

# Charles County



# Climate Action Plan

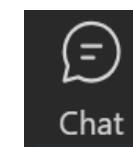
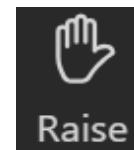
## WELCOME

### Interactive Webinar #4

March 26, 2025



-  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.
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## During today's meeting we will:

- ✓ Understand strategy analysis for GHG reduction, resiliency, and communication.
- ✓ Gather feedback and insights to **refine strategies**.
- ✓ **Understand next steps.**

# 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

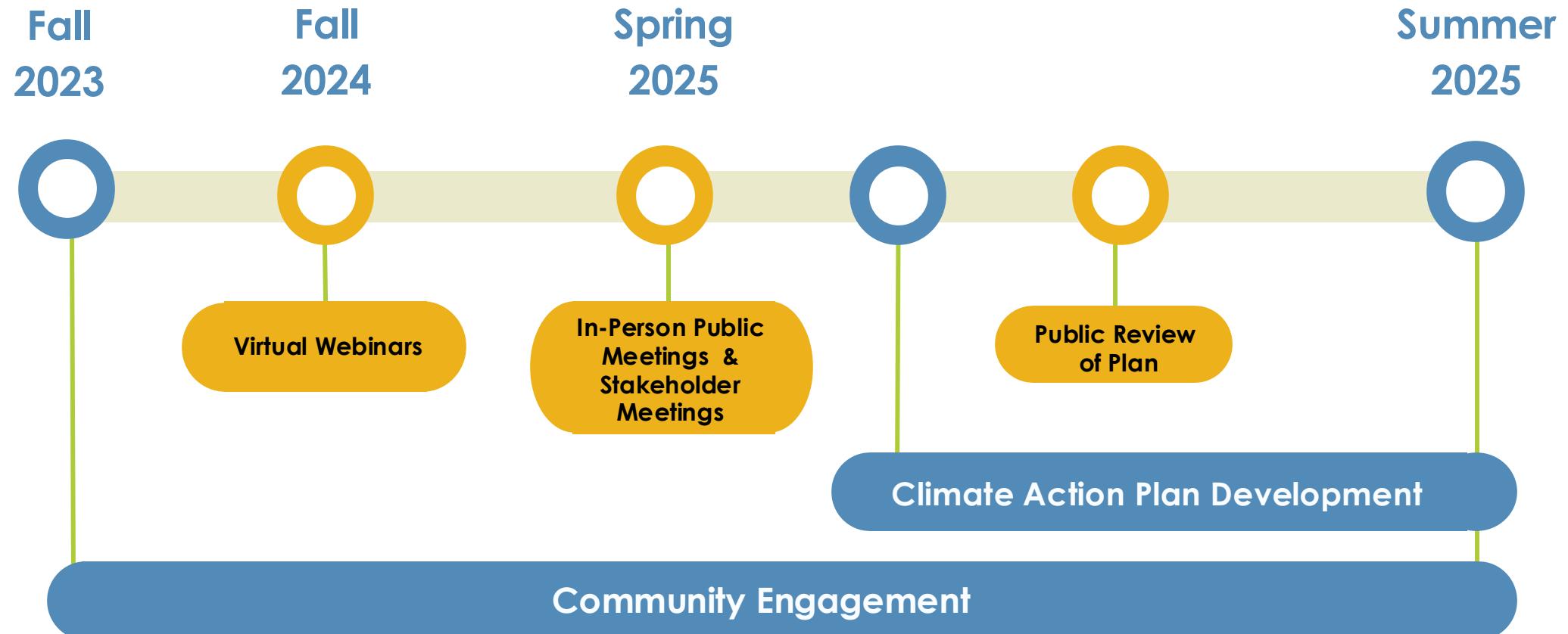
Resilience  
Analyses

Financial Analyses

Community  
Engagement

# CAP Schedule: Where are we now?

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





## Webinars

Interactive webinars were used to gather input from the community.

4



59

## Attendees



129 Views  
on YouTube

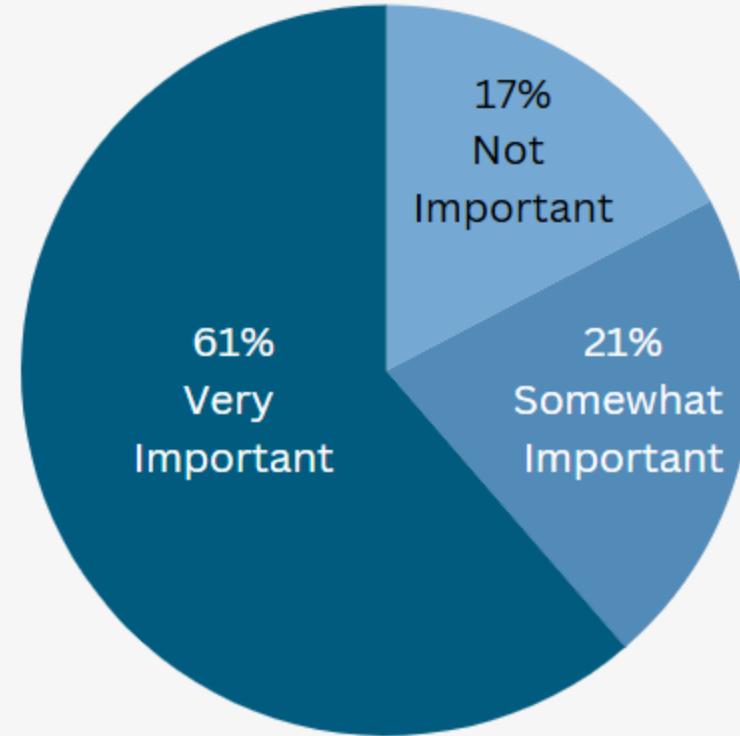
82

responses

## CLIMATE ACTION PLAN SURVEY

Share your thoughts on  
climate action planning.  
A quick 5 minute survey  
to collect basic interest  
and demographics.

I THINK REDUCING GREENHOUSE GAS  
EMISSIONS IN OUR COMMUNITY IS:



# Communications Analysis

## Top 3 GHG Reduction Strategies



- Develop more accessible communities (i.e. bikability, walkability, micromobility).
- Improve public transportation.
- Enhance green spaces (recreational and natural).

## Top 3 Resiliency Strategies

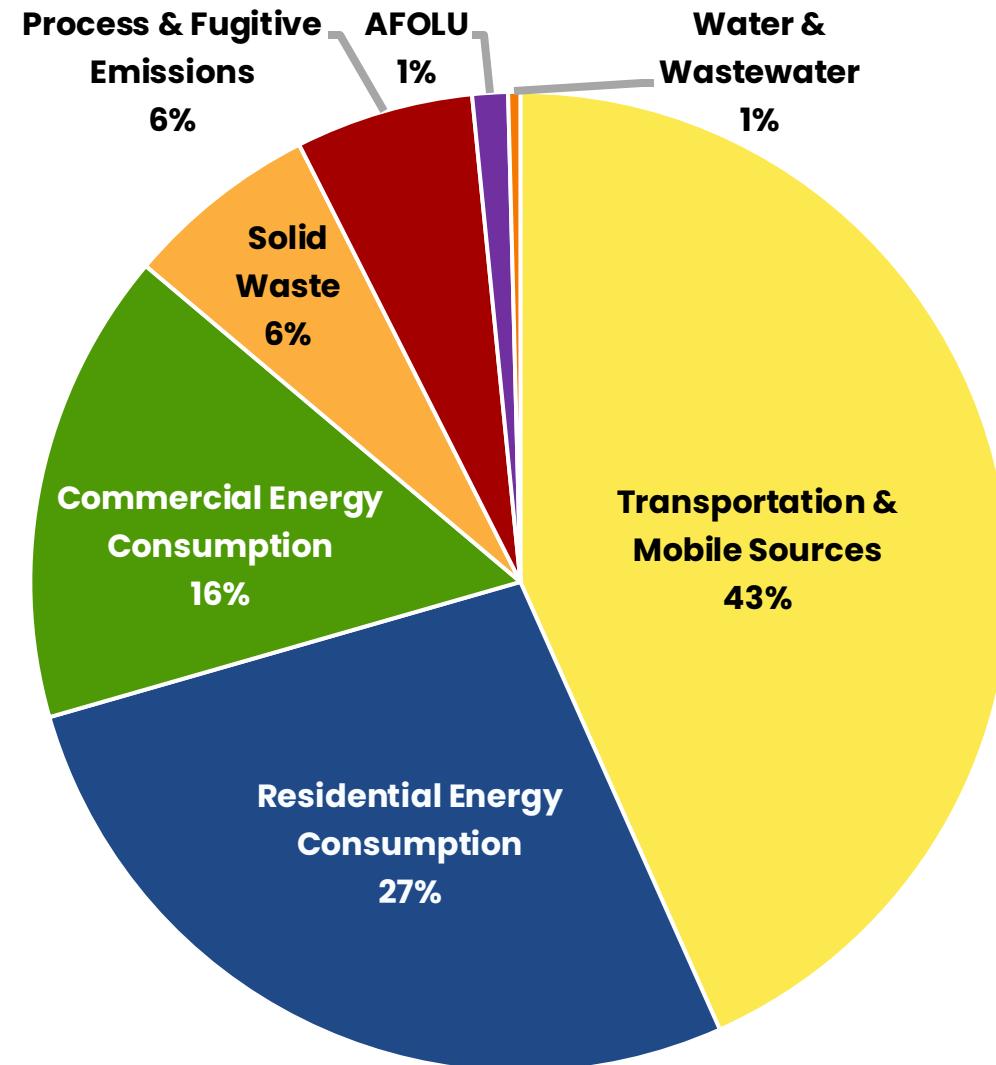


- Incorporate resiliency into infrastructure and building codes.
- Manage localized flooding and stormwater.
- Protect vulnerable populations.

# Where do GHG Emissions Come From?

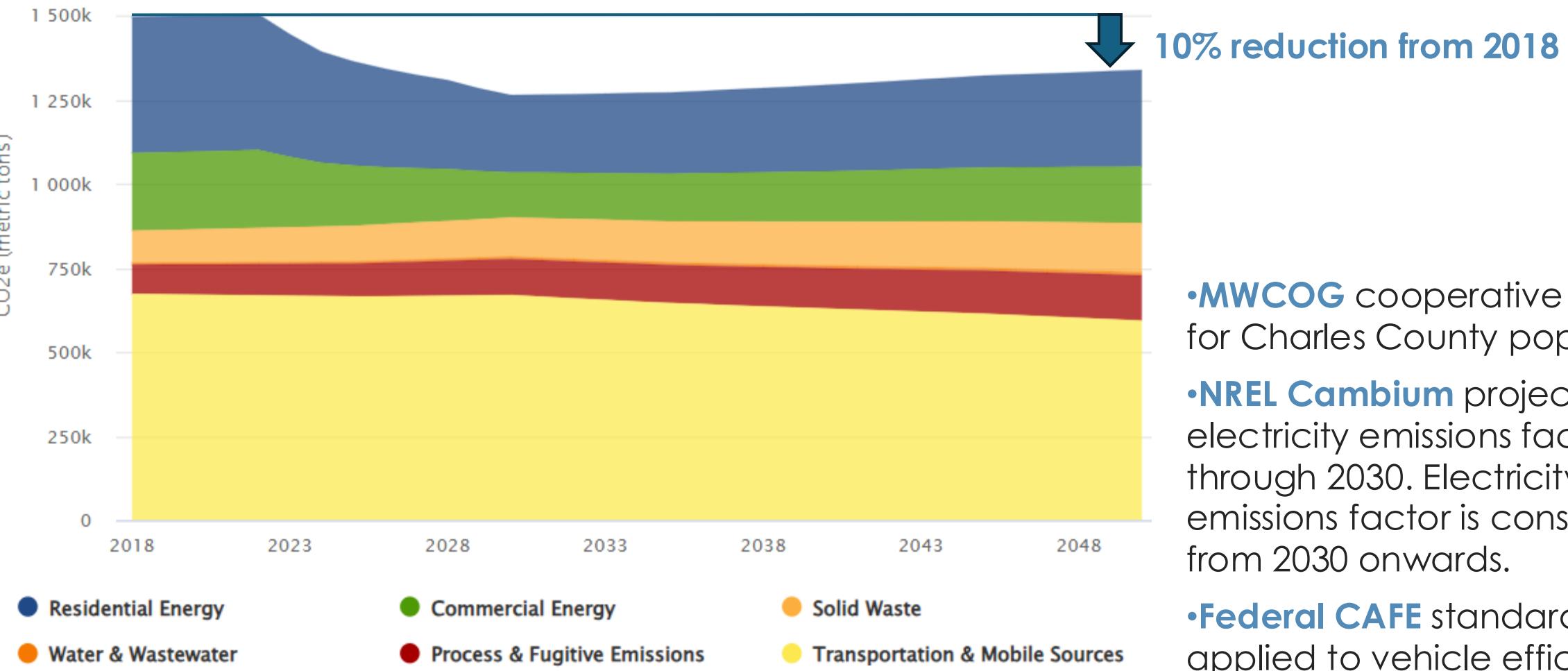
Let's Talk About It  
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- **86%** from Transportation and Energy Use
- **AFOLU** = Agriculture, Forestry, and Other Land Use
- **Process & Fugitive Emissions** = Industrial process and manufacturing emissions as well as leaks from equipment or pipelines



# What is Business-As-Usual?

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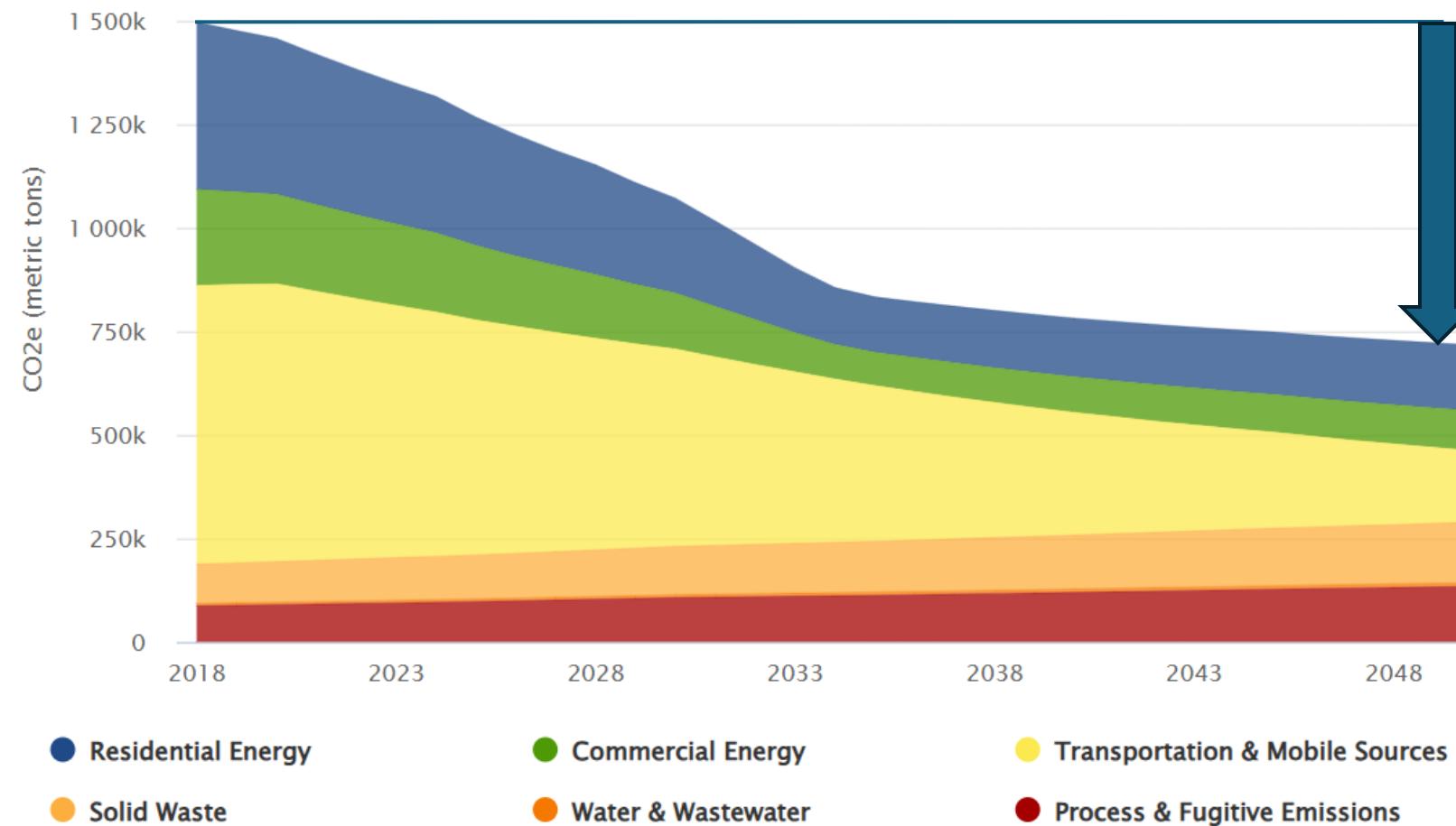


\* Charles County Emissions Inventory based on 2018 Data Available from MWCOG

- **MWCOG** cooperative forecast for Charles County population
- **NREL Cambium** projections for electricity emissions factors through 2030. Electricity emissions factor is constant from 2030 onwards.
- **Federal CAFE** standards applied to vehicle efficiency through 2050.

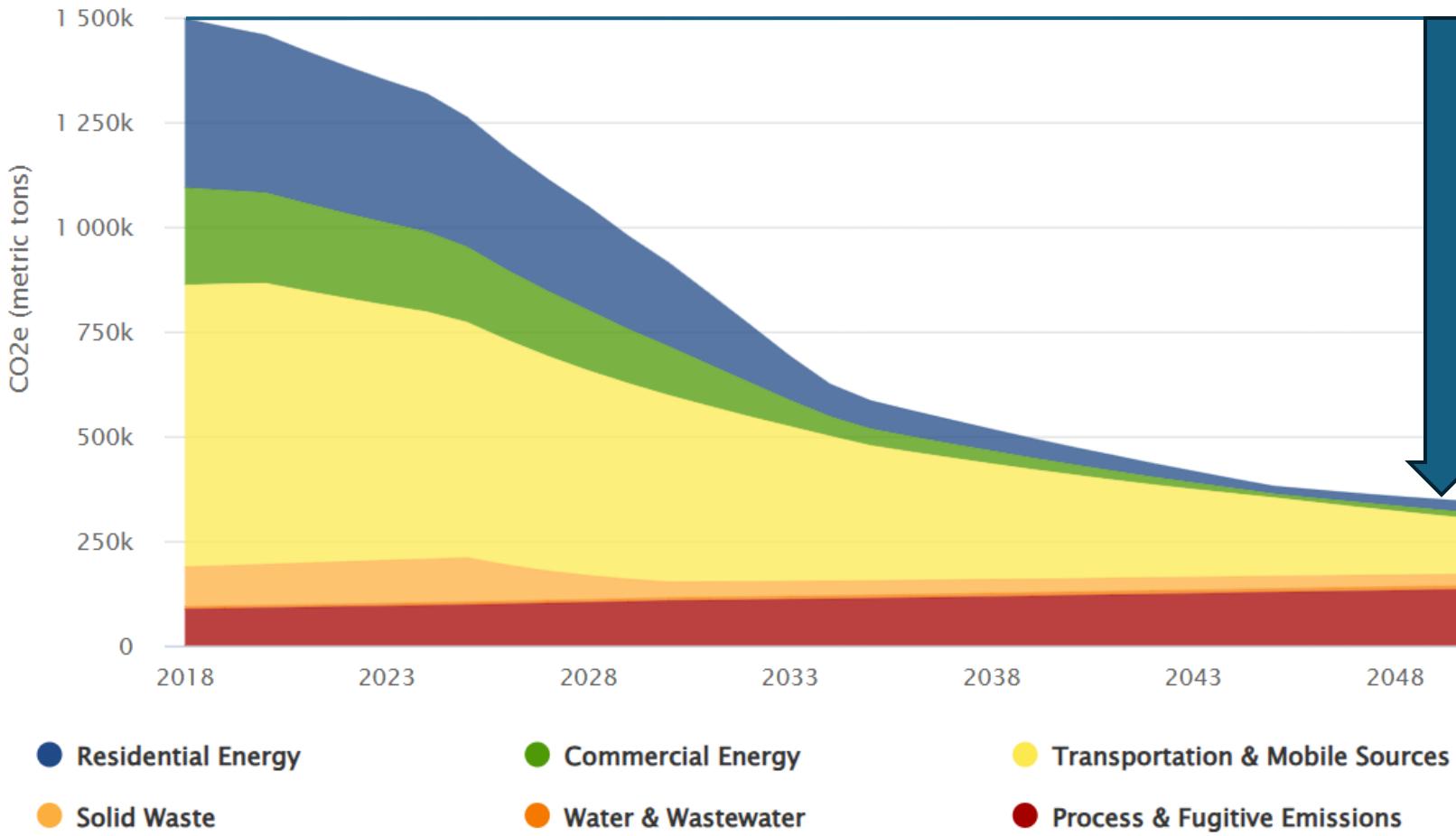
# Major State of Maryland Policies

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52% reduction from 2018

- **Clean Power Plan** - 100% clean electricity by 2035
- **Advanced Clean Cars II** - 100% of new light-duty vehicles are electric from 2035 onwards
- **Advanced Clean Trucks** - 40% of new heavy-duty trucks are electric from 2032 onwards.

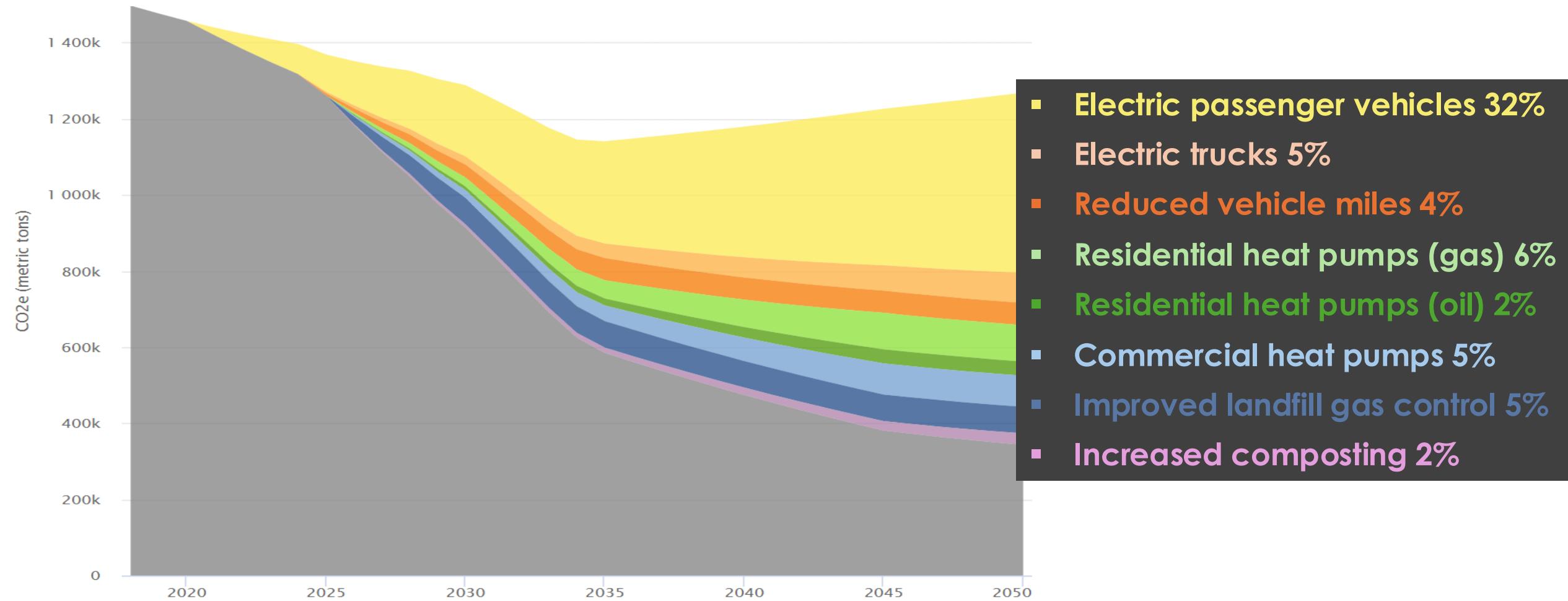


77% reduction from 2018

- **Reduce Vehicle Miles** - 10% reduction in 2035 from improved transit, walkable and bikeable neighborhoods
- **Heat pumps** - residential and commercial building heat transitions to heat pumps by 2045
- **Landfill gas controls** - improved technologies deployed at landfill to capture gas
- **Composting** – increased composting diverts half of organic material from landfill by 2050

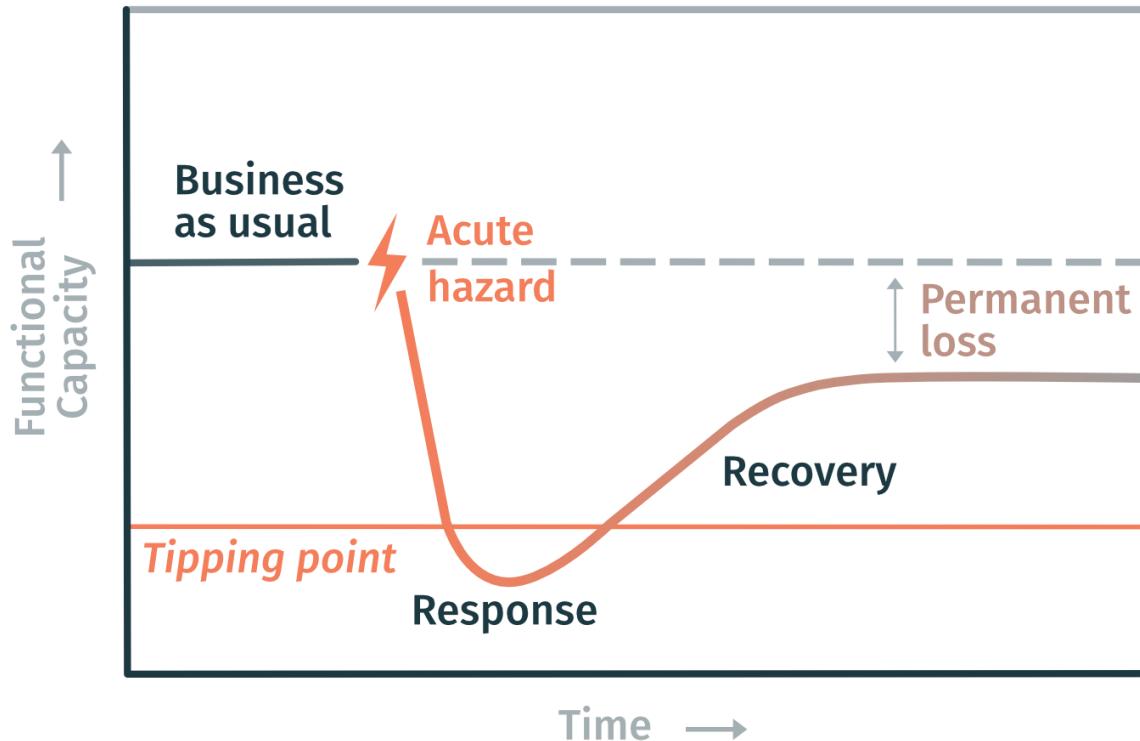
# Reduction Scenario

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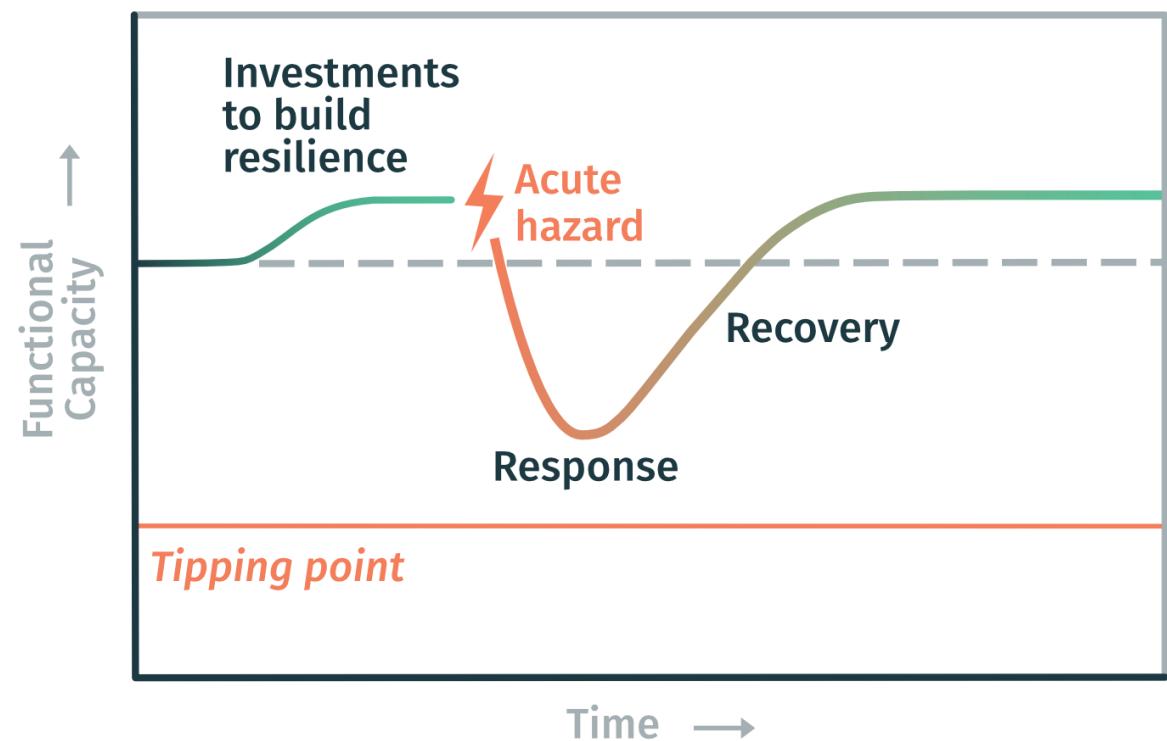


"The capacity of a community, business, or natural environment to **prevent, withstand, respond to, and recover from** a disruption."

## Less Resilient



## More Resilient



# Understanding Resilience

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

# Resilience Assessment

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

Resilience assessment identifies communities and community assets that have, **high**, **medium**, and **low vulnerability** associated with climate hazards.

### Hazards

Tidal Flooding

Floodplain Inundation

Storm Surge

Extreme Heat

### Asset Categories

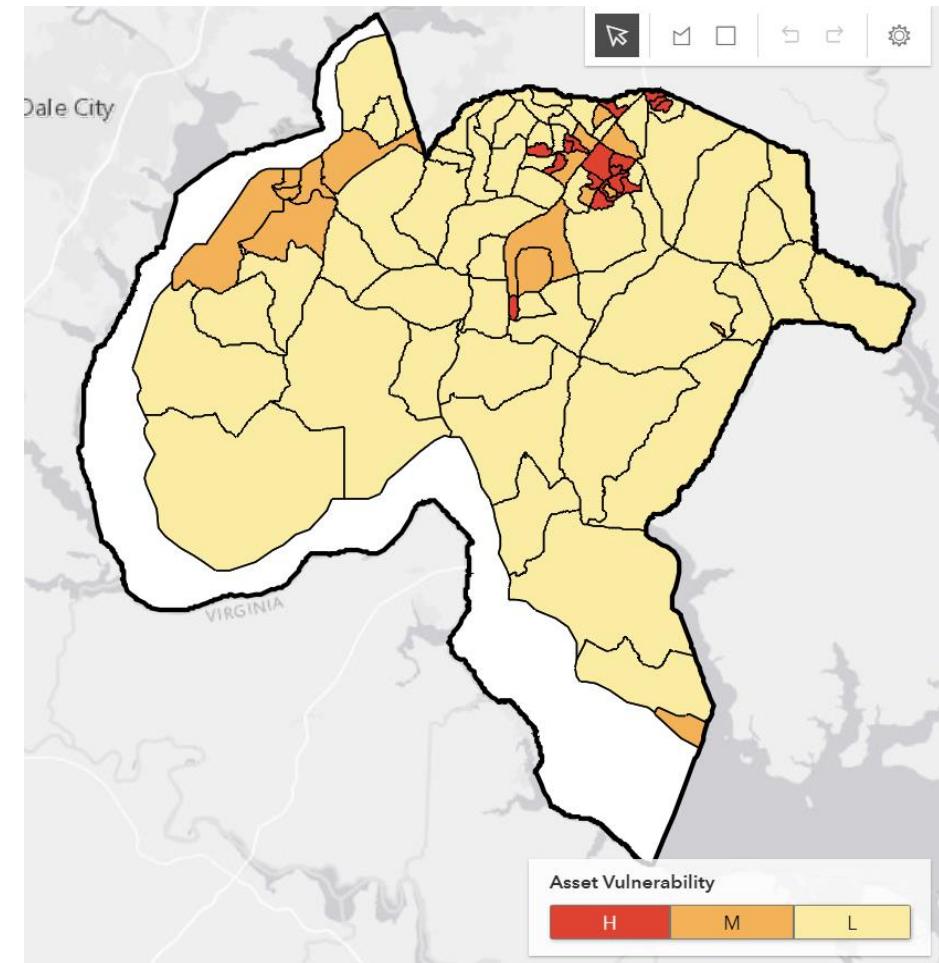
#### **Government**

**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

### Extreme Heat Vulnerability

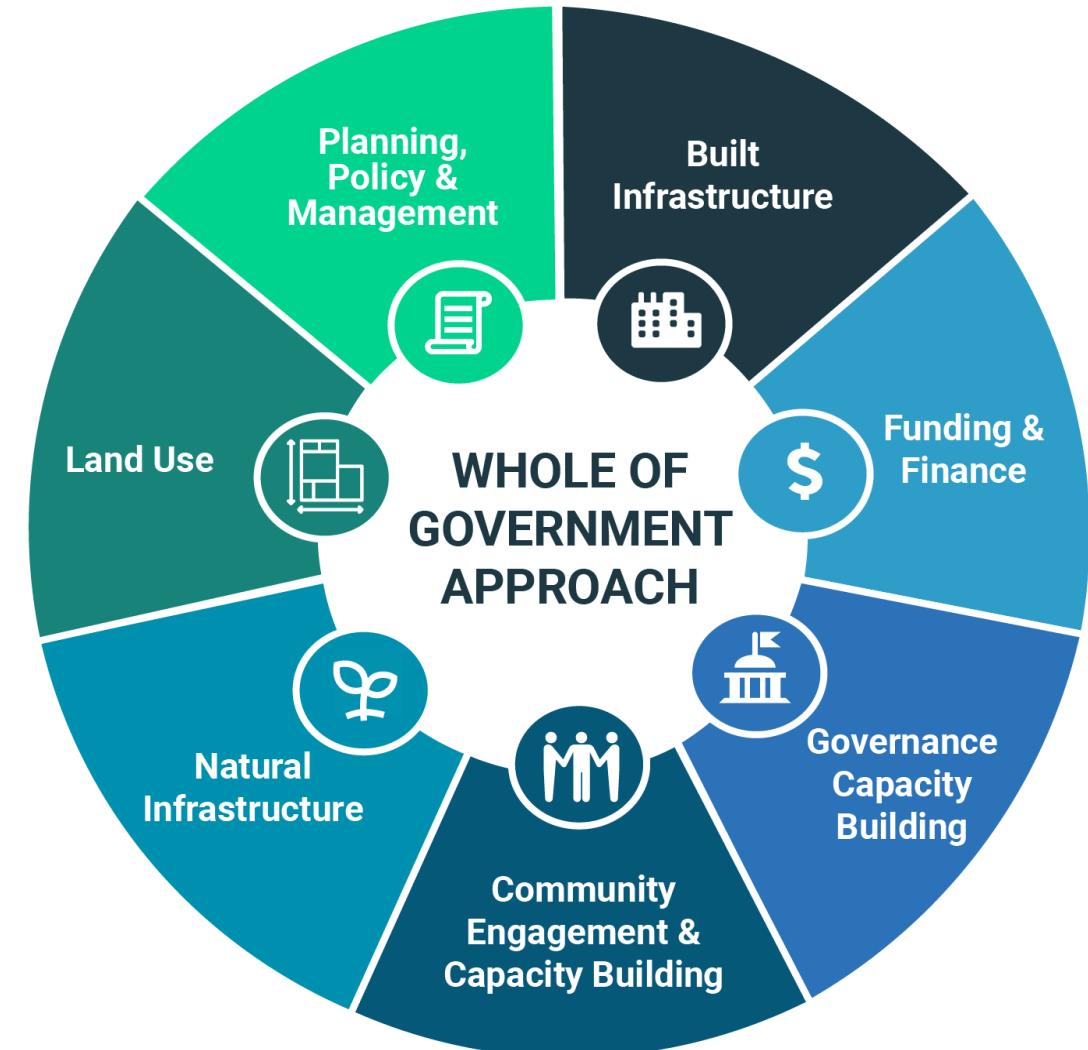


The vulnerability output for the extreme heat assessment in the County, where darkest red census block groups have the highest vulnerability to extreme heat events and yellow have the lowest vulnerability.

Resilience strategy development is informed by vulnerabilities identified in the resilience assessment and public and stakeholder input.

## Themes of Resilience Strategies Developed for Charles County

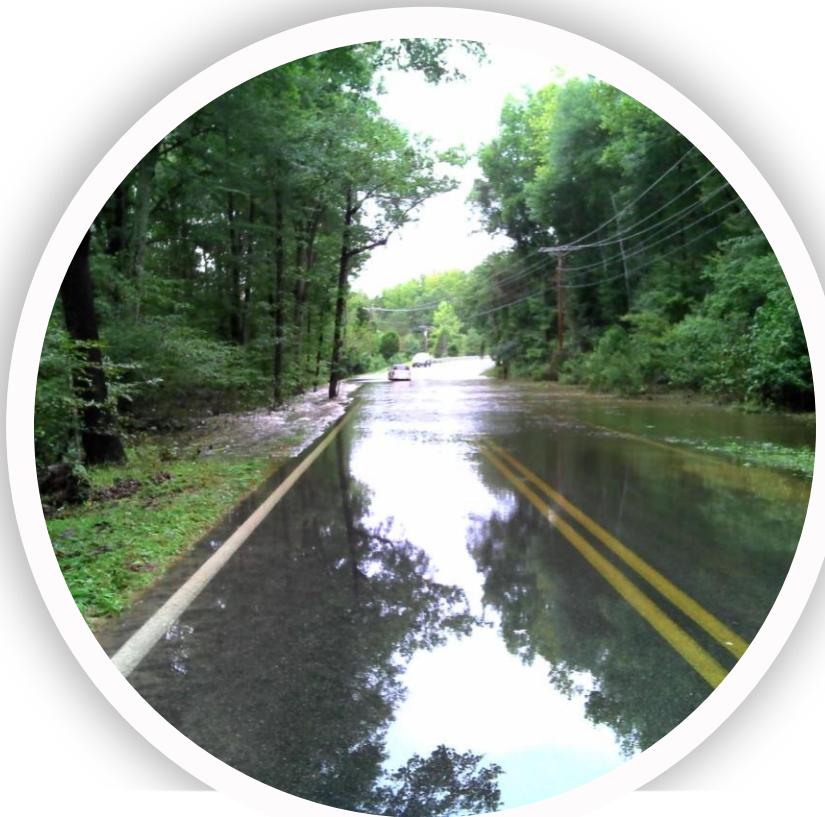
1. Land Use
2. Natural Infrastructure
3. Built Infrastructure
4. Planning, Policy & Management
5. Funding & Finance
6. Governance Capacity Building
7. Community Outreach



## Resilience Strategy Example: Manage Localized Flooding and Stormwater

What factors support this strategy?

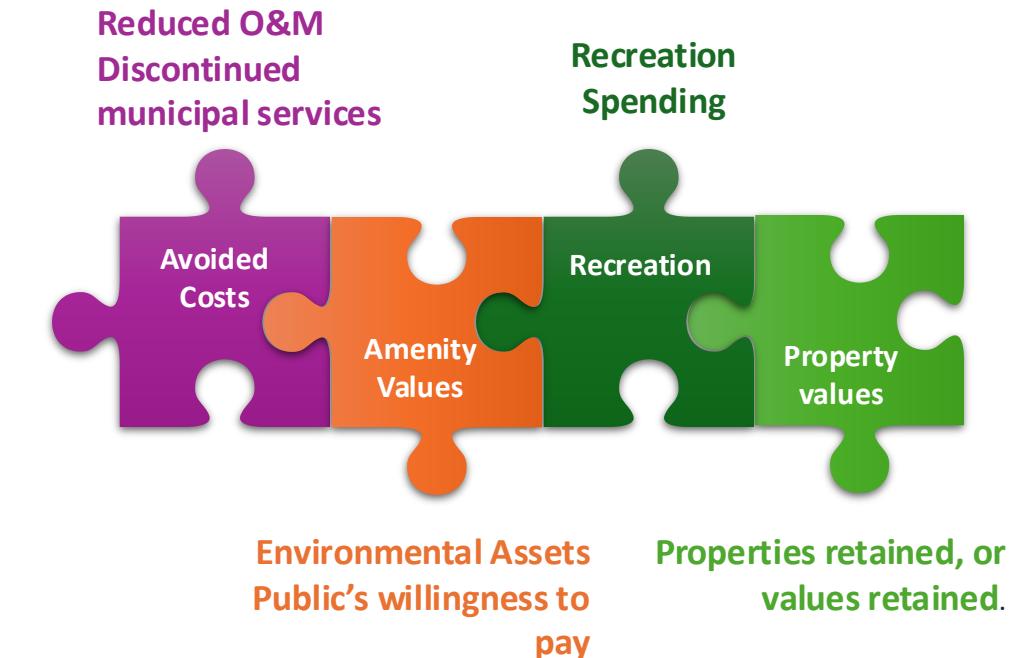
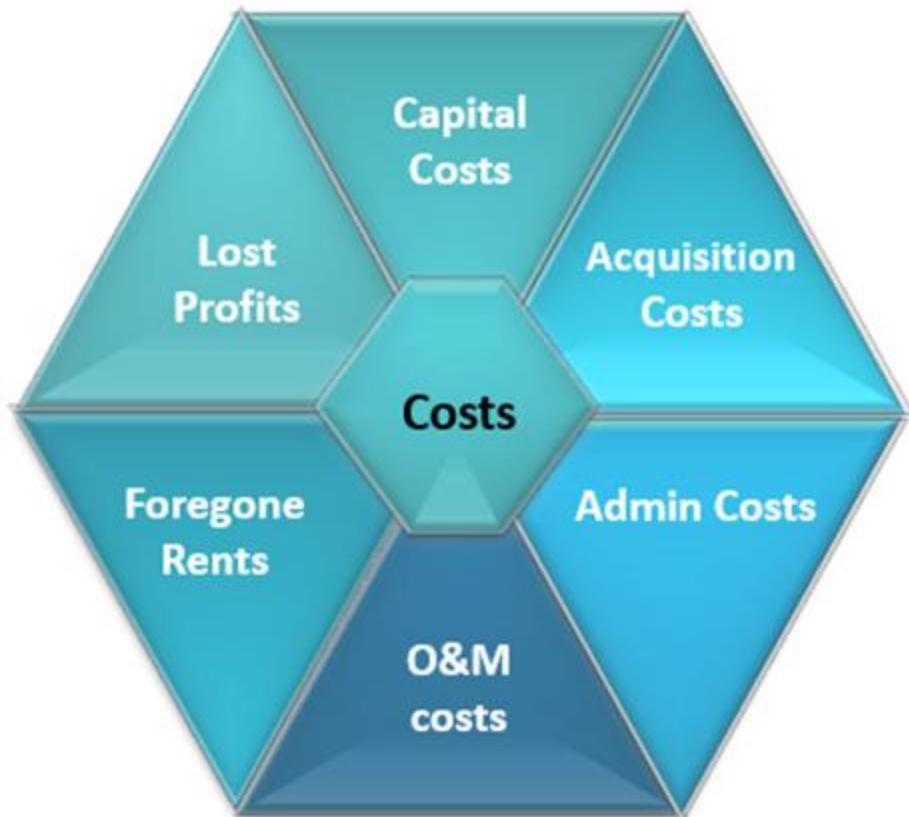
- **Public Support:** Identified as a top priority resilience action at a previous webinar.
- **Addresses Key Vulnerability:** Addresses flooding, a key vulnerability identified in the assessment.
- **Environmental Co-Benefits:** reduce pollution from stormwater runoff.
- **Reduce Impacts:** Flooding can damage local property and infrastructure.



# Benefit Cost Analysis

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Priority actions provided through community input will be selected for benefit-cost analysis  
Economic, environmental and social costs and benefits



**Strategy:** Support urban forestry programs and incentives to **maximize canopy in vulnerable communities.**

**Benefit Cost Analysis:** **5% Increased** tree canopy over 20 years;  
\$2,886/acre/year cost savings.

## Costs

- Pre-planting services
- Planting: native grasses, seedlings, containerized trees
- Post-planting services
- Land survey & appraisal
- Legal services
- Private easement payouts
- Maintenance (mulching, vegetation control, mowing, etc.)

## Benefits

(Ecosystem Benefits)

- Carbon sequestration
- Air pollutant reduction
- Recreation
- Erosion Reduction
- Stormwater runoff reduction
- Nutrients uptake
- Wildlife habitat
- Timber
- Urban Heat Island Effect reduction



QUESTIONS?

**Q:**

Will the nuclear power initiative be a part of the CAP?

**A:**

The CAP will include analysis of state policies, regulations, and projects such as the Clean Power Plan and the Renewable Portfolio Standard. While nuclear power is acknowledged as a potential power source under state initiatives, the recommendation to build a new nuclear power plant in Charles County will not be included as a specific strategy in the CAP.

**Q:**

How far will renewable power generation technologies such as solar and wind power get us toward our clean energy goals? Can the state meet the goal of 100 % renewable by 2035?

**A:**

The County has participated in discussions with state entities, such as the Maryland Association of Counties, and acknowledge that achieving 100% renewable energy by 2035 will be challenging.

The CAP will establish goals that are aligned with the state goals and actionable in Charles County. This might include the installation of renewable energy generation resources, such as solar panels, which will require both government and community action. It will also include related actions such as revising the County's zoning and building codes to rely less on fossil fuels and reduce barriers to renewable energy installation and use.

**Q:**

When will the CAP be completed?

**A:**

The draft CAP will be available over the summer and will go through a public review process as well as through the Resilience Authority and the Board of Commissioners. Our goal is to develop a transparent plan, metrics, and milestones that can be tracked and shared as we make progress.

**Q:**

When referring to fleet transition, are you speaking about County-owned vehicles?

**A:**

Yes.

**Q:**

Will the CAP include homeowner or commercial costs for implementing the strategies or actions?

**A:**

The CAP will not include this level of detail. The actions and strategies may have general cost estimates but will not be able to estimate the granular costs of final implementation.

**Q:**

Is there a governance opportunity to require that for every tree that comes down due to development, you have to plant 3 somewhere else?

**A:**

There will be some opportunities to address the degradation of the tree canopy, and our plan will include strategies around tree planting and preserving the canopy. We are also aware of the family of plans and ordinances that are related very closely to Climate Action, such as the Comprehensive Plan and Zoning Ordinance. The CAP will highlight those linkages and the importance of ensuring climate action is a consideration throughout the County's planning efforts.

**Q:**

How does the CAP work; will there be a budget; what County Department does this fall under?

**A:**

The CAP will establish a set of goals and actions to accomplish those goals. There will be general cost estimates of the suggested actions, but there is not a separate budget for implementation of CAP initiatives. Responsible parties such as state, local, federal entities, and the community will be identified as stewards of the actions. Development of the CAP falls under the County Department of Planning and Growth Management.

**Q:**

How are goals and actions established in the CAP?

**A:**

The goals and actions will be established based on several factors:

- The baseline resilience and GHG analyses which identify existing conditions and needs.
- Input from the community and stakeholders.
- The political, economic, and overall implementation feasibility of the actions.
- Research on similar CAPs prepared in other jurisdictions such as the MWCOG region, or the state, and the relative applicability for Charles County.

**Q:**

Once the CAP is complete, will it be someone else's job to implement?

**A:**

The CAP will establish a multi-departmental, whole-of-government approach. There will be coordination across departments with the Department of Planning and Growth Management acting as a resource and tracking entity that will assist other departments with implementation through the County's family of plans, such as the Comprehensive Plan and assisting with identifying funding opportunities such as grants.

- A goal of the CAP could be no net forest loss in the county, or preferably a goal of forest gains; could also be part of the Comp [Comprehensive] Plan.
  - This would be great! we have plenty of already developed space that could be better utilized if redeveloped to have smarter land uses.
- In fill development!
- Would also help lower greenhouse gas emissions if the building is less sprawl and more dense, less cars, more walking and biking.
  - They definitely go hand in hand! Transportation is such a big carbon emission factor because the development is so car centric.
- There is a Forest Conservation Act that directs tree take down and replacement during development. Is the FCA being strictly enforced by the County? My impression is that it is not being enforced.
- I definitely appreciate the move to electrify the fleet, but I definitely think a bigger part of the issue is just total vehicle miles travelled. Electric vehicles are only going to be a band aid solution, because they require the roads and parking lots and infrastructure that promotes greenhouse gas emissions. There are so many vehicles on our roads that will never be electric, so minimizing the total number of car trips by trying to make the trips that can be easily be made by walking, biking, or public transit will have a much greater impact on the emissions. The zoning ordinance and comp plan will definitely help.

## Public Meetings

6

Upcoming public meetings to engage with you in your town about what matters to you!

Date	Location
4/22	Christ Church La Plata Parish Hall
4/24	Benedict Volunteer Fire Department
4/29	Waldorf West Library
5/1	Indian Head Village Green Pavilion
5/6	Nanjemoy Creek Community Center
5/8	Newburg Volunteer Fire Department Company 14

## Learn

About climate change basics and how community feedback helps to develop CAP strategies.

Understand how the CAP will influence local policies, infrastructure, and climate resilience and mitigation efforts

## Engage

Discuss localized climate change impacts and connect with community members and specialists to ensure your voice is heard.

## Act

Discover practical steps your community can take to make a positive impact.

**Navigate** to the resources on the following slide to learn more!

# Be Engaged & Involved!

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

SCAN ME



## Visit our Climate Action Plan Engage Page

<https://charles-county-md.civilspace.io/en/projects/charles-county-climate-action-planning>

SCAN ME



## Join Our Mailing List & View Meeting Information

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

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## Follow Us on Social Media!

<https://linktr.ee/CharlesCAP>



Nextdoor