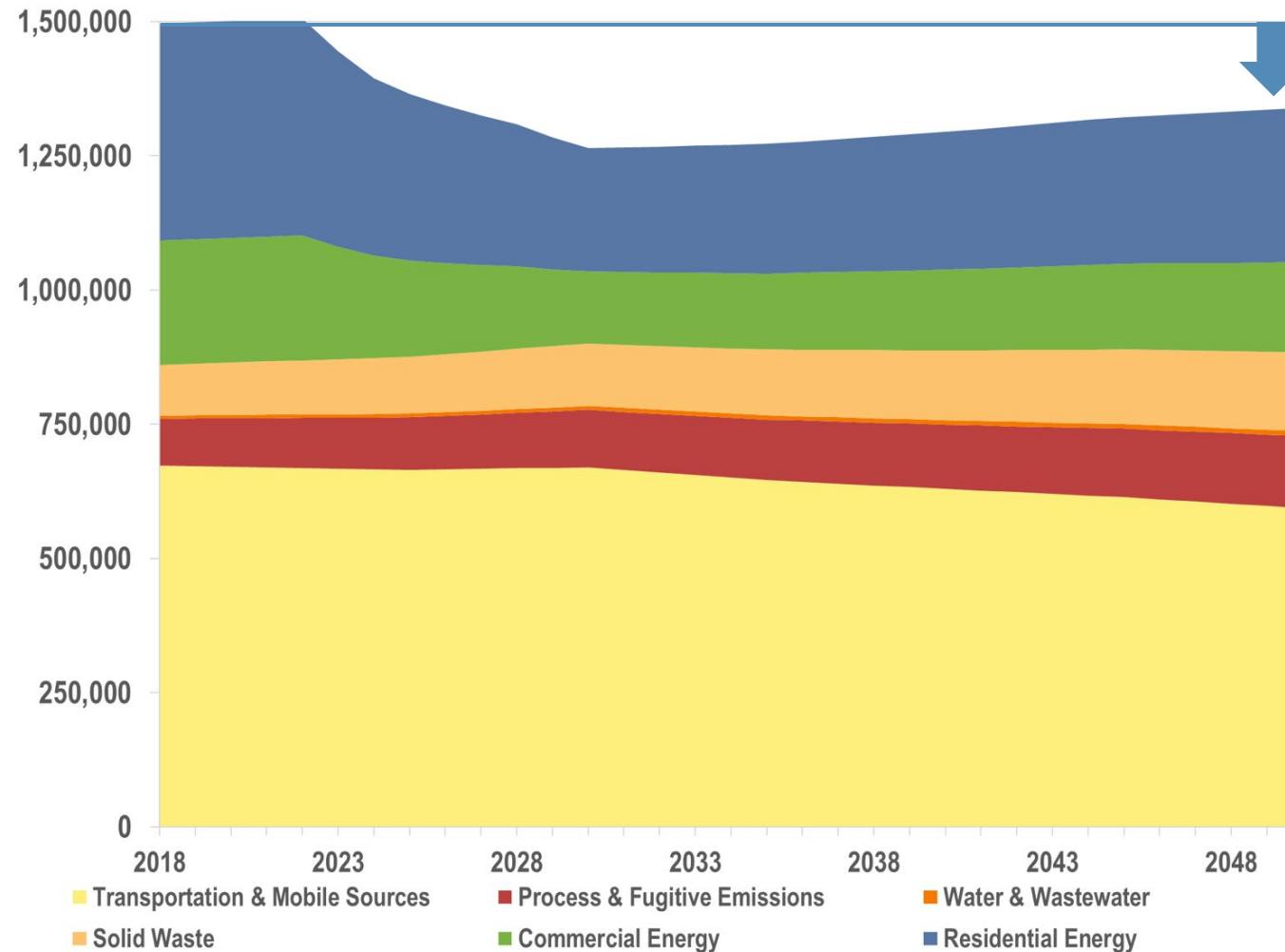
- **86%** from Transportation and Energy Use
- **AFOLU** = Agriculture, Forestry, and Other Land Use
- **Process & Fugitive Emissions** = Industrial process and manufacturing emissions as well as leaks from equipment or pipelines



\* Charles County emissions inventory based on 2018 data available from MWCOG – to be updated with 2023 data upon release

# What is Business-As-Usual?

## Let's Talk About It Climate Action Planning in Charles County



**10% reduction from 2018**

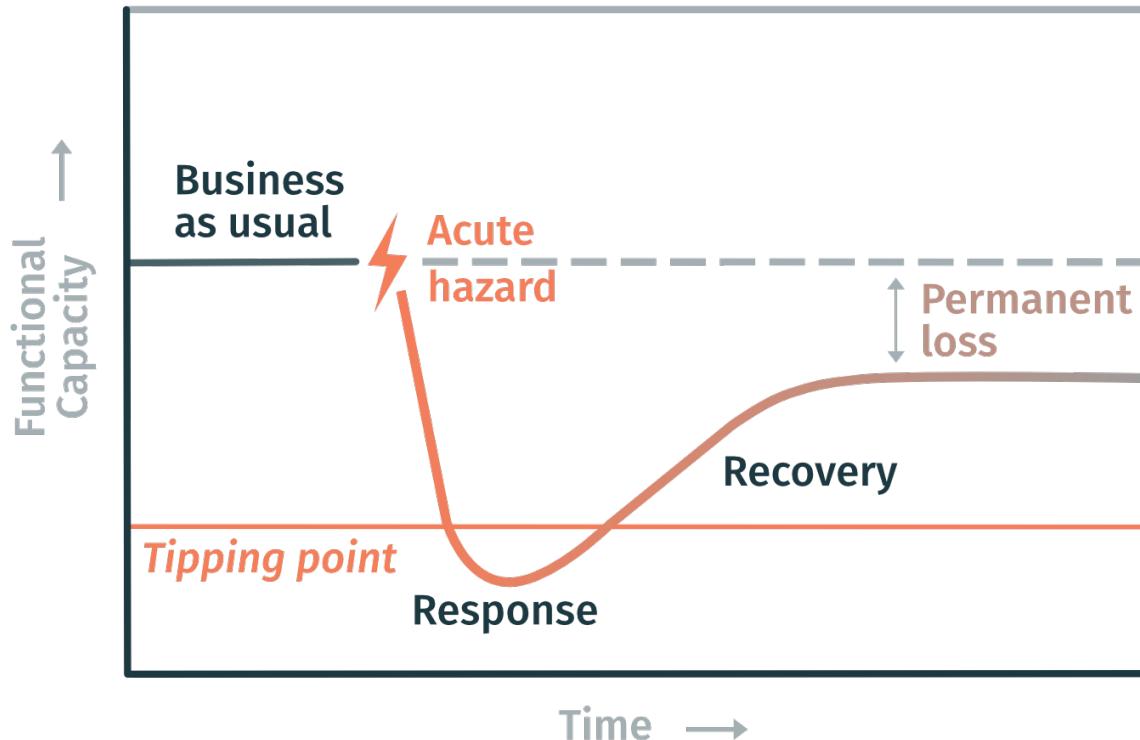
- **MWCOG** cooperative forecast for Charles County.
- **National Renewable Energy Laboratory (NREL) Cambium** projections for electricity emissions factors through 2030. Electricity emissions factor is constant from 2030 onwards.
- **Federal** vehicle efficiency standards through 2050.

# Understanding Resilience

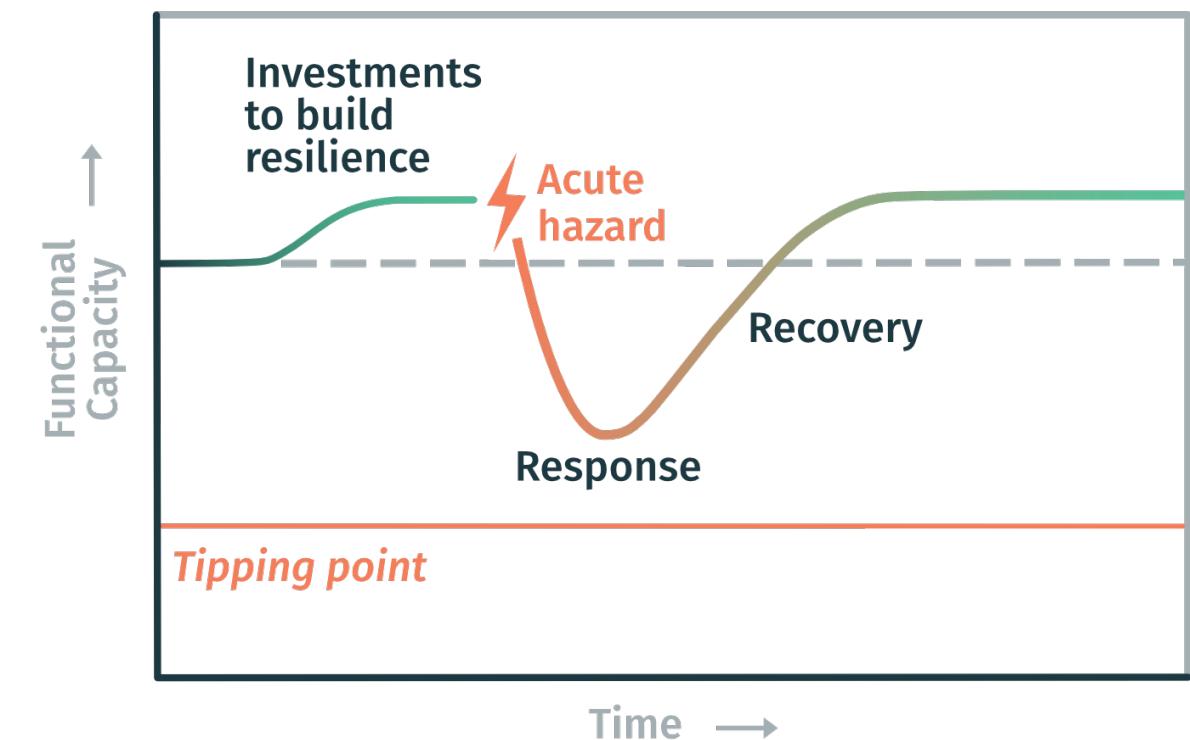
Let's Talk About It  
Climate Action Planning in Charles County

"The capacity of a community, business, or natural environment to **prevent, withstand, respond to, and recover from** a disruption."

## Less Resilient



## More Resilient



From U.S. Climate Resilience Toolkit, adapted from M.E. Hynes, B. Ross and CARRI (2008); White et al. (2015)

# Understanding Vulnerability

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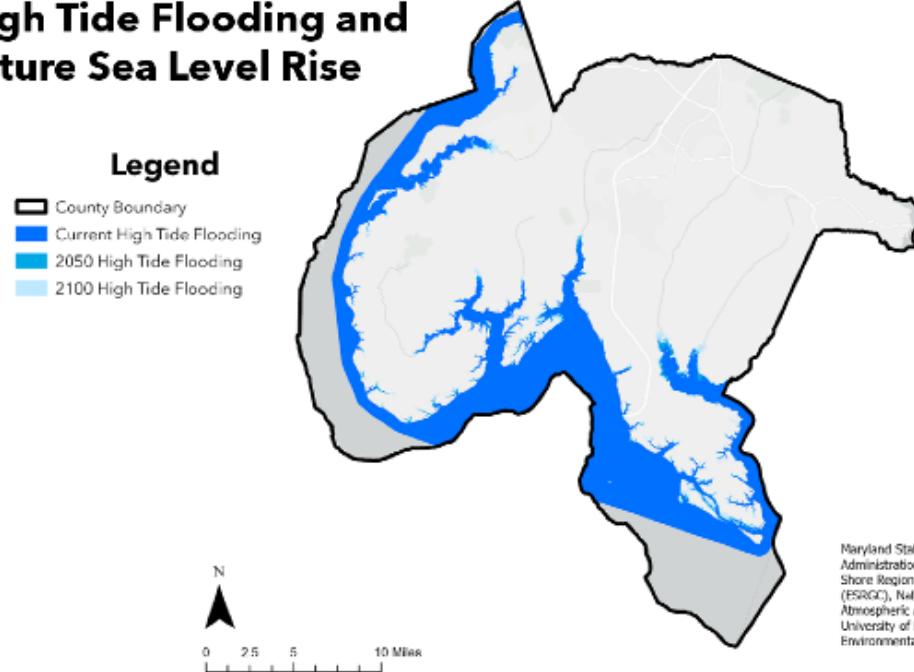
All three homes are exposed to flooding, but their level of vulnerability varies.

# Resilience Assessment – Hazards & Assets

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Climate Action Planning in Charles County

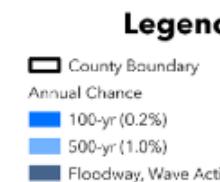
Resilience assessment identifies communities and community assets that have, [high](#), [medium](#), and [low vulnerability](#) associated with climate hazards.

## High Tide Flooding and Future Sea Level Rise



Maryland State Highway Administration (MDSHA), Eastern Shore Regional GIS Cooperative (ESRG), National Oceanic and Atmospheric Administration (NOAA), University of Maryland Center for Environmental Science (UMCES)

## FEMA Floodplain Inundation (Riverine Flooding)



FEMA NFHL Product ID 24017C; latest LCINR effective date 7/23/2021; study effective date 5/4/2015

## Asset Categories

**Government Operations Assets:** Government owned properties, critical infrastructure

**Community Wide Assets:** Residential and commercial property, cultural and community resources

**Transportation:** Roads and parcels potentially isolated from Emergency Services due to flooding

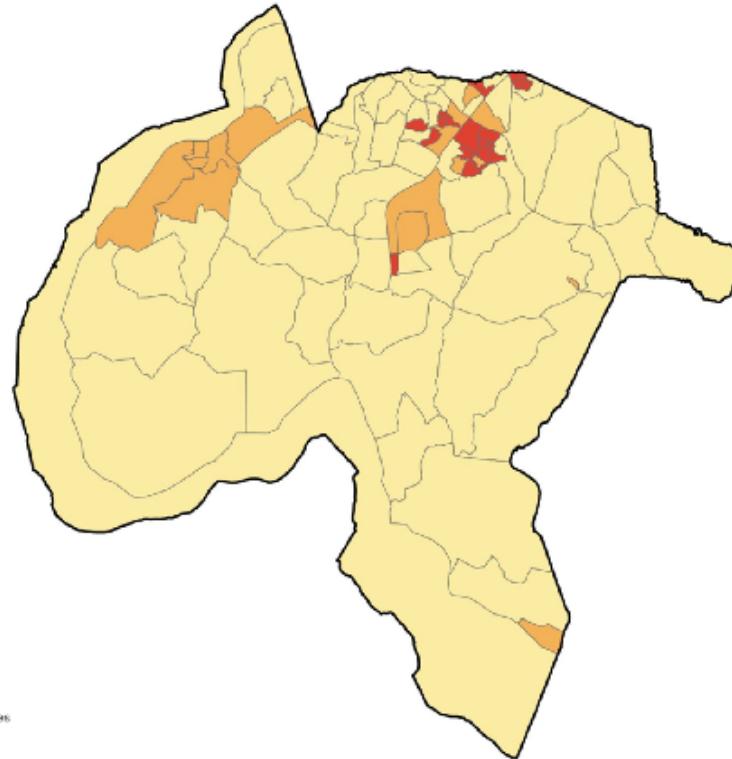
# Resilience Assessment – Hazards & Assets

Let's Talk About It  
Climate Action Planning in Charles County

## Extreme Heat

**Extreme Heat Vulnerability**  
Vulnerability Score

- Low (Yellow)
- Medium (Orange)
- High (Red)

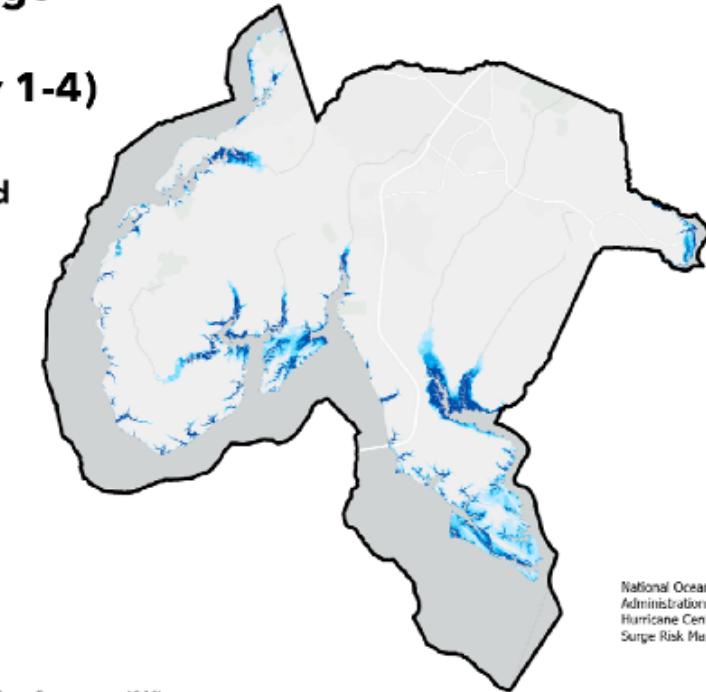


VG/N, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, USFWS

## Storm Surge Flooding (Category 1-4)

### Legend

- County Boundary
- Category 1
- Category 2
- Category 3
- Category 4



National Oceanic and Atmospheric Administration (NOAA) National Hurricane Center National Storm Surge Risk Maps version 3

## Asset Categories

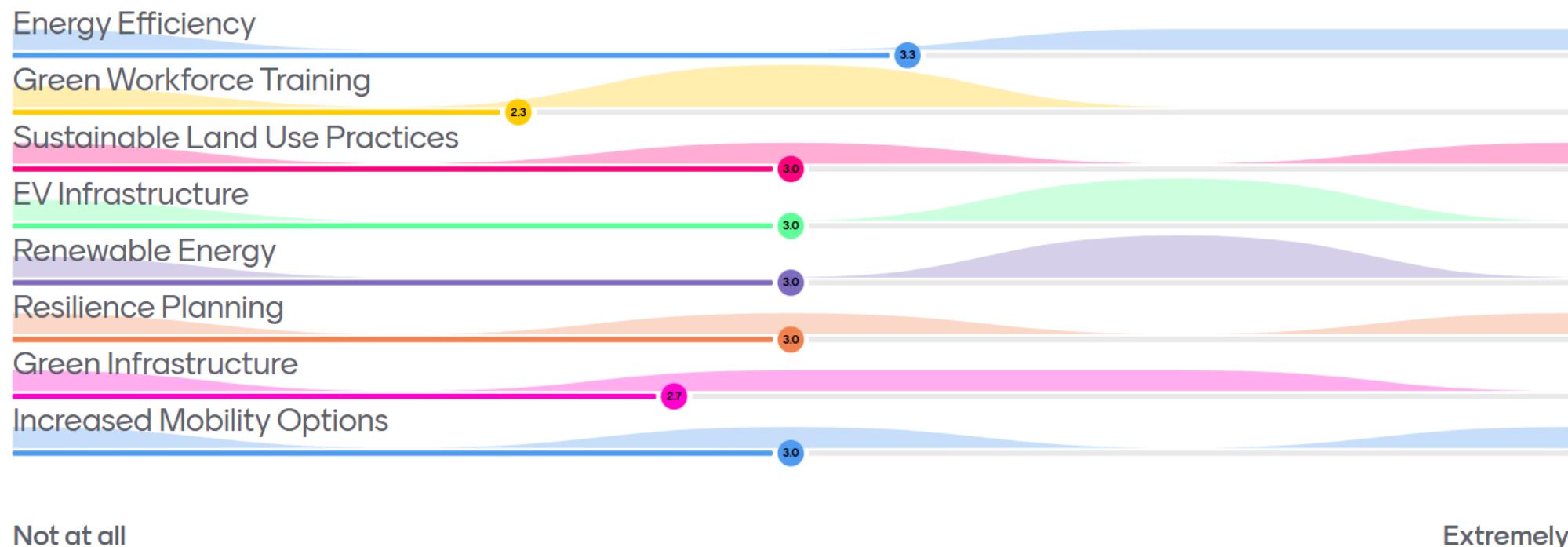
**Government Operations Assets:** Government owned properties, critical infrastructure

**Community Wide Assets:** Residential and commercial property, cultural and community resources

**Transportation:** Roads and parcels potentially isolated from Emergency Services due to flooding

## Opportunities and Barriers

Which areas would your business / operation / group be most interested in exploring further?



Opportunities and Barriers

What are the biggest barriers your business / operation / group faces in reducing emissions or improving resilience?



cost  
regulations  
lack of knowledge  
deliverables

Opportunities and Barriers

What kind of support would most help your business / operation / group take climate action?



Grants / Incentives



Technical Assistance



Training Programs



Streamlined Permitting



Peer Collaboration

**The County is working to reduce greenhouse gas emissions and improve energy efficiency. Businesses play a critical role in this effort. We'd like to hear your thoughts on how your business can contribute—and what support you need to take action.**

## Strategies:

- Communicate through business associations and Chamber of Commerce about available state and utility incentives (as applicable) for conversion to heat pumps.
- Provide technical assistance to developers and businesses on green building and renewable energy technologies.
- Promote green business practices through the development of a Green Business Partners Program.
- Work with larger food waste generating businesses (restaurants, food processing, grocery stores) to reduce/divert waste following EPA wasted food scale.
- Implement green building standards such as minimum energy performance standards or mandatory performance improvement targets



## Discussion Highlights

- Agricultural stakeholders inquired about the inclusion of agriculture-specific strategies within the CAP.
- Questions were posed regarding public awareness of the major emissions sources within the County.
- It was emphasized that regulatory implementation is not within the scope of the CAP and emissions regulations for energy production are implemented at the utility and grid scale.
- Clarification was provided that Charles County does not own nor operate natural gas or coal power production facilities. Further clarification was provided that no coal power plants operate within the county, though natural gas facilities remain.

**Transportation is a major contributor to greenhouse gas emissions in Charles County. Businesses can play a vital role in reducing these emissions by transitioning to low-emission fleets, supporting electric vehicle (EV) infrastructure, and investing in clean transportation technologies.**

## Strategies:

- Support EV infrastructure and fleet electrification, including by connecting residents to state and federal funding and identifying and prioritizing rural locations and underserved areas for EV charging.
- Increased walkability and mobility, e.g., transit, ADA accessibility, etc.
  - Upgrade bus stop shelters and expand bus routes
  - Adopt complete streets standards including encouraging bike lanes, sidewalks, crosswalks
  - Encourage infill development in designated development zones
- Support a low-carbon economy by fostering local employment opportunities that reduce long commutes, support infill development, and strengthen the county's economic resilience.



## Discussion Highlights

- Participants noted that in order for electric vehicles (EVs) to be suitable for agricultural operations, innovations must be made in the market to improve power and range of batteries.
  - Cost was also noted as a barrier, with a specific need for cheaper and easier repair and maintenance processes for electric tractors.
- Tentative support was expressed for switching to all electric lawn equipment if costs can be brought down. Stakeholders expressed lack of interest in incentive programs that would raise taxes as their source of funding.
- A proposal was made to initiate a pilot program in collaboration with the University of Maryland and local farmers to assess EV feasibility and compare costs.
- Stakeholders noted that the additional weight of electric tractors/farm equipment on the road would increase road maintenance costs.
- Participants emphasized the importance of promoting local farms, their products, and their contact information through the County website to enhance public awareness and support for local agriculture.
- Stakeholders highlighted the need for improved public transportation options to increase access to local farms and pick-your-own operations, noting that local food production contributes to community resilience.

**As Charles County works to reduce greenhouse gas emissions and build climate resilience, infrastructure and land use decisions play a critical role. Businesses can lead by example through investments in green infrastructure and climate-ready facilities.**

## Strategies:

- Invest in green infrastructure (e.g., cool roofs, tree canopy expansion, living shorelines)
  - Explore policy options to limit the removal of existing tree canopy for new developments & protect and maintain mature shade trees
- Prepare for and adapt to extreme weather events: restrict development in floodplains, target tree-planting efforts in high-heat areas, update stormwater infrastructure, establish community gathering spaces as resilience hubs
- Ensure that all outdoor workers have adequate protection from extreme conditions, and that healthy and safe working conditions are maintained.
- Promote Community Supported Agriculture (CSA) programs through storytelling, sign-up drives, and educational events that celebrate agricultural heritage and highlight CSAs' role in advancing food justice and local sustainability.
- Collaborate with community-based organizations to develop or expand urban greening and urban agriculture programs and advertise installations as visible examples meant to inspire individual action and community participation.



## Discussion Highlights

- Interest was expressed in expanding urban farming initiatives and community-supported agriculture (CSA) programs.
  - A suggestion was made to highlight [University of Maryland Extension's Beginning Farmer Success Program](#) and upcoming Urban Farmer Program on the county website to increase awareness and participation.
- Farmers markets recommended as a good way to collect information on which farms offer CSAs.
- Information about the potential process for reviewing and incorporating stakeholder feedback into CAP strategies was provided.
- Transparency was encouraged, particularly around state-mandated elements and the delineation of local versus state-level responsibilities.

# Current Opportunities

## Let's Talk About It Climate Action Planning in Charles County

- [Business Energy Investment Tax Credit \(ITC\)](#): Offers a federal tax credit of up to 30% for solar PV and other renewable energy systems.
- [Qualified Plug-in Electric Drive Motor Vehicle Credit](#): Up to \$7,500 tax credit for businesses purchasing qualified electric vehicles.
- [Supporting Agribusiness in Charles County](#): The Charles County Economic Development Department provides a range of resources designed to help agricultural businesses thrive in Charles County.
- [Chesapeake Bay Trust Charles County Tree Planting Grant](#): Generally, less than \$20,000 to implement tree planting projects in the County that will increase tree cover in urban and rural spaces
- [Small Business Innovation Research \(SBIR\) Grants](#): Federal grants for R&D in clean tech and sustainability.
- [Green Jobs & Workforce Development \(Maryland\)](#): Workforce training and apprenticeship programs supporting green industries.
- [Emission Reduction Credits \(ERCs\)](#): Businesses can earn and trade credits by reducing emissions below regulatory thresholds.
- [Green Community Grants \(Urban Tree Program\)](#): Up to \$5,000 for tree planting and urban greening projects in impacted communities.
- [MD-PACE program](#): \$50,000 to \$100,000+ for energy efficiency, renewable energy, and resiliency upgrades to commercial properties in Maryland.



# Next Steps

## Let's Talk About It Climate Action Planning in Charles County

Review the DRAFT Community and Government Operations strategies:

<https://www.charlescountymd.gov/government/climate-action-plan/-fsiteid-1#/!/>

### Community CAP Strategies Feedback Form:

<https://forms.office.com/r/Uy3ZeFwyYW>



### Government Operations CAP Strategies Feedback Form:

<https://forms.office.com/r/Q6tJVPwT2r>



### What Else Can I do?

Visit our website and sign up for our CAP Mailing List to learn more and to stay up to date on next steps:

<https://www.charlescountymd.gov/government/climate-action>