

# Climate Action Plan Advisory Group

Meeting #1



# Agenda

- Opening Remarks & Introductions
- Advisory Group Overview
- Meeting Procedures
- Greenhouse Gas (GHG) Emissions Inventory
- Our Changing Climate
- Climate Action Plan (CAP)
- Public Engagement
- Next Steps
- Mentimeter Questions
- Discussion
- Public Comment
- Closing remarks



# Introductions

Please state your name and affiliation

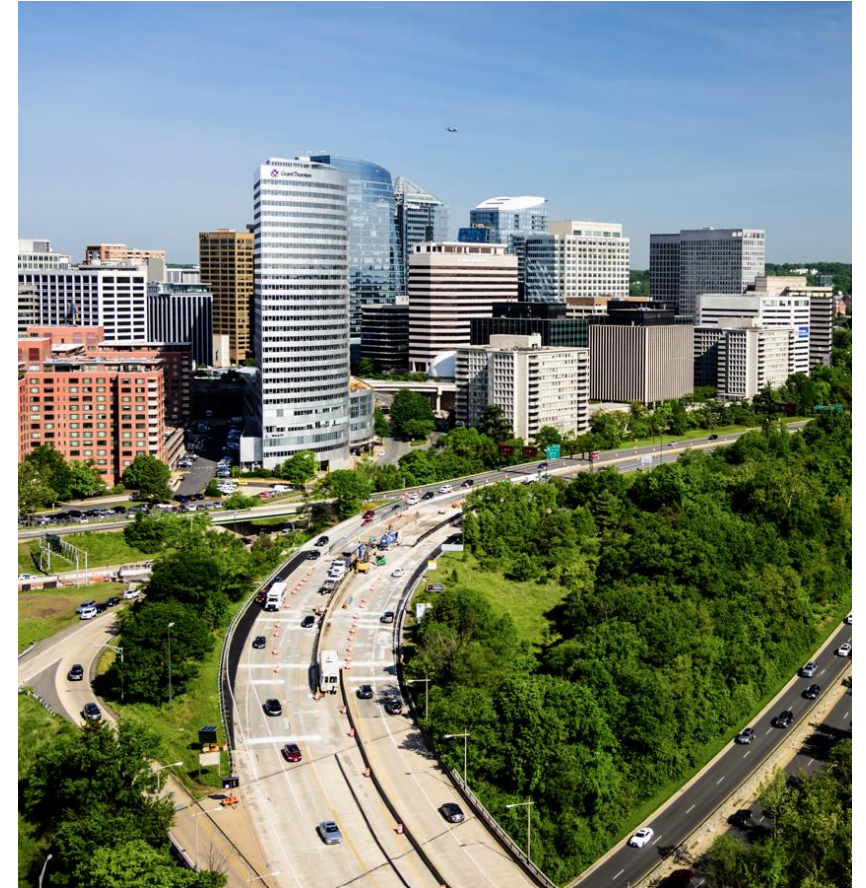
# Project Team

## Core Team

- **CPO Project Director:** Jennifer Fioretti
- **CPO Project Manager:** Rich Dooley
- **CPO Climate Communications Specialist:** Rhina Lara
- **DPR Natural Resources Specialist:** Jennifer Soles
- **DES Environmental Management Specialist:** Drew Stilson

## AECOM:

- **Principal-in-Charge:** Ida Namur
- **Project Manager:** Laura Cloninger
- **Deputy Project Manager:** Corri Waters
- **Engagement Lead:** Joyce Tsepas



# Advisory Group Members

## Advisory Groups

- APS Superintendent's Advisory Committee on Sustainability
- Climate Change, Energy and Environment Commission
- Economic Development Commission
- Food Security Coalition
- Forestry and Natural Resources Commission
- Housing Commission
- Planning Commission
- Transportation Commission

## Non-Profits At-Large

- Civic Federation
- EcoAction Arlington
- Faith Alliance for Climate Solutions
- NAACP-Arlington Branch
- Sierra Club
- Tree Stewards & ARMN
- Virginia Clinicians for Climate Action

## Businesses At-Large

- Arlington Chamber of Commerce
- Penzance

# Advisory Group

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## Purpose

- Provide guidance on the development of the Climate Action Plan (CAP), which will update and expand the scope of the 2019 County Board adopted Community Energy Plan (CEP), one of 12 elements of the County's Comprehensive Plan.
- The CAPAG will conclude its work at the time of County Board adoption of the CAP.

# Advisory Group

## Responsibilities

- Attend the CAPAG meetings and act as liaisons to and from their respective Commissions and the community
- Assist staff and the consultant in developing a community engagement plan
- Participate in public engagement activities
- Support a balanced approach to prioritizing the CAP recommendations
- Act as an unbiased sounding board during the development of the CAP
- Assist in development of performance measures, key performance indicators, and performance targets
- Review drafts, final recommendations and reports
- Assist staff in promoting the CAP to build awareness of climate action

# Meeting Procedures

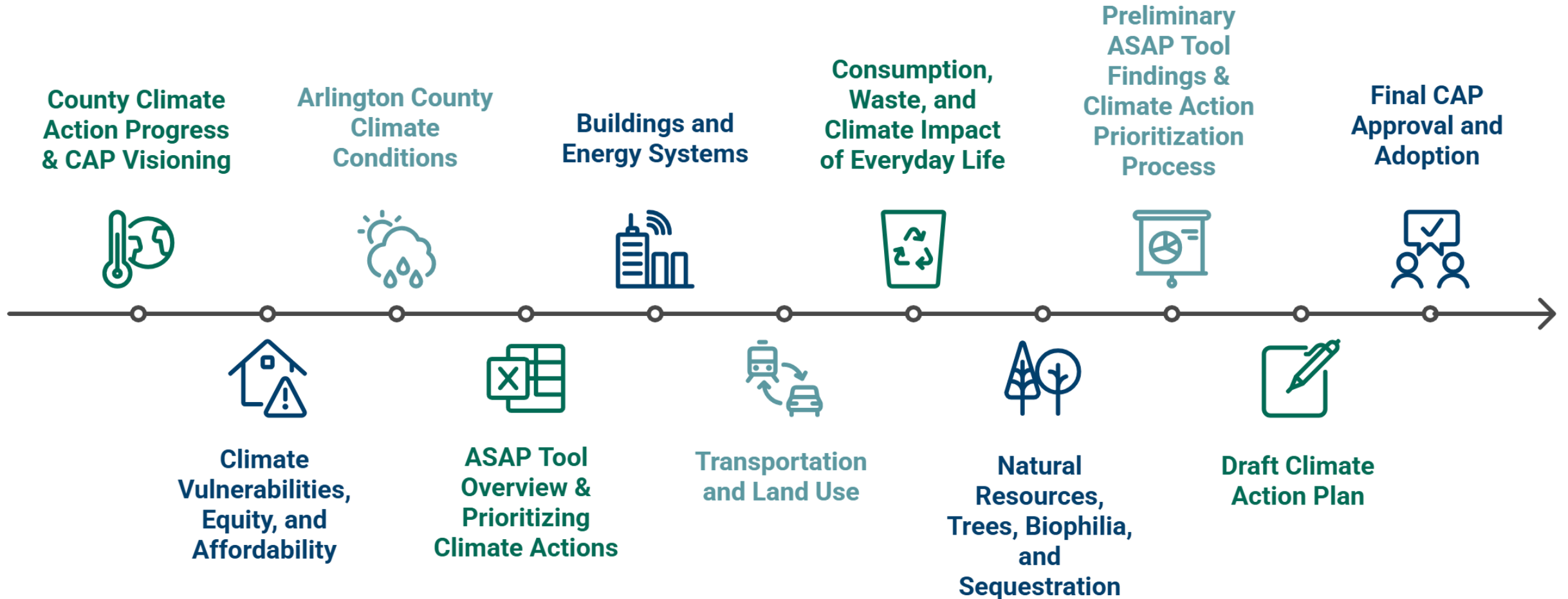
## **Advisory Group Members**

- Raise virtual hand & wait to be called on
- Video on, if possible
- Chat for tech support or when asked to provide input during discussion
- Phone-in option if having internet issues

## **Members of the Public**

- Public comment taken at end of meeting
- 3 minutes per person
- Use chat to add your name to the public comment list

# Upcoming CAPAG Meeting Topics



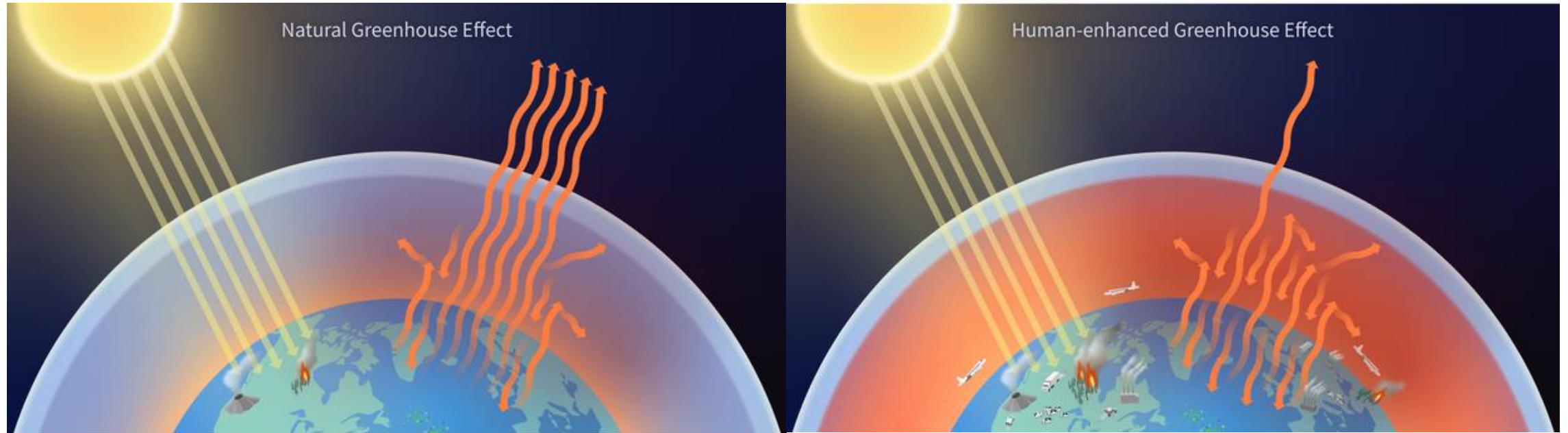
# Hot Topics: Greenhouse Gases

# Key Takeaways

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- Human-caused Greenhouse Gas (GHG) emissions drive increasing global temperatures
- GHGs, including CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, are emitted from activities like fuel and electricity use, waste generation, industrial processes, and agriculture
- Arlington County's emissions have fallen 33% from 2007 to 2023
- As part of the Climate Action Planning process, Arlington will revisit its goal of carbon neutrality by 2050 as established in the 2019 Community Energy Plan

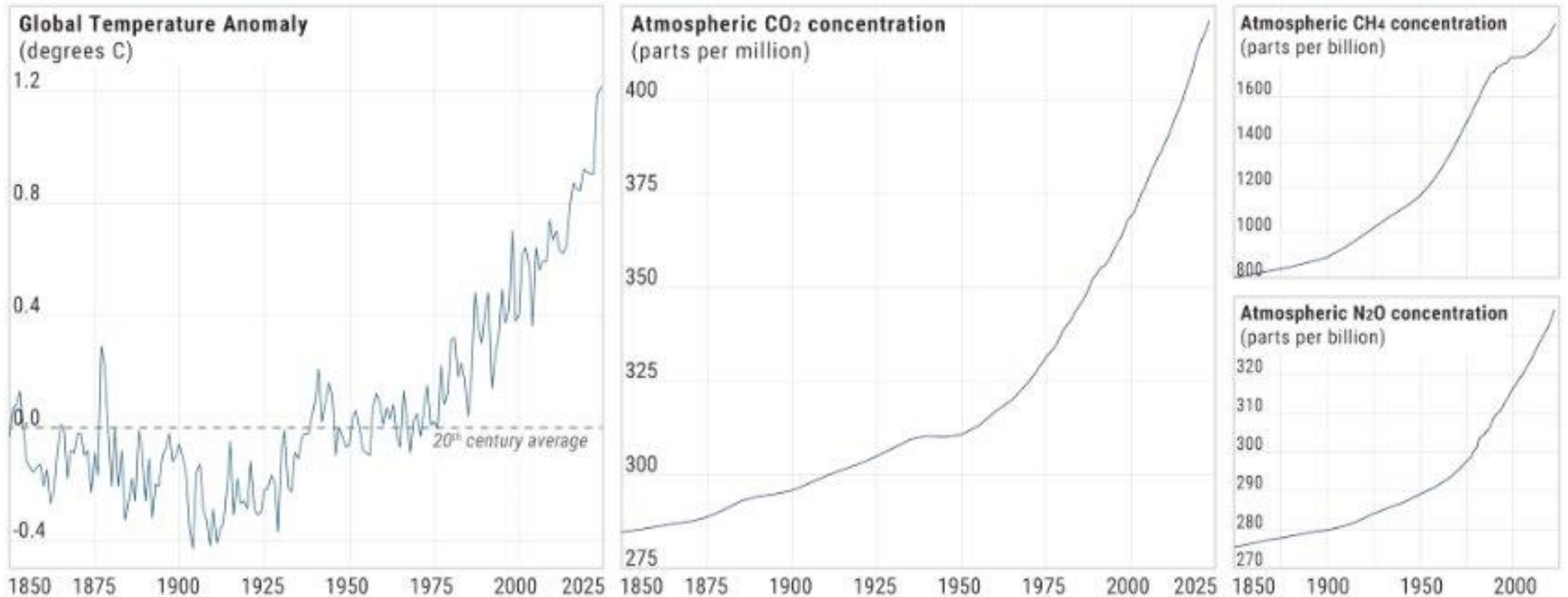
# Greenhouse Gas Effect



Source: NOAA, <https://www.climate.gov/ghg/what-are-greenhouse-gases-and-why-do-they-matter>

- Greenhouse gases (GHGs) absorb heat and trap it in the atmosphere
- GHGs remain in Earth's atmosphere for long periods of time
- H<sub>2</sub>O, CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, fluorinated gases

# Greenhouse Gas Effect



Source: Image from Center for Climate and Energy Solutions, Data from NOAA's Global Monitoring Laboratory and Global Temperature Time Series, <https://www.c2es.org/content/main-greenhouse-gases/>

# Setting GHG Reduction Targets

- GHG reductions are needed to slow warming and mitigate the negative impacts of changing climate
- GHG Protocol provides guidance for public sector organizations in setting GHG targets
- Targets allow local governments and other organizations to measure and report on progress toward climate goals

## The Greenhouse Gas Protocol for the U.S. Public Sector



## Interpreting the Corporate Standard for U.S. Public Sector Organizations

# Setting GHG Reduction Targets

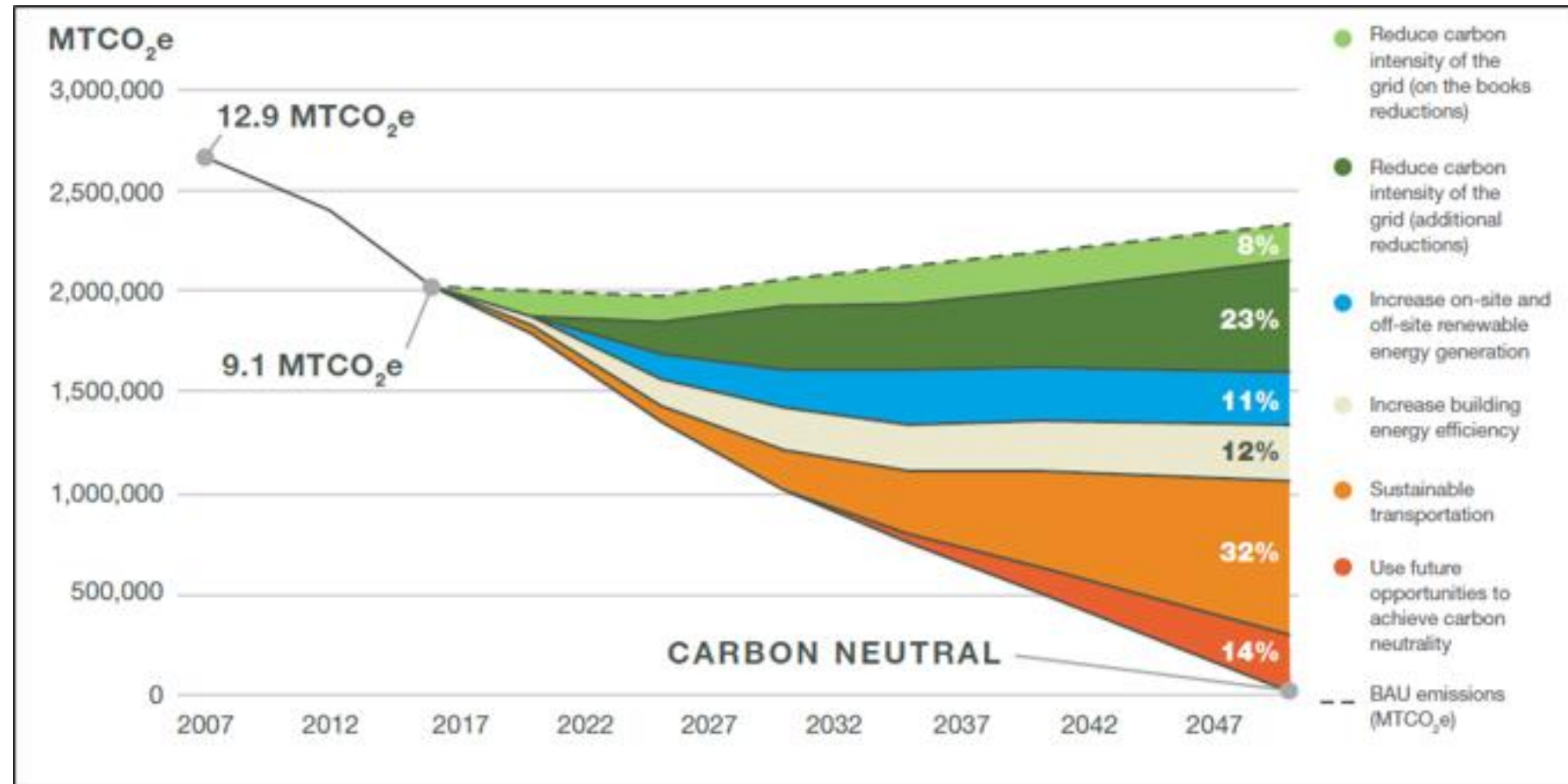
- Target type:
  - Absolute emissions: Reduce total quantity of emissions (e.g., reduce by a certain percent by a given year)
  - Emissions Intensity: Reduce emissions relative to another metric (e.g., per capita)
- Set a target boundary:
  - Which GHGs?
  - Which emission sources and scopes?
  - Which geography?

# Setting GHG Reduction Targets

- Set a base year
  - Allows a comparison point against which to measure progress
- Define target completion date and length of commitment period
  - Short-term (e.g., 2030) and/or long-term (e.g., 2050) targets
- Decide on use of GHG offsets or credits
- Decide on target level
  - E.g., science-based targets

# 2019 Community Energy Plan: Carbon Neutral Target

- Arlington's 2019 CEP established a target of carbon neutrality by 2050
- Carbon neutrality defined as net-zero GHG emissions



# Arlington GHG Inventory Background

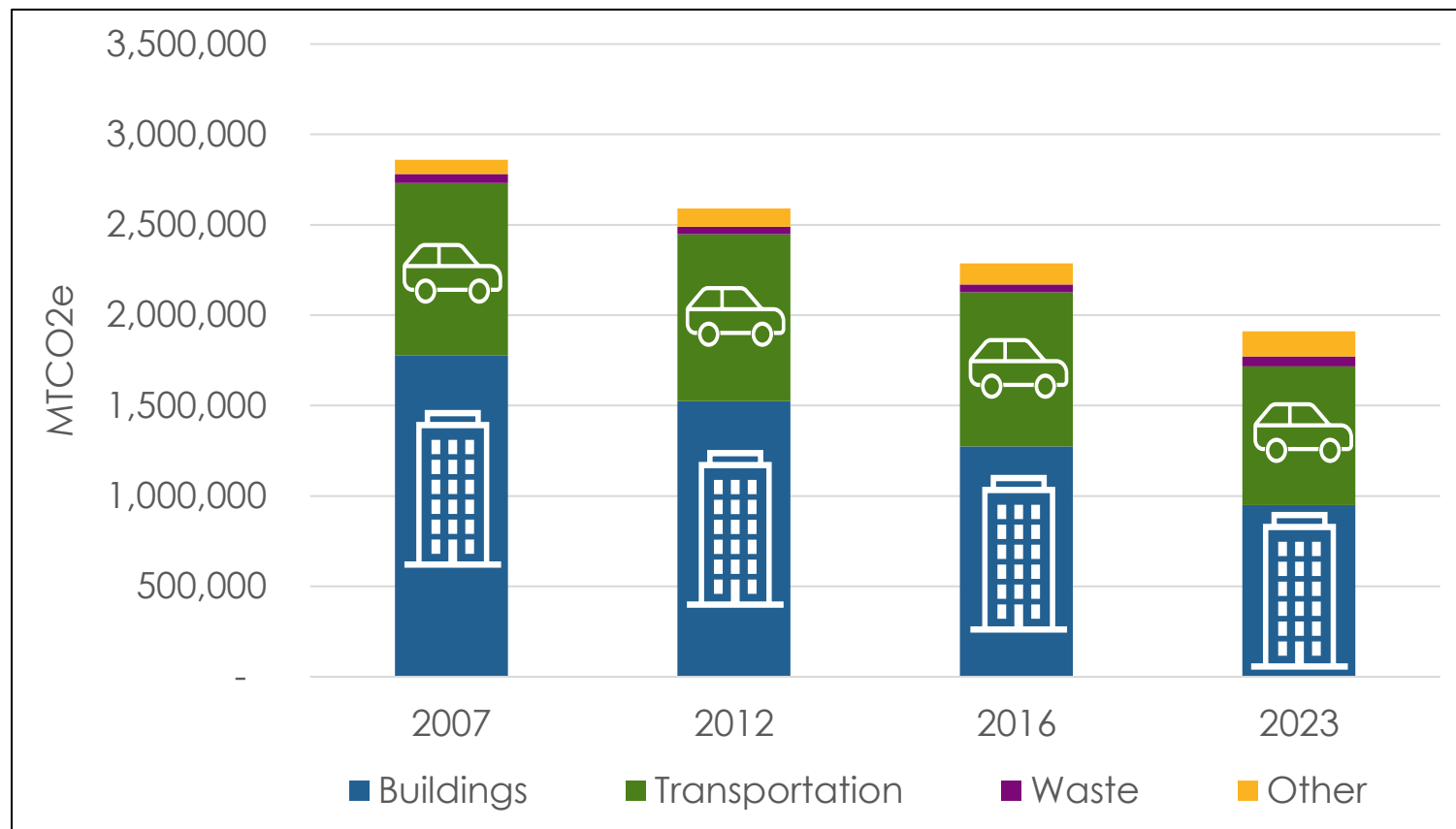
- The greenhouse gas (“GHG”) inventory provides a snapshot of annual GHG emissions generated by activities within the County in a given calendar year
  - The inventory does not include projections about future emissions (e.g., wedge chart) or evaluate emission reduction potential of mitigation strategies
  - Arlington has completed GHG inventories for years 2007, 2012, 2016, and most recently 2023
  - The inventory update for 2023 was completed by AECOM with data inputs from the County

# Arlington GHG Inventory Background

- GHG Inventories help the County:
  - Track progress toward GHG reduction goals
  - Identify largest sources of emissions and how they have changed over time
  - Direct and prioritize climate actions
    - The GHG inventory provides the basis for strategy analysis of forthcoming Climate Action Plan

# GHG Inventory Results

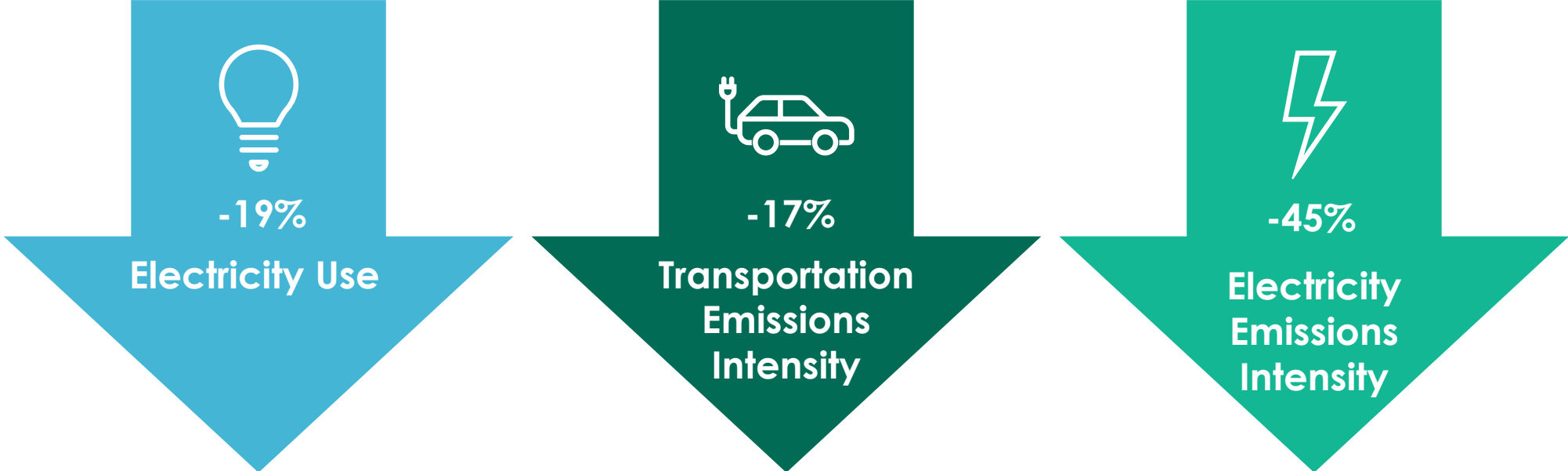
- Total emissions in 2023 were 1,910,549 MTCO<sub>2</sub>e
- Emissions have fallen 16% since 2016 and 33% since 2007
- Buildings remain the largest source of emissions, followed by transportation
- These two subsectors made up 90% of total emissions in 2023
- Refrigerant emissions contributed 7% of total emissions in 2023



\*Other emissions include refrigerant leakage and agricultural soils

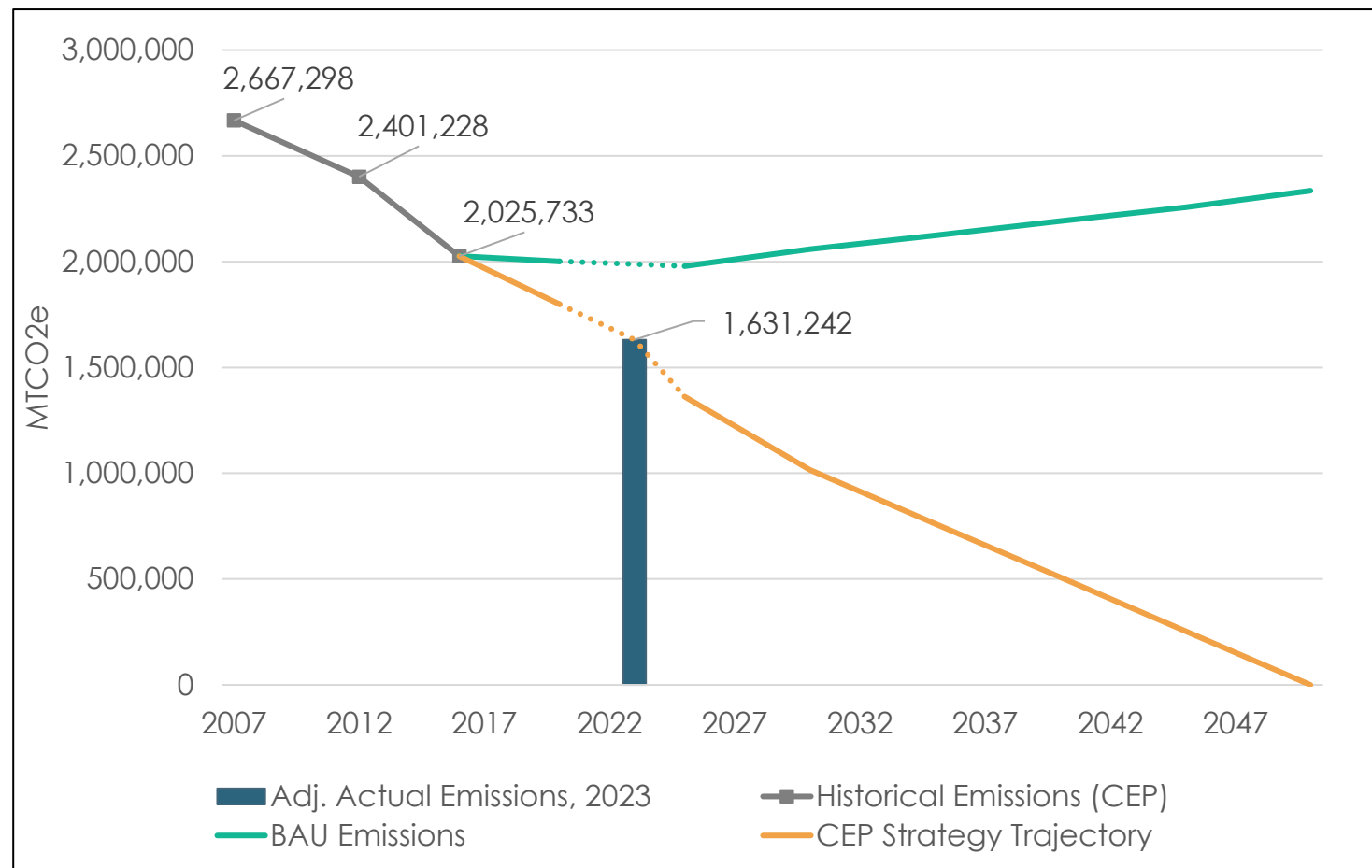
# GHG Inventory Results

Factors Contributing to Emission Reductions, 2007-2023



# GHG Inventory Results – CEP Progress

- As part of the 2019 CEP, two emissions forecasts were projected:
  - business as usual (BAU) scenario
  - target trajectory scenario, which incorporated emission reduction strategies
- Emissions were projected on 5-year increments
- The 2023 emissions shown here are adjusted for methodological consistency with the 2019 CEP projections to allow for comparison
- 2023 GHG emissions were below the 2020 target trajectory and well below the BAU trajectory



Note: Historical and projected emissions from 2019 CEP

# Next Steps

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- The data and emission results from the GHG inventory will be used as inputs to the quantitative analysis for the CAP update
- Current emissions and historical trends will inform the development of GHG reduction strategies

# Our Changing Climate

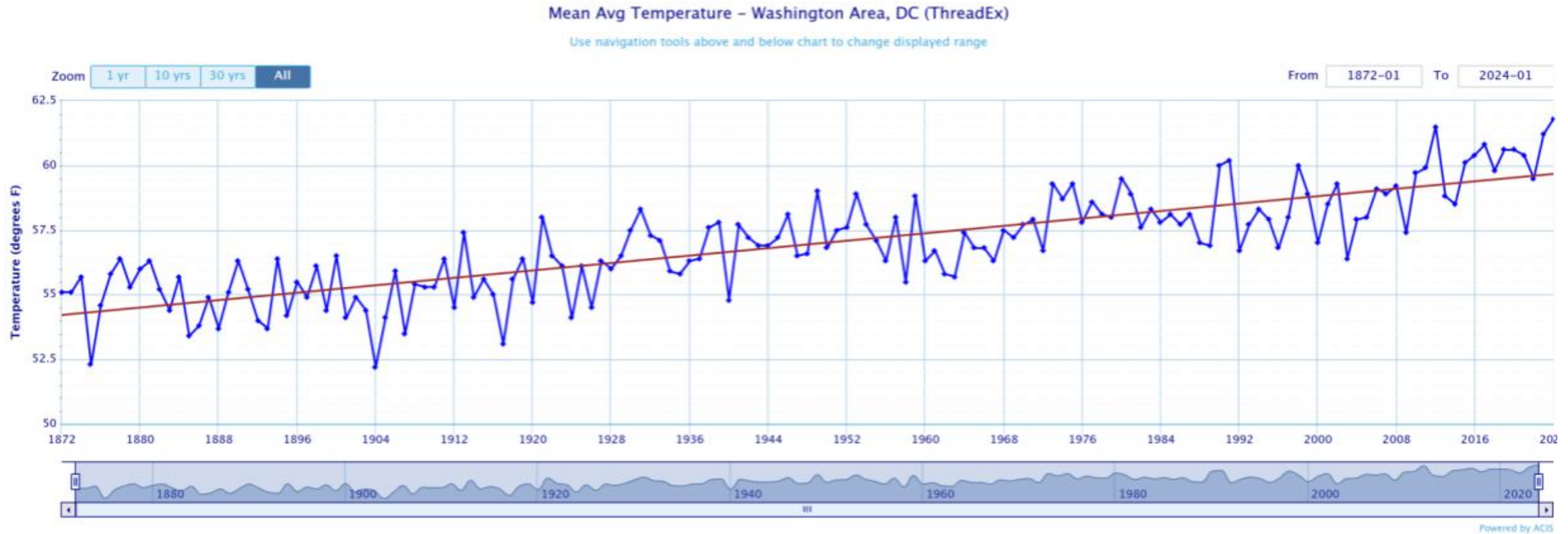
Arlington's main climate-related hazards

# Key Takeaways

- D.C. area weather is becoming warmer and wetter, with less snow and higher tides.
- These trends will continue for decades.
- We will need to plan for and adapt to changes.
  - Heat island reduction
  - Stormwater management
- Reducing emissions of greenhouse gases will lower risk of the worst, unwelcome changes.



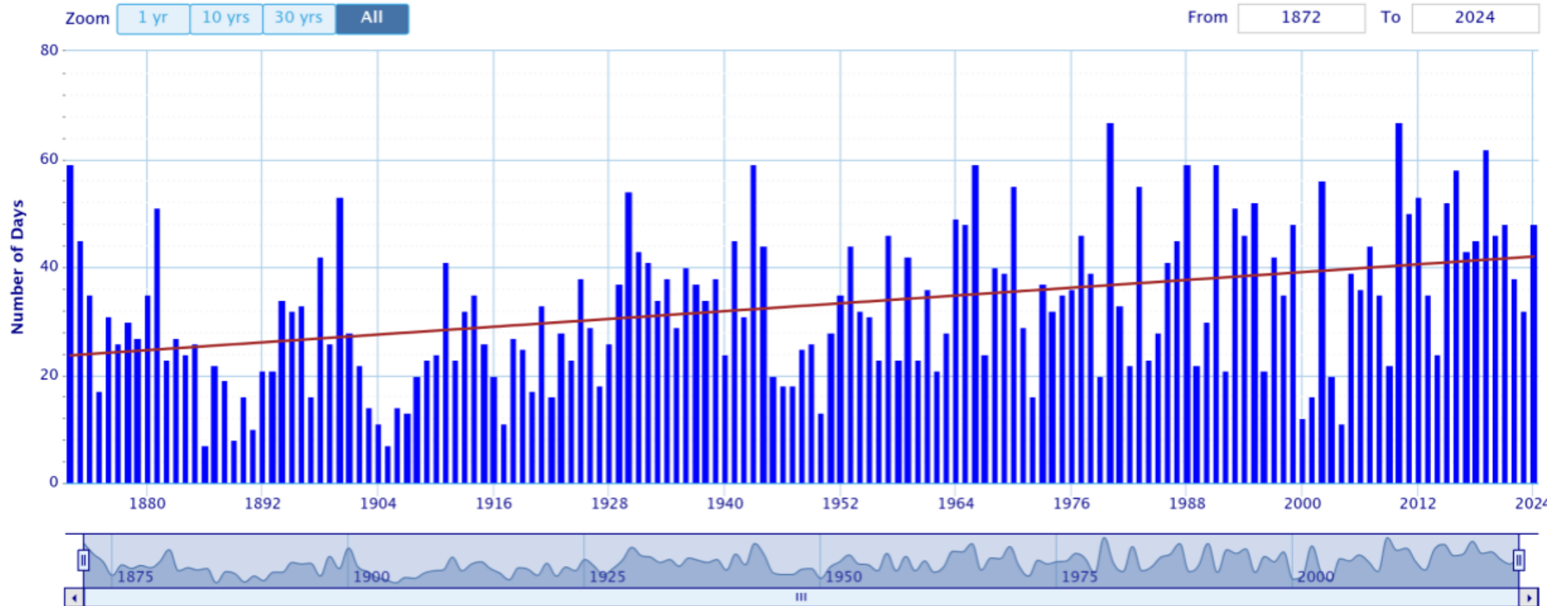
# Rising Regional Temperature



# Extreme Heat

Number of Days Max Temperature  $\geq 90$  - Jan through Dec - Washington Area, DC (ThreadEx)

Use navigation tools above and below chart to change displayed range

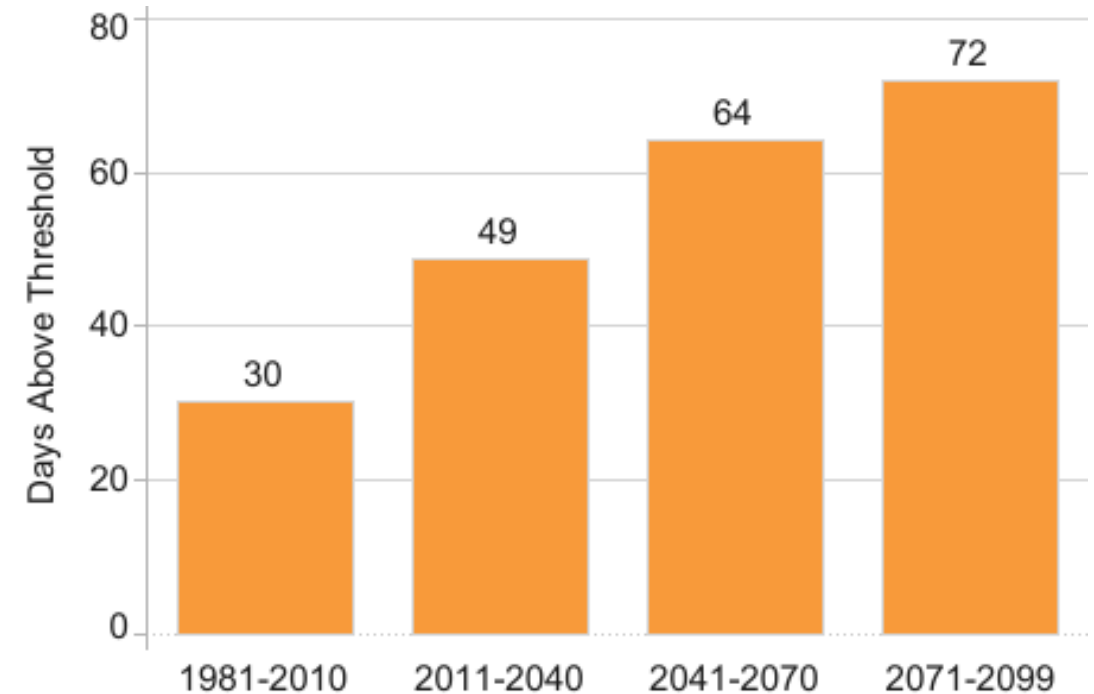


Powered by ACIS

# Why Extreme Heat Matters

- Regional Reality
  - Anticipate up to 43 extremely hot days in NoVa annually by 2050.
- Infrastructure breakdown
  - Extreme heat expands metal, impacting transit systems
- Public Health Dangers
  - High heat + humidity prevents human body from cooling itself.
  - Drives heat stroke, puts vulnerable residents at immediate risk
- Emergency Services Under Strain
  - Extreme temps drain batteries in life-saving AEDs and damage emergency vehicle electronics.
  - Workers face risk of heat exhaustion

Days above 90 degrees in Washington



Mid-Atlantic RISA  
Low emissions scenario

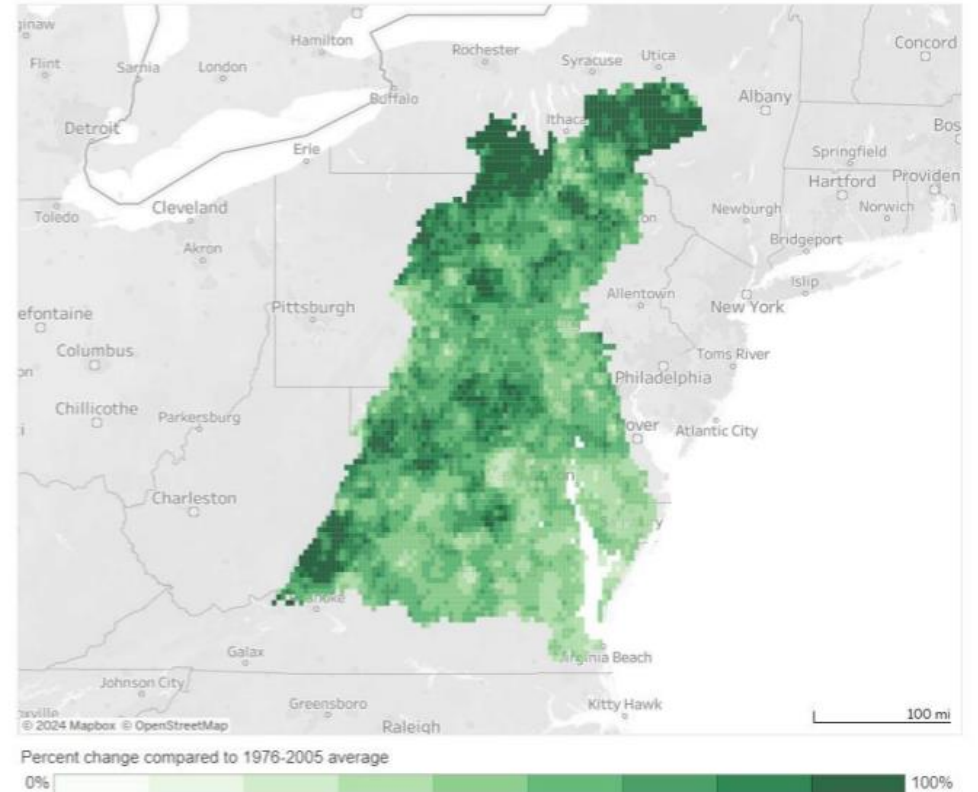


# Extreme Rainfall

- Shifting Seasons
  - Cherry blossoms blooming earlier
  - Pollen season starts earlier
- Intensifying Weather
  - Heavy rainfall events becoming more frequent
  - Flooding is increasing
- Rising Seas
  - Over one foot of sea level rise in the last century

## Increase in no. of days with >2" of rain by 2100 Moderate emissions

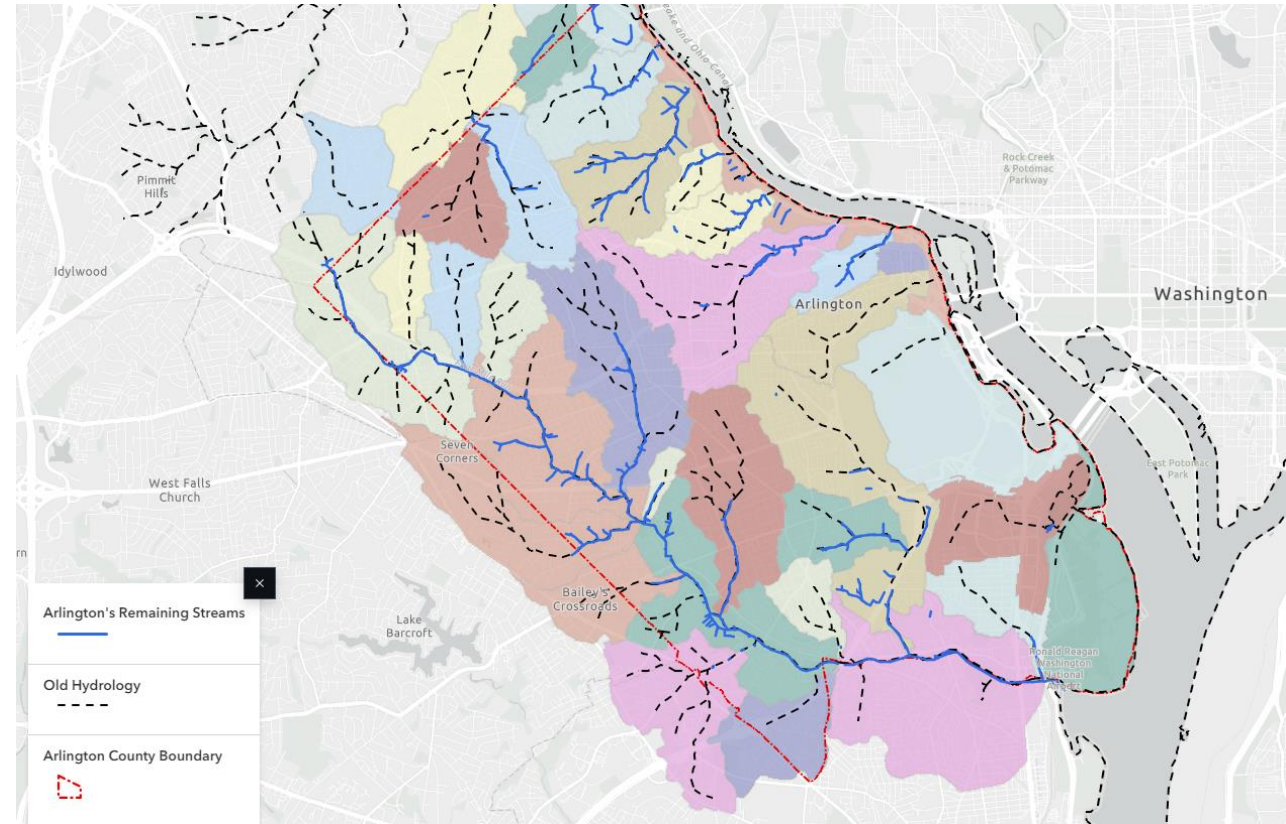
Figure 3b. Projected change in the average annual number of days with precipitation above 2" (2066-2095: Moderate Emissions (RCP 4.5))



Mid-Atlantic RISA

# Why Increasing Rainfall Intensity Matters

- 1930s-60s, 60%+ of Arlington's streams were encased in underground stormwater pipes
- Buildings and roads built over former stream valleys and floodplains
- When storm drain capacity is exceeded, floodwaters threaten life, safety, and property
- As rainfall intensity increases, **this flooding occurs more often**
- Arlington's Stormwater Program is investing in flood risk reduction in critical watersheds
- Re-establishing 'overland relief' for floodwaters through voluntary property acquisition a key strategy to reduce flood risk permanently

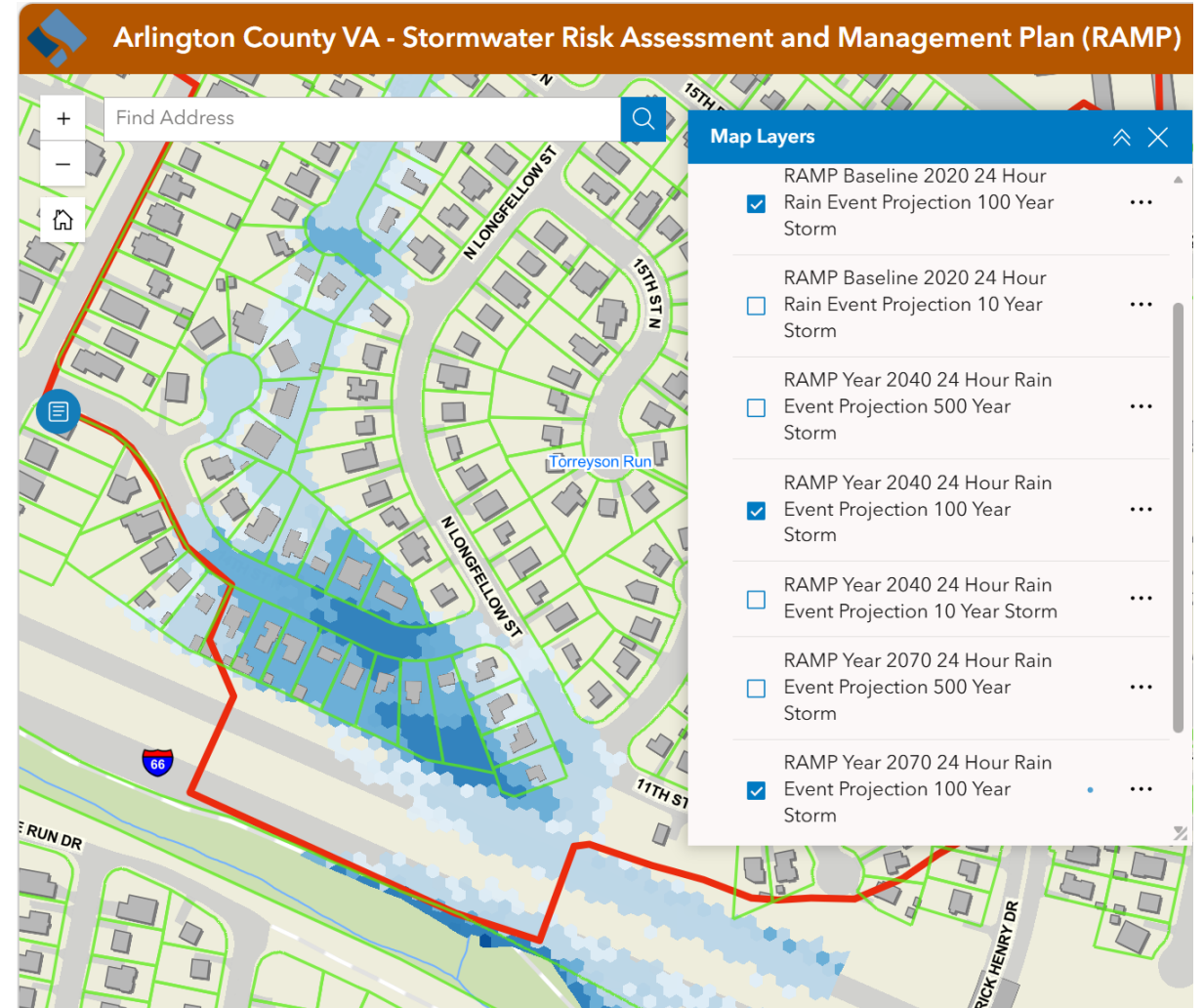


Arlington County

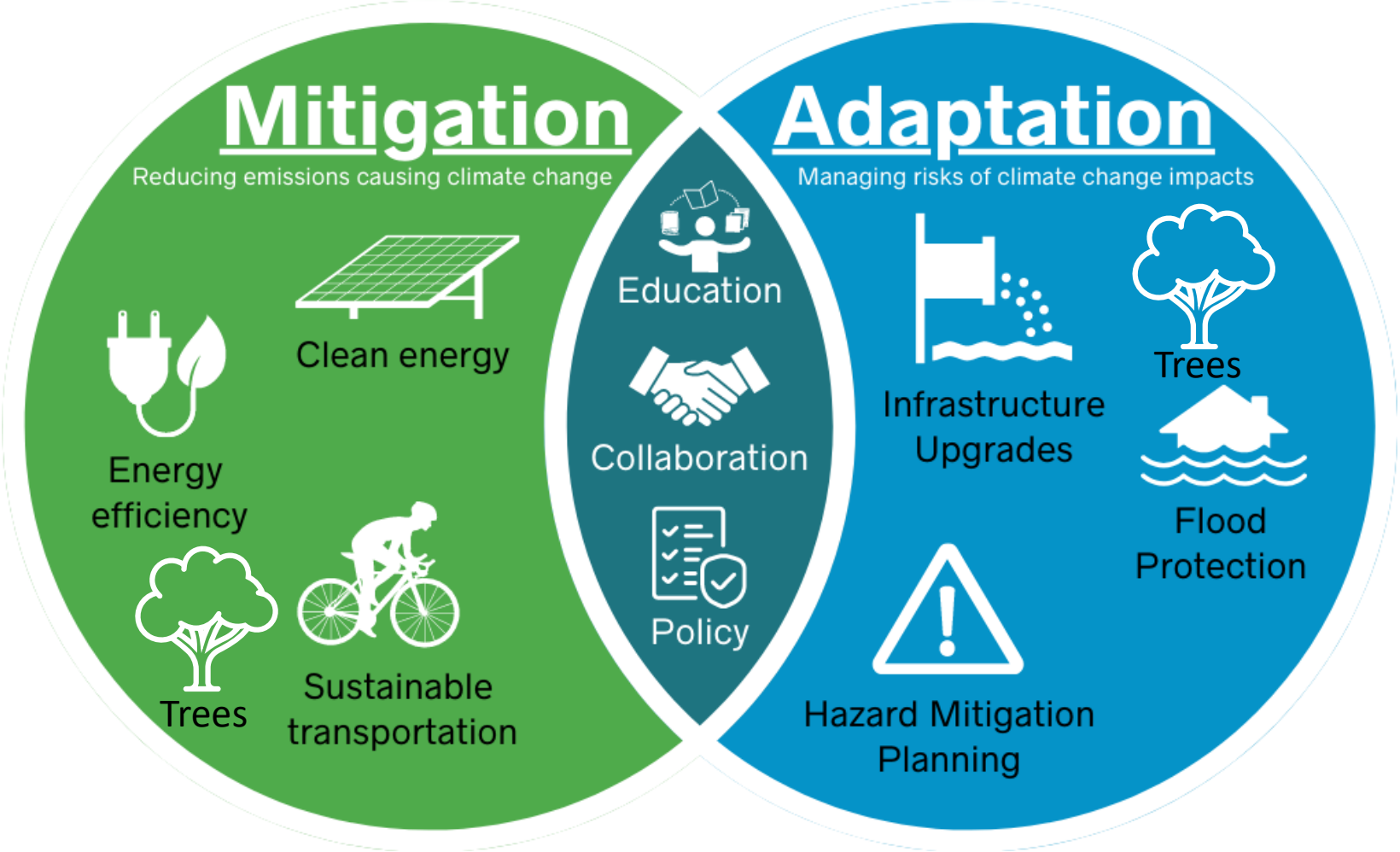
# Planning for the risks of today and tomorrow

- Arlington has analyzed local rainfall and made projections for climate change
- We have also modeled where to and to what depth flooding occurs and how it would increase with more intense storm events

[Reduce Your Risk of Flooding – Official Website of Arlington County Virginia Government](#)

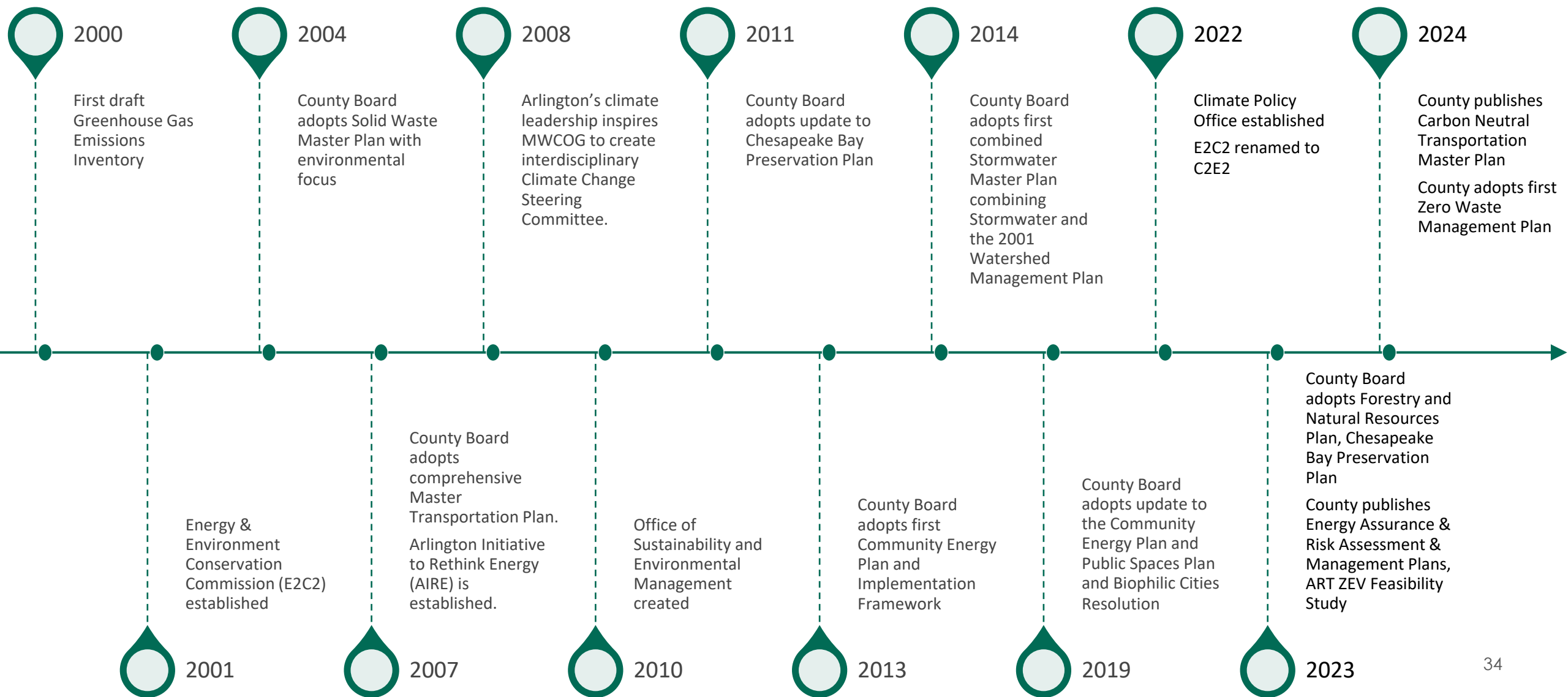


# Strategies for Addressing Climate Change



# Climate Action Plan







# Climate Planning Milestones



# Community Energy Plan



- 100% renewable electricity for County operations by 2025 (achieved 2023)
- 100% renewable electricity for community by 2035
- Carbon neutrality by 2050

	<b>BUILDINGS</b>	→	<ul style="list-style-type: none"><li>• Total community 2016 energy use reduced by at least 38% by 2050</li><li>• Incentive beyond-code building design, construction &amp; operation</li></ul>
	<b>RESILIENCE</b>	→	<ul style="list-style-type: none"><li>• Develop Energy Assurance Plan</li><li>• Develop energy resilience, e.g., micro-grids, diverse resources</li></ul>
	<b>RENEWABLE ENERGY</b>	→	<ul style="list-style-type: none"><li>• Govt ops electricity 50% renewable energy by 2022; 100% by 2025</li><li>• Community @ 100% renewable energy by 2035</li></ul>
	<b>TRANSPORTATION</b>	→	<ul style="list-style-type: none"><li>• Carbon neutral government fleet by 2050 (including APS)</li><li>• 0.5 mt CO<sub>2</sub>e / capita / year by 2050 (present 2.7 mt)</li></ul>
	<b>GOVERNMENT</b>	→	<ul style="list-style-type: none"><li>• County government carbon-neutral by 2050</li><li>• Design/construction of new &amp; major renovation facilities should presume Net Zero Ready Targets</li></ul>
	<b>BEHAVIORAL CHANGE</b>	→	<ul style="list-style-type: none"><li>• Engage and empower individuals to reduce energy use</li><li>• Design and implement programs that address equity issues</li></ul>

# Overview

- Climate Action Plan (CAP)
  - Identification of vulnerabilities, adaptation, and resilience opportunities
  - Integrates past work, and feedback, sets mitigation, adaptation and resilience priorities
  - Creates new goals, expands on old ones
    - Goes beyond energy
    - New goal areas like water use and solid waste
    - Will be central source on climate change mitigation, adaptation, and resilience matters



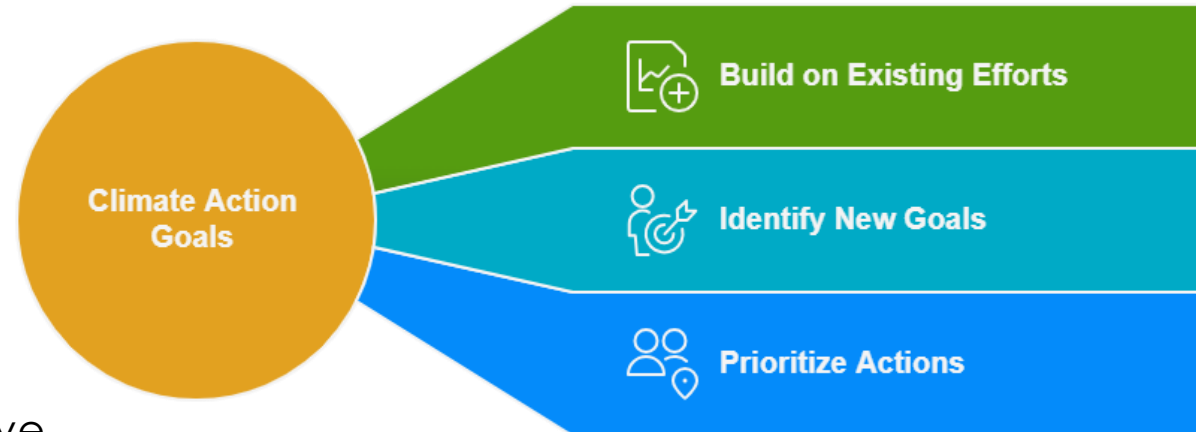
# Scope

## Purpose

- Update and enhance path to reduce Arlington's GHG emissions and update climate mitigation, adaptation, and resiliency across multiple sectors
- Guides Arlington's whole-of-community, whole-of-government response to climate change

## Project Scope

- Updates and expands Community Energy Plan
- Integrated planning process, informed by robust inclusive public engagement that blends existing County policy and plans/programs with new strategic recommendations
- Data-driven approach utilizing GHG reduction forecasts
- C40 Cities' Climate Action Selection and Prioritization (ASAP) tool to inform County decision-making



# Deliverables

## Major Deliverables

- Data collection and synthesis
- Stakeholder engagement, marketing, communications plans, and branded materials
  - Engagement logistics, facilitation, incentives, advertising managed internally
- GHG emissions reduction action development & analysis
- Desktop natural hazard assessment
- Climate action evaluation and prioritization
  - Utilizes C40 Cities' Climate Action Selection and Prioritization (ASAP) tool
- Develop climate action summaries
- Draft and Final Climate Action Plan

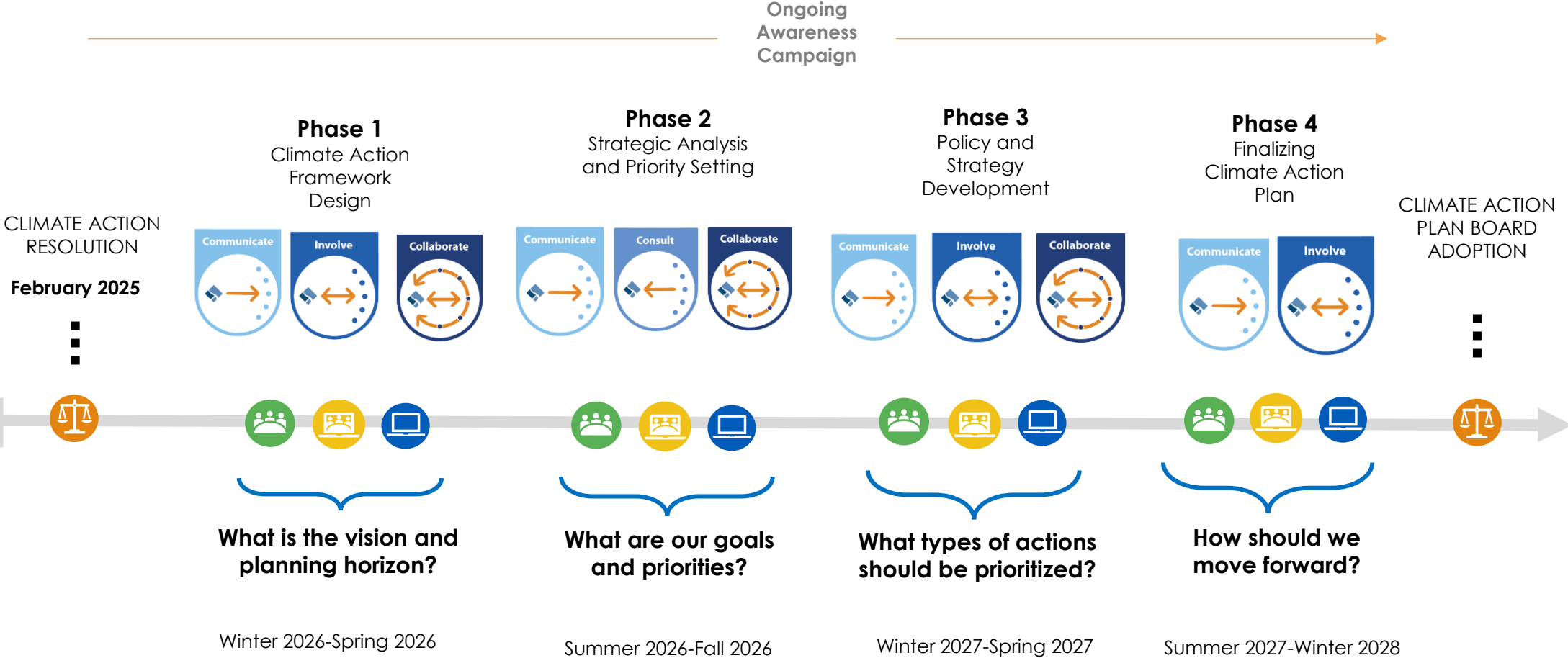


# Climate Action Plan Process



# Public Engagement

# Public Engagement Overview



# Public Engagement # 1

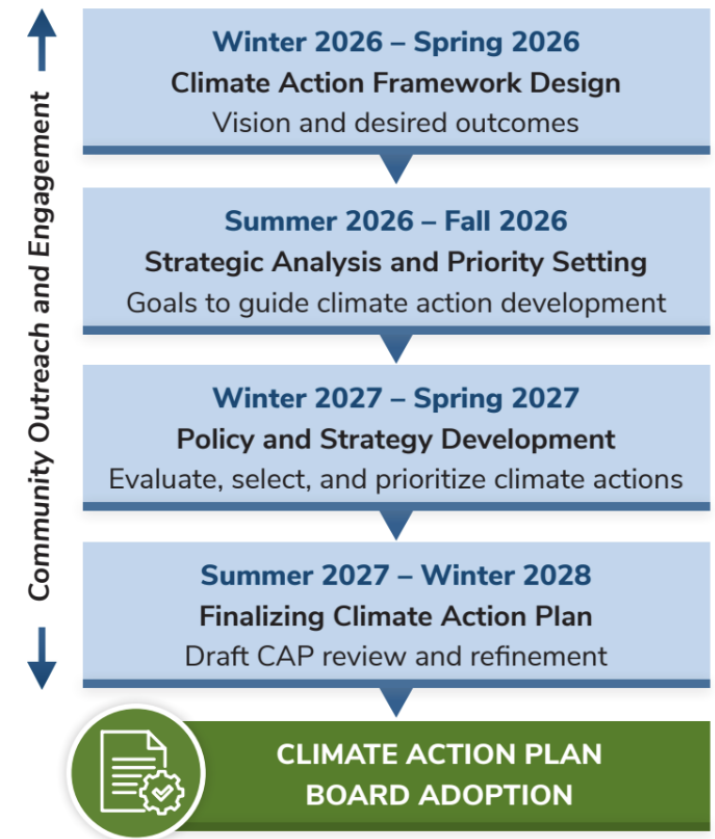
- Public launch of Climate Action Plan at Climate & Cuisine Event on **February 25**
- Phase 1 (of 4) will focus on **Visioning and Desired Outcomes**

## Key Information to Convey:

- Why we need a Climate Action Plan
- What the County is currently doing to mitigate climate change
- What individuals can do to live more sustainably
- What Arlington Climate Together is and how the process will unfold

## Key Questions to Ask:

- What climate-related issues are most concerning?
- Which areas should the County prioritize MOST in the Plan?
- What does an ideal future for a sustainable Arlington look like?
- How can the County ensure its climate approach supports vulnerable and under-resourced communities?



# Public Engagement Overview

## In-Person Events

- Canvassing
- Pop-up events
- Public Open Houses
- Lunch and Learns

## Online Tools

- Climate Action Plan webpage
- Feedback form
- Social media campaign
- E-boards
- Email campaigns

## Materials

- Fact sheet and rack card
- Flyers
- Display boards and interactive activities
- Giveaways

## Partnerships

- Climate Action Plan Advisory Group
- Commissions and Committees
- Interdepartmental Working Group

## Listening Sessions

- Focus groups



# Next Steps

# Next Steps

- **Engagement #1 Launch – May 2026**
  - In-person and virtual open house
  - Collect community insights to help inform the CAP vision and themes for plan development
- **Advisory Group Meeting #2 – May 2026\***
  - County Climate Action Progress and CAP Visioning
- **Advisory Group Meeting #3 – June 2026\***
  - Climate Vulnerabilities, Equity and Affordability

**\*Placeholder timeframes**

# How to Use Mentimeter

## Instructions

Go to

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

Enter the code

**4219 3632**



Or use QR code

# Discussion

## **Public Comment**

**2-3 minutes per person depending on # of speakers**

# Thank you

