



Frederick County Climate and Energy Action Plan for Internal Government Operations

April 25, 2023
Presentation to the Frederick County Council



2020-2021



The Frederick County Council approved a Climate Emergency Resolution and adopted goals to reduce GHG emissions 50% by 2030 and 100% by 2050.

County Council created a community-driven Climate Emergency Mobilization Work Group.

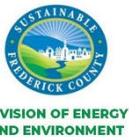
Workgroup invested 18,500 hours to produce a Climate Response and Resilience Report.

2022 -2023



Frederick County Climate and Energy Action Plan for Internal Government Operations

March 2023



Created the Division of Energy & Environment

- Department of Stormwater and Department of Climate and Energy

Initiated key climate and energy programs

- Climate and Energy Action Planning
- Building Energy Performance
- Transition to Alternative Fuel Vehicles
- Clean Energy Procurement

Moved DEE under the CAO

- CE approves Climate & Energy Action Plan for Internal Government Operations
- Plans for Electric Vehicle Readiness and Alternative Fuel Vehicle Transition nearly complete
- Work on equity-focused Community-Wide CEAP begins

Objectives of the CEAP

Measure and Reduce GHG Emissions

Identify and Reduce Climate Risks

Greenhouse Gas
Inventory

GHG Mitigation
Strategies

Risk and
Vulnerability
Assessment

Climate
Resilience
Strategies

Frederick County Government Actions

Community-Wide Issues, Benefits, and Actions

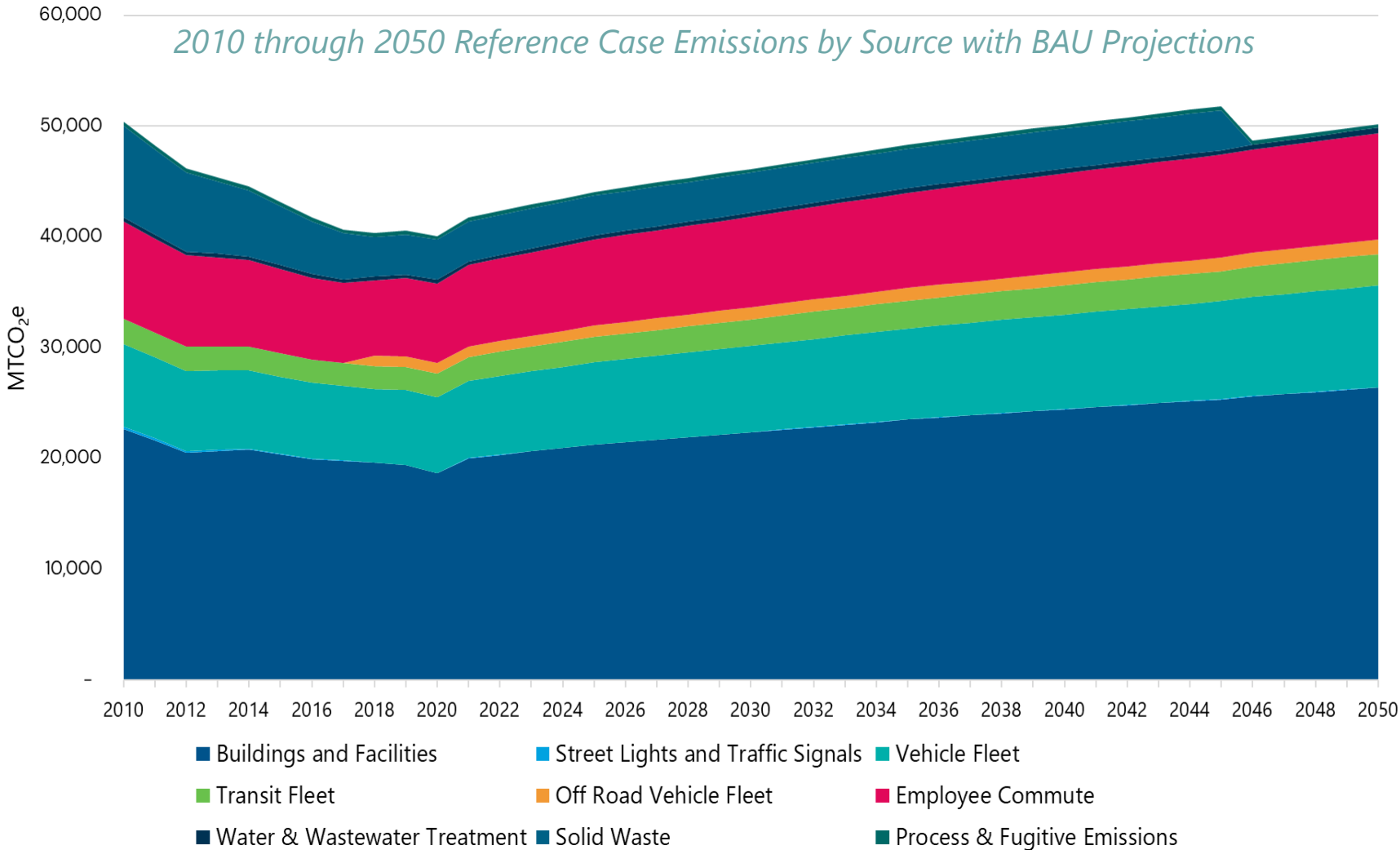


GHG Inventory and Mitigation Analysis

DATA TO INFORM DECISIONS



Understanding Baseline Emissions

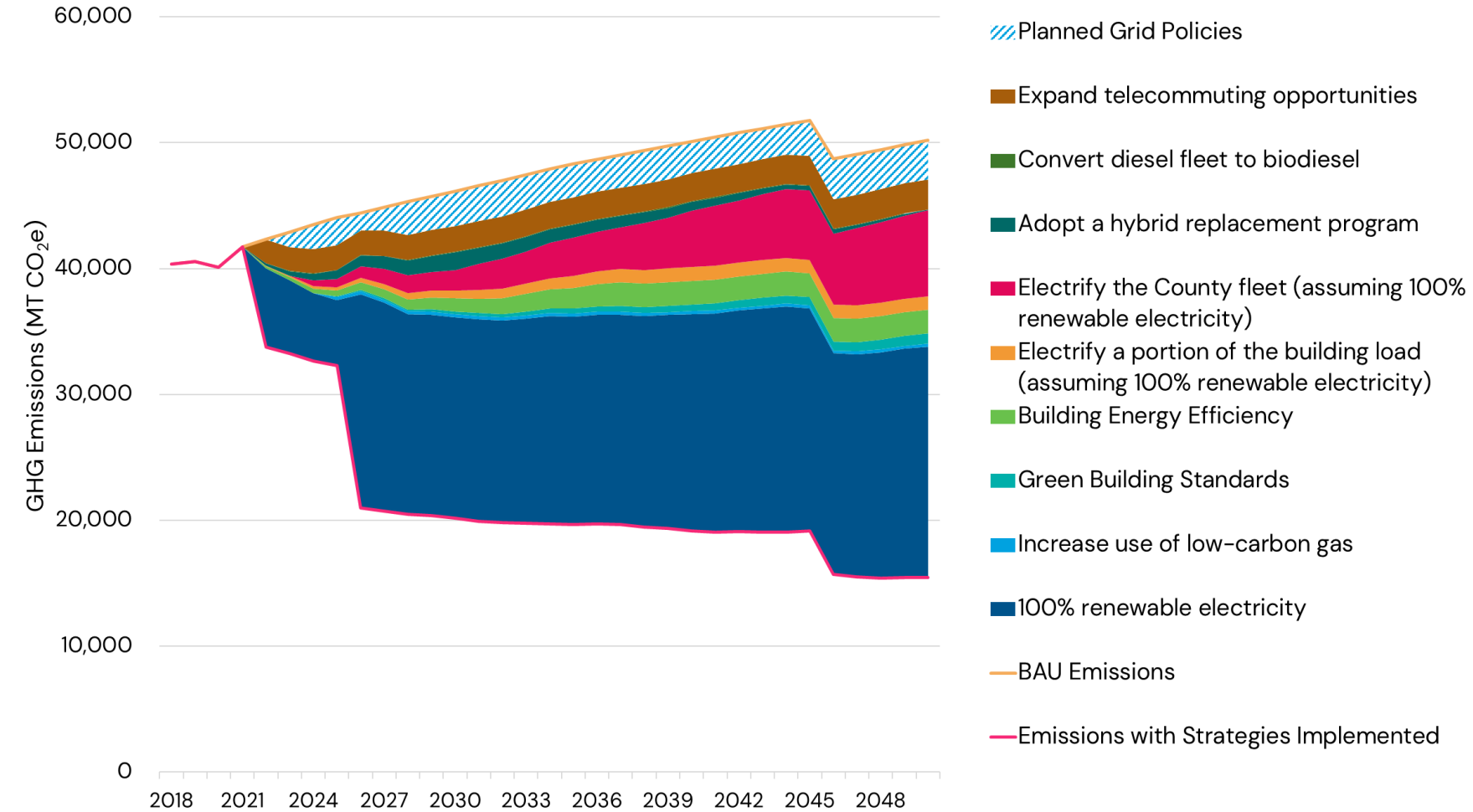


Key Findings:

- About 50% of FCG emissions are energy use-related from buildings and facilities
- Buildings/facilities and transportation sources together account for 89% of FCG emissions
- GHG emissions reduced 20% between 2010 and 2018
- FCG operations account for 1.1% of community-wide emissions



Impact of Mitigation Strategies by 2050



The CEAP identifies the most effective strategies to reduce emissions from government operations.

- Strategies cut across the building and transportation sectors
- Implementing all mitigation strategies will result in 62% lower emissions in 2030 than 2010

Projected Government Operations Emissions 2018-2050 with CEAP Mitigation Strategies



Strategies

Clean Energy Procurement and Facility Energy Use

The CEAP recommends:

- Utilization of 100% renewable electricity, moving towards large-scale power purchase agreements (PPAs)
- Facility benchmarking and additional retrofitting
- Electrification of a portion of the building load



Strategies

Transportation Sector

The CEAP recommends:

- Plans for clean fleet transition
- Alternative fuel use
- Reduced employee commuting



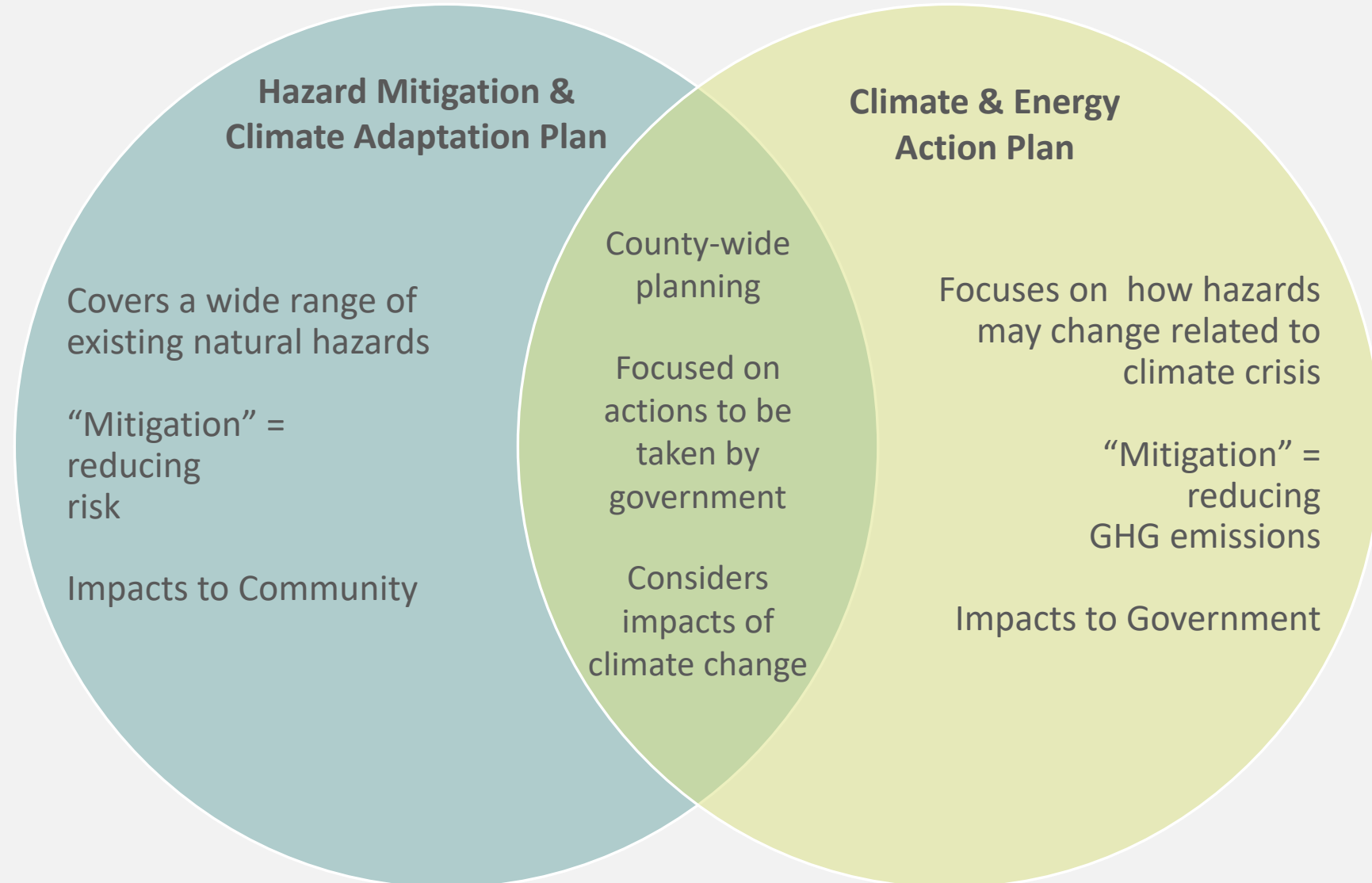
Climate Risk & Vulnerability Assessment and Resilience Strategy Recommendations

DATA TO INFORM DECISIONS



Climate Risk & Vulnerability Assessment (CRVA)

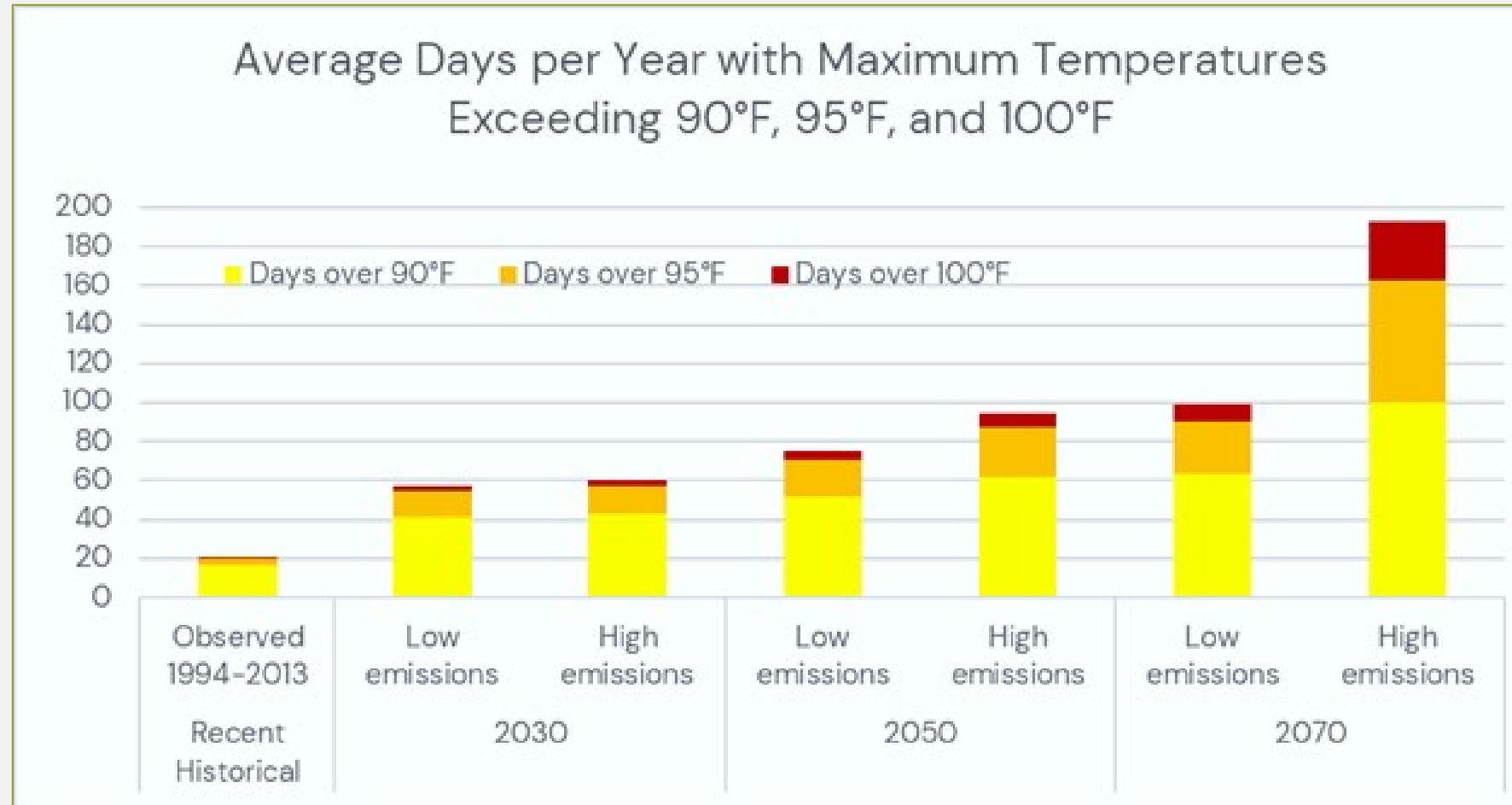
- The CRVA systematically identifies potential risks to County division assets and operations under a changing climate.
- The CRVA can inform County decision makers on forward-looking resilience actions to prepare for future conditions.
- Frederick County is the first jurisdiction in Maryland to include climate hazards in a hazard mitigation plan.





Climate Risk Projections

- Increased average temperatures and extreme heat days
- Increased risk of drought
- Increased year-to-year precipitation variability
- Increased risk of inland flooding
- Increased frequency and intensity of storms and extreme winter conditions





Climate resilience is the ability to prepare for, recover from, and adapt to climate risks.



Resilience Strategies for Climate Risks

Flooding

- Develop deeper understanding of flood vulnerabilities
- Build overall resilience to stormwater flooding
- Prevent flood-related interruptions to County services and/or use of County assets
- Increase resilience of County infrastructure to flood-related damage
- Understand and reduce risk of water contamination





Resilience Strategies for Climate Risks

Heat

- Protect human health from extreme heat
- Increase resilience of County infrastructure and operations to extreme heat





Resilience Strategies for Climate Risks

Multi-Hazard

- Assess and update codes and ordinances to be climate-informed
- Advance monitoring and awareness of green infrastructure and nature-based solutions that meet County climate and operational goals
- Build in resilience considerations into budgeting and capital improvement processes
- Install generators/backup power at critical facilities





Resilience Strategies for Climate Risks

Multi-Hazard

- Develop and adopt indicators and inter-division collaboration mechanisms to monitor and adaptively manage climate resilience measures over time
- Ensure resilience efforts are equitable and support environmental justice



The impacts of climate change are not distributed equally.

We must partner across agencies, with citizens, and in support of stakeholders to develop an equity-driven climate response.



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