FAIRFAX COUNTY
VIRGINIA



Climate Action Implementation Progress and Highlights

Part I : Overarching Metrics & Resilience Highlights

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Climate Plans in Fairfax County

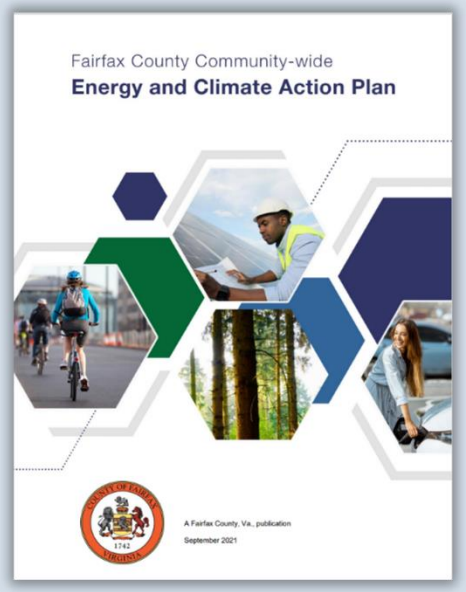
We are addressing both the **cause** and the **effects** of climate change.

Addressing the Cause:

by doing our part
in the global effort to reduce emissions

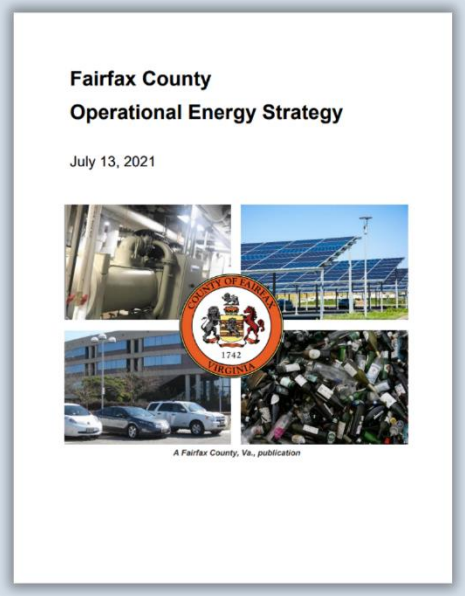
CECAP

(Community-wide)



Operational Energy Strategy

(Government operations only)

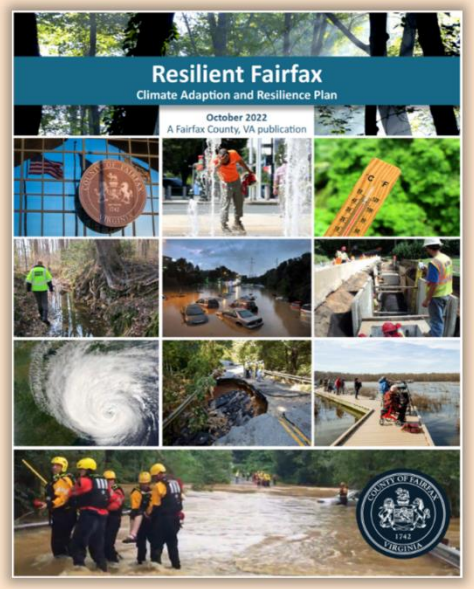


Addressing the Effects:

adapting/building resilience to the impacts we experience locally

Resilient Fairfax

(Government and community)



Today's update is focused on CECAP and Resilient Fairfax.

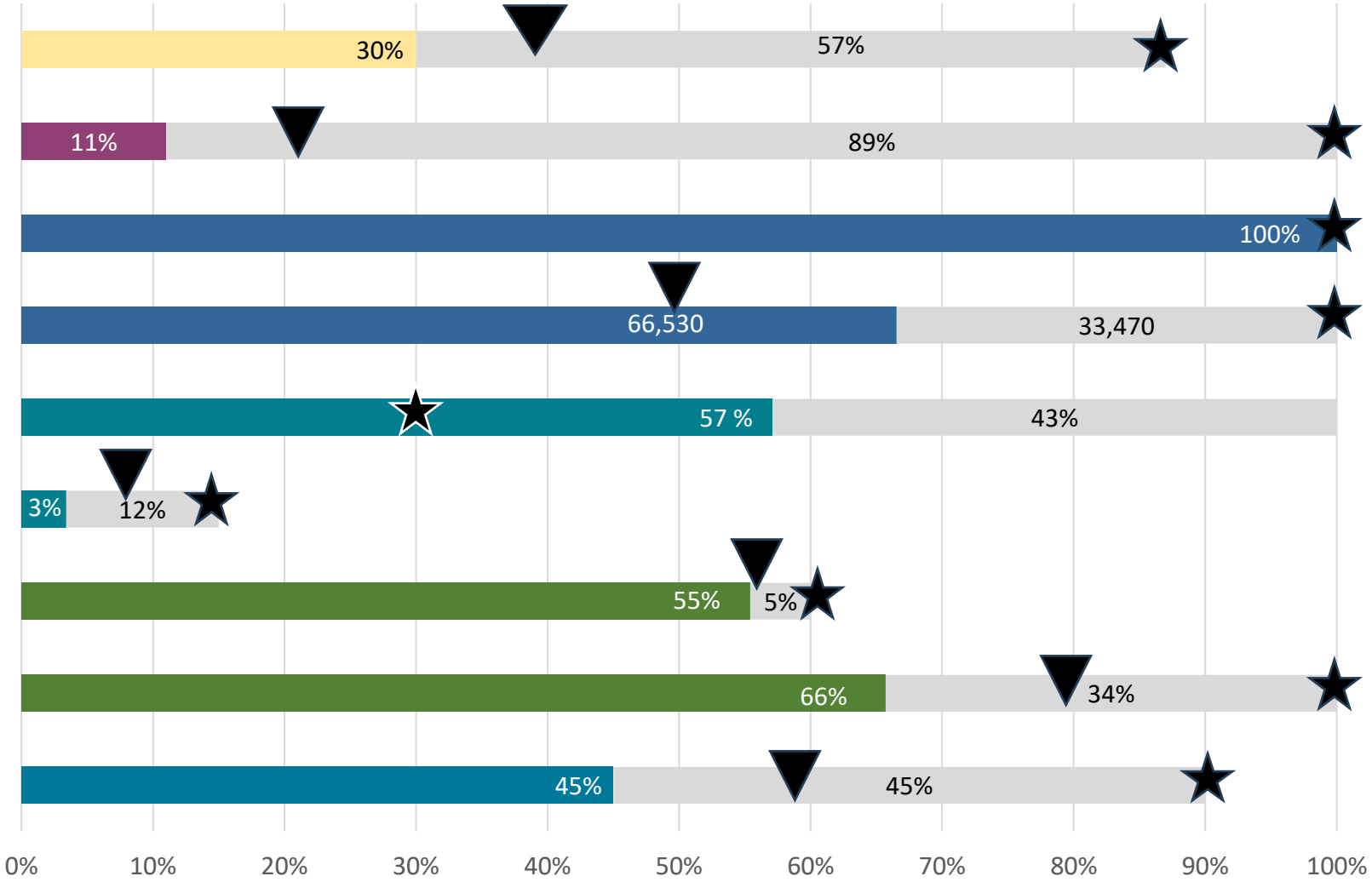
Implementation of the Climate Plans in 2024

- **2024 Climate Progress and Highlights Report**
- **Complements:**
  - Climate Action Dashboard
  - OEEC Newsletter
  - Online resources for residents, organizations and businesses
- **150+ staff** from **25+ agencies** involved
- Coordination with community groups, businesses, fellow jurisdictions, utilities, state and federal government, and the general public.



Outcomes: CECAP *(Emissions Reduction for the Population)*

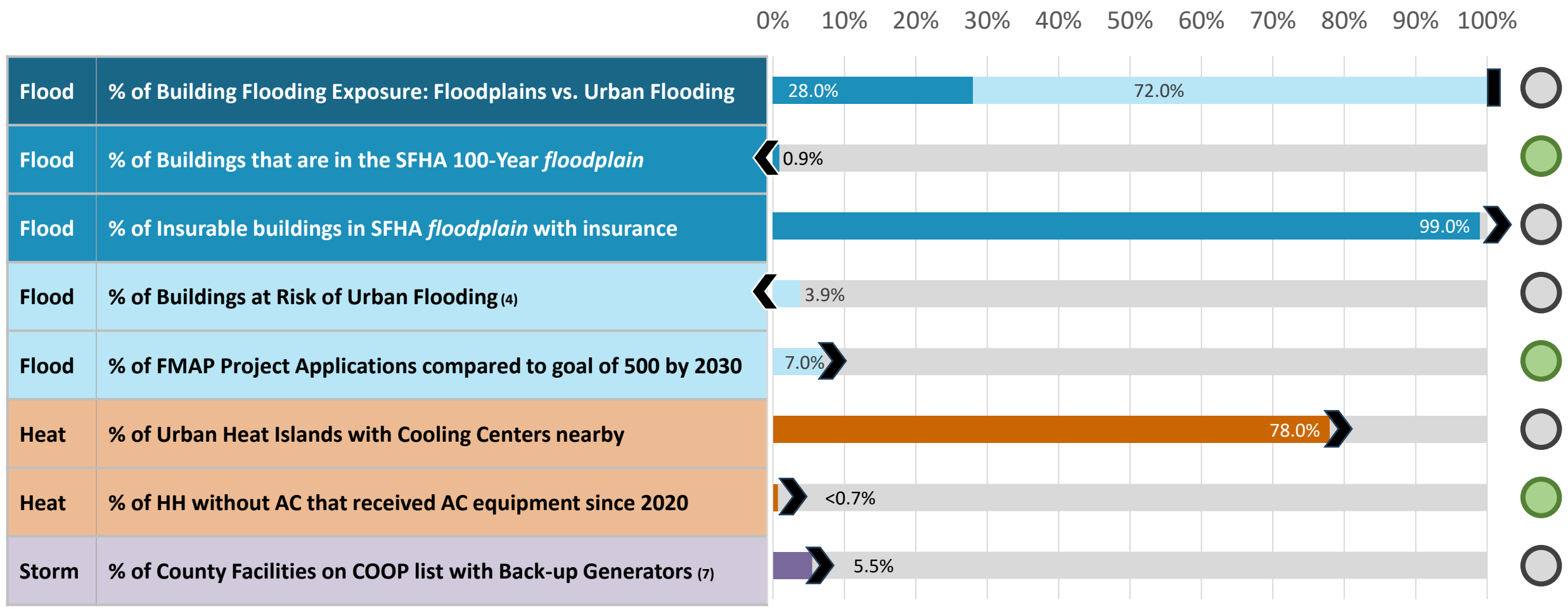
Carbon Neutrality	Carbon neutrality for the population by 2050 (87% reduction)
Energy Supply	Virginia Clean Economy Act (100% clean by 2045)
Energy Efficiency	All new, eligible buildings have a commitment to green building
Energy Efficiency	Retrofit at least 100,000 housing units with energy efficiency by 2030
Transport	Increase transit, non-motorized, and telework* commuting to 30% by 2030
Transport	Electric vehicle registrations (PHEVs and BEVs) to 15% by 2030
Natural Resources	60% tree canopy overall in the County
Natural Resources	100% of Census Tracts have >=40% canopy by 2030
Waste	Zero waste by 2040 (90% waste diverted from the landfill/incineration)



*Due to teleworking during the pandemic, this goal was surpassed, but will likely regress as workers return to the office

Bars = Where we are ▼ = Where we should be ★ = Final Goal

Outcomes: *Resilient Fairfax*



Please note: There are many additional Resilient Fairfax metrics that cannot be expressed as status bars.

Goal is to decrease. Goal is to increase. General tracking to understand issues. No notable change. Progress made.

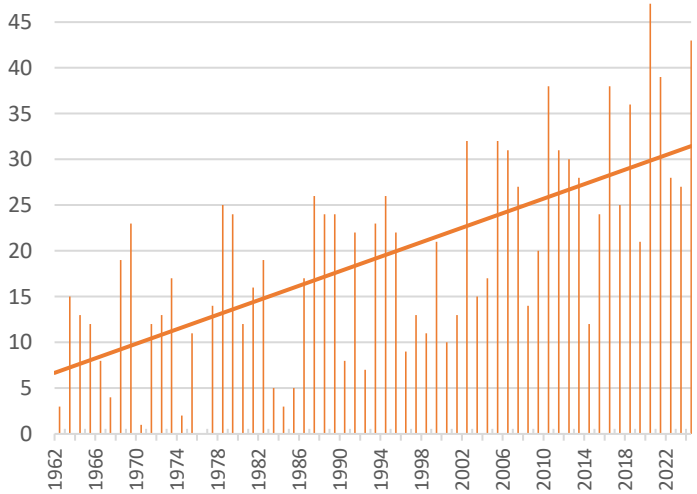
Outcomes: *Resilient Fairfax, continued*

Like running on an accelerating treadmill

We are seeking to adapt and boost resilience to changing conditions as the conditions themselves intensify.

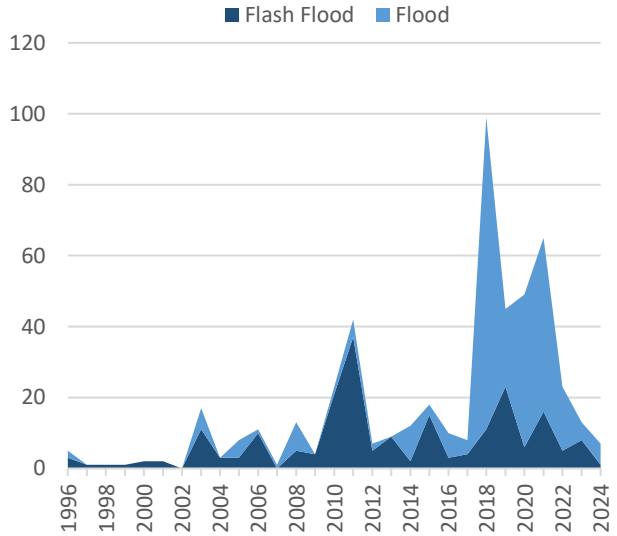
Warmer

Nights Per Year that Remained Above 70 F in Fairfax County, Virginia (1962-2024)



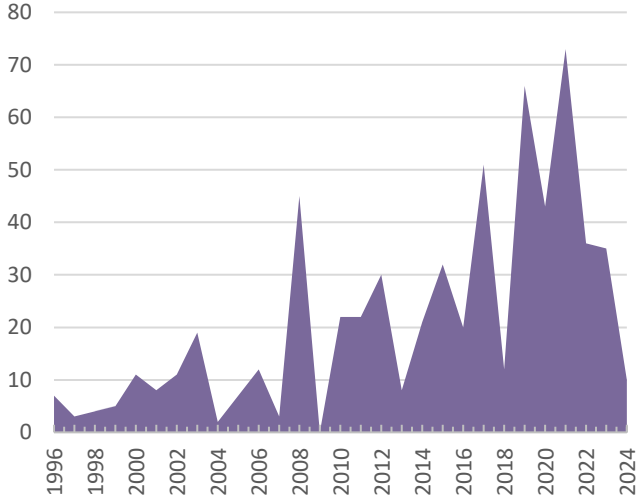
Wetter

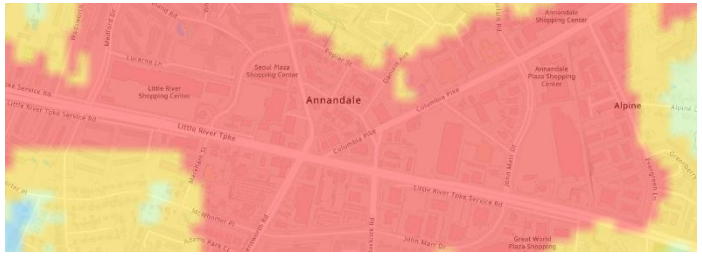
Number of Flood and Flash Flood Events Per Year in Fairfax County, Virginia (1996-2024)



Weirder

Number of Severe "Thunderstorm Wind" Events Per Year in Fairfax County, Virginia (1996-2024)



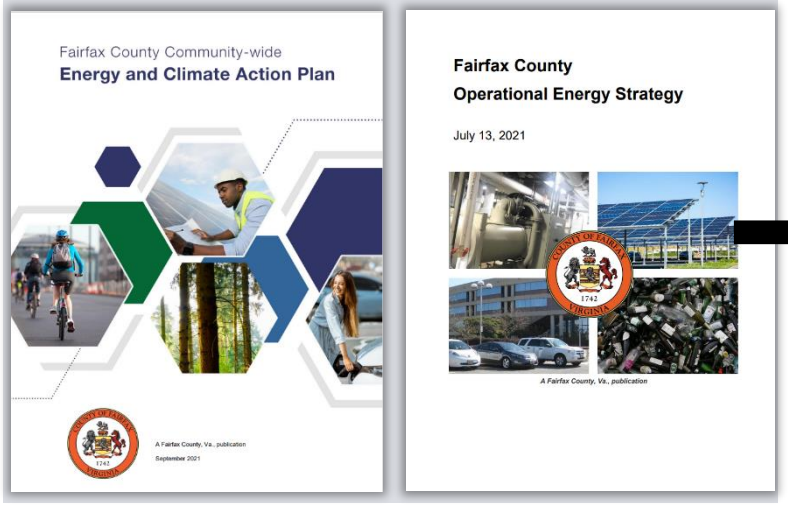




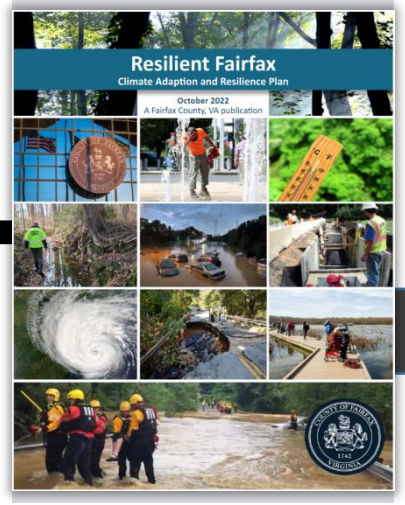


How are the plans being implemented across agencies?

Reducing Emissions



Resilience



Consolidate, streamline, consider who implements what…

Implementation

Group 1: Coordination, Funding, Legal

Group 2: Development Codes, Plans, Policies

Group 3: Community Aid, Education, Engagement, Incentives

Group 4: Natural Resources

Group 5: County Facilities and Operations

Group 6: Data and Research

Highlights: Development Codes, Policies, and Plans

Coordination, Funding, Legislation

Development Codes, Plans, Policies

Community Services, Aid, Engagement, Incentives

Natural Resources

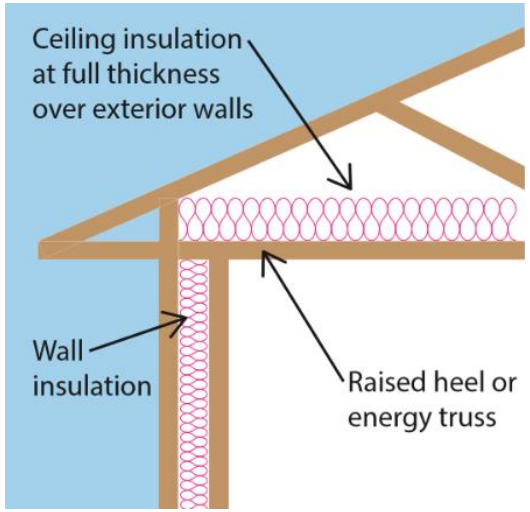
County Facilities and Operations

Data and Research

- **Flood Risk Reduction**
  - 100+ stormwater improvement projects
  - Modeling & analyses to update design standards
- **Comprehensive Plan Amendments - Plan Forward**
  - DPD: updates to the entire Policy Plan of the Comprehensive Plan
  - CECAP and Resilient Fairfax climate concepts being integrated
- **Zoning Ordinance Amendments**
  - ✓ Data Centers Zoning Ordinance Amendment, adopted **9/24**
  - ✓ Parking Reimagined Zoning Ordinance Amendment, effective **1/24**
  - ✓ Landscaping and Screening Zoning Ordinance Amendment, adopted **1/24**
  - ○ Battery Energy Storage Systems, research for potential Zoning Ordinance
- **Uniform State Building Code (statewide)**
  - ✓ Updated in 2021, enforcement beginning **1/24**
  - ✓ Energy efficiency through insulation, ventilation systems, reduce energy use in lighting and power, and rooftop solar placement modifications
  - ✓ LDS Building Codes and Letter to Industry



PLAN FORWARD



Highlights: Community Services and Engagement – *Extreme Heat Services*

Coordination, Funding, Legislation

Development Codes, Plans, Policies

Community Services, Aid, Engagement, Incentives

Natural Resources

County Facilities and Operations

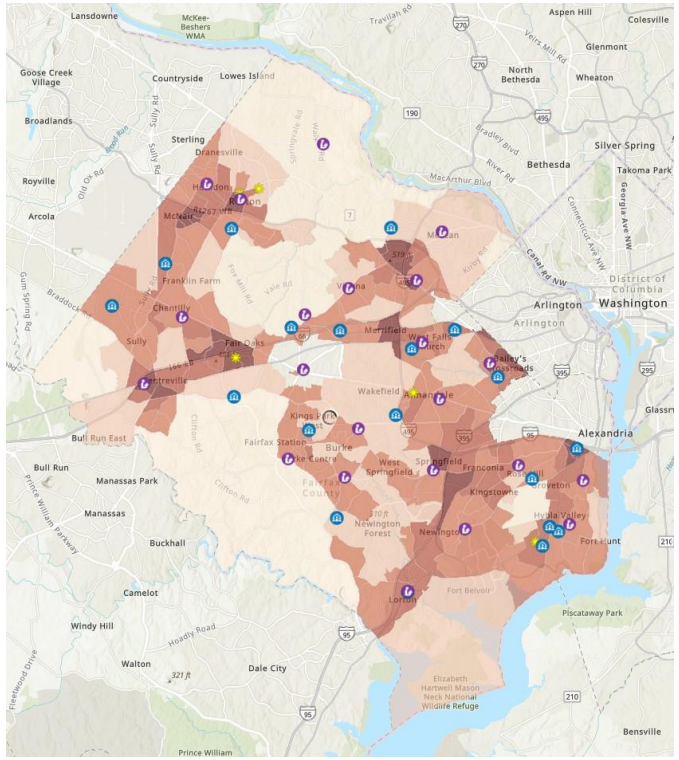
Data and Research

Extreme Heat Services

47
official Cooling Centers
(Same as 2023)

1,301
Visits to Cooling Centers in 2024
(Up from 251 in ’23)

1,557
Cooling Assistance approvals in 2024
(Up from 1452 in '23)



Interagency efforts: NCS, DEMS, DFS, OEEC, FCPL, and more

Prior Years, Memory refresh:

- ✓ Resilient Fairfax, heat data, maps, vulnerabilities
- ✓ Survey of unsheltered residents
- ✓ Updated Cooling Centers, free transportation, supplies
- ✓ Heat comms and outreach (Alerts, Map, webpage, flyers),

2024 updates:

- ✓ Training for employees on heat plan, roles, responsibilities
- ✓ Heat communications toolkit
- ✓ Cooling Center usage tracking
- ✓ Cooling Assistance continued; new AC Rescue pilot

2025 (ongoing):

- Consolidating heat info across agencies
- Heat effects for those w/ mental health & medication needs
- Guidance for residents on heat adaptation through design

Highlights: Community Services and Engagement – *AC Rescue*

Coordination, Funding, Legislation

Development Codes, Plans, Policies

Community Services, Aid, Engagement, Incentives

Natural Resources

County Facilities and Operations

Data and Research

AC Rescue





- Summer 2024: heat emergency at mobile home park; many homes with little to no AC; No successful C.A.
- Quick collaboration between county, non-profits, places of worship, Spanish interpreters
- **Door-to-door outreach with trusted partners (TWU, UC)**
- 31 AC units and other critical repairs installed; connections to other wrap-around services
- Now transitioning **AC Rescue into a standing program with Rebuilding Together, leveraging existing HCD Home Repair contract**
- No duplication of existing cooling programs; filling the gaps

Highlights: Community Services and Engagement

Coordination, Funding, Legislation

Development Codes, Plans, Policies

Community Services, Aid, Engagement, Incentives

Natural Resources

County Facilities and Operations

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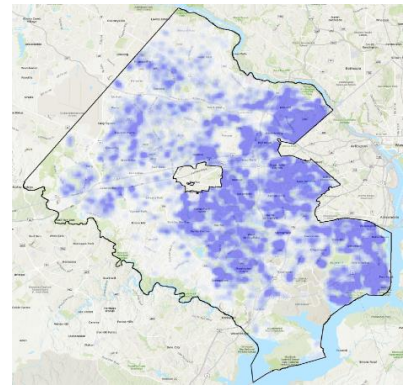
Flood Risk Reduction Programs

- **NEW: Flood Mitigation Assistance Program (FMAP) – launched July 2024!**
  - Reduces flood risk in homes through floodproofing
  - For residents: 50% reimbursement up to $5,000
  - Floodproof windows, flood gates, HVAC elevation, and more
  - **2024: 23 applications** & **$45,310 dispersed in first 6 months** (Jul – Dec 2024)
  - **Total: 35 applications** & **$73,607 dispersed total to date,** including 2025 so far
  - Managed by Northern Virginia Soil and Water Conservation District (NVSWCD)
- **Conservation Assistance Program (CAP) Stormwater – continued success**
  - Reduces flood risk in yards (among other benefits)
  - Bioretention, rain gardens, impervious surface removal, and more
  - **2024: 42** approved applications, **132** site visits, **51** installed projects
  - Managed by Northern Virginia Soil and Water Conservation District (NVSWCD)
- **Flooding & Drainage Service Requests**
  - Residents can report storm drainage system flooding or issues
  - DPWES-MSMD tracks, investigates, responds to these requests







Highlights: Natural Resources – *Resilient Trees*

Coordination, Funding, Legislation

Development Codes, Plans, Policies

Community Services, Aid, Engagement, Incentives

Natural Resources

County Facilities and Operations

Data and Research

- **Downed trees are the #1 reason for weather-related road closures in Fairfax County**
- Tree losses from warmer, wetter, weirder climate
- Hardiness zones have changed with changing climate
- Certain local species are more resilient and adaptable
- Tree survivability makes planting efforts more successful
- **OEEC, LDS, UCFD, and FCPA compiled research on 250+ local tree species, scored for both resilience & adaptation:**
  - *Ability to adapt to change*
  - *Shift in suitable habitat*
  - *Wind resilience & wind protection*
  - *Flood resilience & stormwater absorption*
  - *Heat resilience & UV absorption, cooling*
  - *Drought resilience*
  - *And much more*
- Informing updates to the **Public Facilities Manual** to encourage planting of more resilient trees
- Also in 2024: **changed tree planting window from Sept → Oct**



