



Climate Progress Update

Update

John Morrill, Acting Director, Office of Environmental and Energy Coordination

December 12, 2023

Climate Plans in Fairfax County

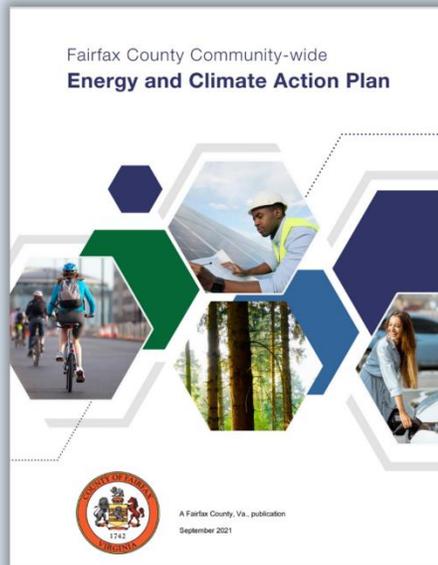
We are addressing both the **cause** and the **effects** of climate change.



Addressing the Cause:
by doing our part
in the global effort to reduce emissions

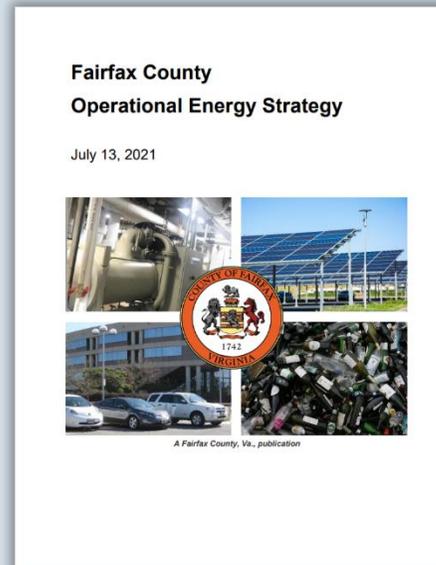
CECAP

(Community-wide)



Operational Energy Strategy

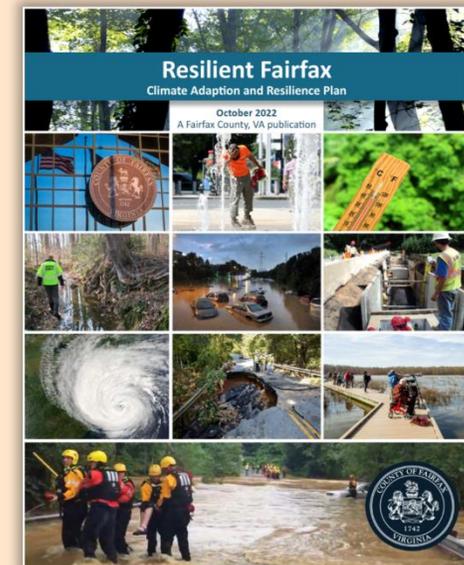
(Government operations only)



Addressing the Effects:
adapting/building resilience to the
impacts we experience locally

Resilient Fairfax

(Government and community)



Climate Plans in Fairfax County, Cont.



150+ staff from
25+ agencies are involved
in climate plan implementation.

OEEC coordinates
across all agencies, and with
community groups, businesses,
fellow jurisdictions, utilities, state
and federal government, and the
general public.

How are the plans being implemented across agencies?



Groups	What We're Doing: <i>Strategy "Roll-Ups"</i>	RF	CECAP	OES	Due	% IAs	Status of IAs
Group 1 Coordination, Funding, Legislation	Interagency & Regional Collaboration, Staff Capacity Building, Strategic Plan	✓	✓	✓	Continuous	64%	<div style="width: 64%; background-color: #1f4e79;"></div>
	Federal, State, and Other Funding Opportunities	✓	✓	✓	Continuous	40%	<div style="width: 40%; background-color: #1f4e79;"></div>
	Adaptation Action Area Implementation	✓			2024	25%	<div style="width: 25%; background-color: #1f4e79;"></div>
	Legislative Proposals and Advocacy	✓	✓		Continuous	23%	<div style="width: 23%; background-color: #1f4e79;"></div>
Group 2 Development Codes, Plans, Policies	Flood Risk Reduction	✓			2027	42%	<div style="width: 42%; background-color: #8c8c3d;"></div>
	Comprehensive Plan	✓	✓		2027	27%	<div style="width: 27%; background-color: #8c8c3d;"></div>
	Urban Design Guidance	✓			2026	19%	<div style="width: 19%; background-color: #8c8c3d;"></div>
	County Codes & Zoning Ordinance	✓	✓		2027	48%	<div style="width: 48%; background-color: #8c8c3d;"></div>
Group 3 Community Aid, Engagement, Education	Incentives for Communities		✓		Continuous	52%	<div style="width: 52%; background-color: #4b4b8c;"></div>
	Aid and Risk Reduction for Communities	✓			Continuous	50%	<div style="width: 50%; background-color: #4b4b8c;"></div>
	Education, Workforce Development	✓	✓		Continuous	40%	<div style="width: 40%; background-color: #4b4b8c;"></div>
	Community-Led Pilot Programs, Partners, Champions		✓		Continuous	36%	<div style="width: 36%; background-color: #4b4b8c;"></div>
Group 4 Natural Resources	Consolidated Natural Resources Management Plan Process	✓	✓		2030	10%	<div style="width: 10%; background-color: #4b8c4b;"></div>
	Tree Programs	✓	✓		Continuous	33%	<div style="width: 33%; background-color: #4b8c4b;"></div>
	Surveying & Protection of Natural Areas	✓	✓		2030	18%	<div style="width: 18%; background-color: #4b8c4b;"></div>
	Nature-Based Restorations and Green Infrastructure	✓	✓		Continuous	35%	<div style="width: 35%; background-color: #4b8c4b;"></div>
Group 5: Facilities & Operations	County Facilities: Energy, Water, Green Buildings, Utilities		✓	✓	Continuous	44%	<div style="width: 44%; background-color: #8c4b2d;"></div>
	Resilience for County Facilities and External Infrastructure	✓			Continuous	10%	<div style="width: 10%; background-color: #8c4b2d;"></div>
	Fleet and Transit		✓	✓	2035	36%	<div style="width: 36%; background-color: #8c4b2d;"></div>
	Zero Waste and Sustainable Purchasing and Procurement		✓	✓	2040	31%	<div style="width: 31%; background-color: #8c4b2d;"></div>
Group 6 Data and Research	Data and Map Updates	✓	✓	✓	Continuous	63%	<div style="width: 63%; background-color: #1f7979;"></div>
	Climate-Related Research	✓			Continuous	19%	<div style="width: 19%; background-color: #1f7979;"></div>

IA = Implementation Action. Some actions are larger than others.

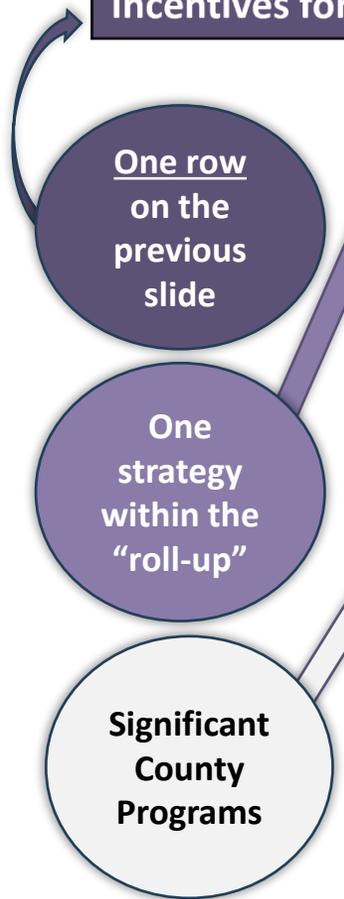
Example for Scale: What is inside a “Strategy Roll-up”

Strategy “Roll-Ups”	% IAs	Status
Incentives for Communities	52%	

29. Incentives for Buildings and Energy Efficiency: County Led Programs	60%	
---	-----	--

 GREEN BUILDING RECOGNITION PROGRAM: CECAP IP BEE.3	
 CONSERVE ENERGY KIT PROGRAM: CECAP IP BEE.1	
 THERMAL CAMERA LOAN PROGRAM: CECAP IP BEE.1	
 HOMEWISE: CECAP IP BEE.11	
 ENERGY CONSERVATION ASSISTANCE PROGRAM: CECAP IP BEE.11	

30. Incentives for Buildings and Energy Efficiency: Promotion of External Programs	42%	
31. Incentives for Solar and Other Renewables	56%	
32. Incentives for Transportation: Electric Vehicle Incentives	50%	
33. Incentives for Transportation: Bicycling and Pedestrian Incentives	50%	
34. Incentives for Transportation: Transit Incentives	63%	

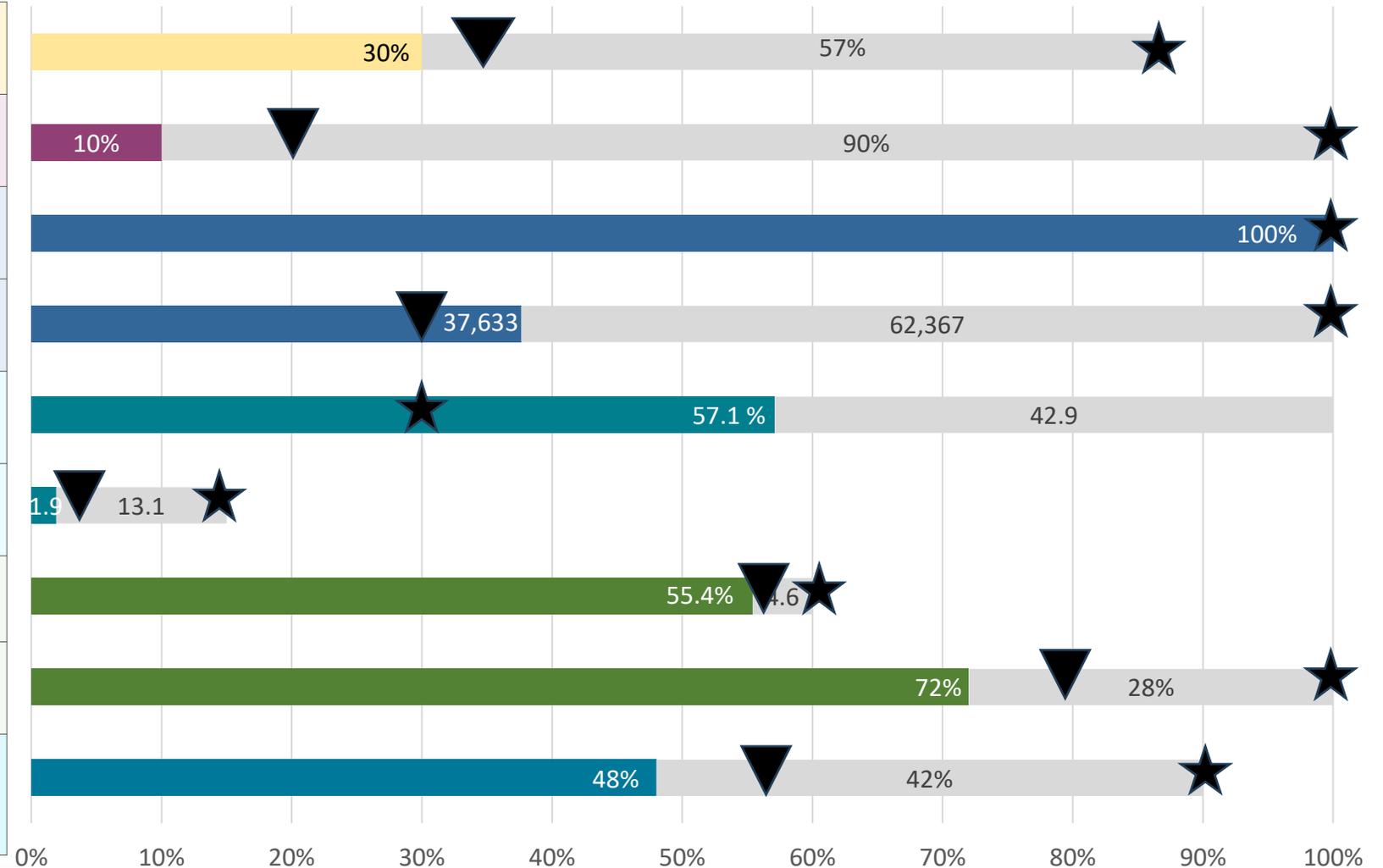


(Much more detail is in the upcoming Progress Report)



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)



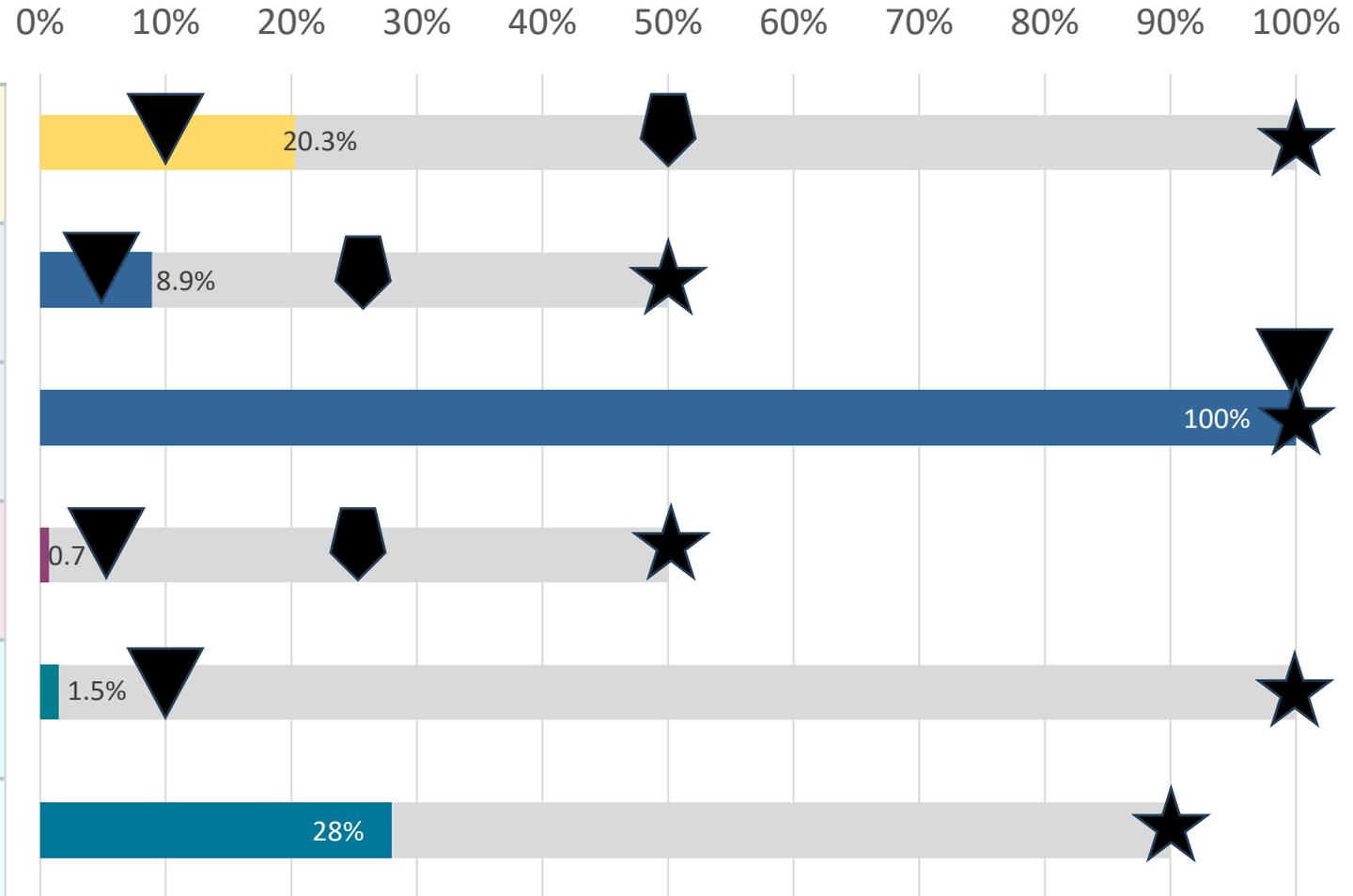
*Due to teleworking during the pandemic, this goal was surpassed, but will likely regress as workers return to the office

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



Outcomes: OES (*Emissions Reduction for County Government*)

Carbon Neutrality	<ul style="list-style-type: none"> • Energy Carbon Neutrality by 2040 • 50% GHG emissions reduction by 2030
Energy Efficiency	<ul style="list-style-type: none"> • 50% building energy reduction by 2040 • 25% building energy reduction by 2030
Green Buildings	<ul style="list-style-type: none"> • New bldgs. LEED Gold + 50% Savings • <i>[Future]</i> Net Zero Energy + All-Electric
Renewables	<ul style="list-style-type: none"> • 50% renewable electricity by 2040 • 25% renewable electricity by 2030
Fleet	<ul style="list-style-type: none"> • Fleet is fully electric or non-carbon by 2035
Waste	<ul style="list-style-type: none"> • Achieve Zero Waste by 2030 (% waste tonnage diverted from landfill)



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

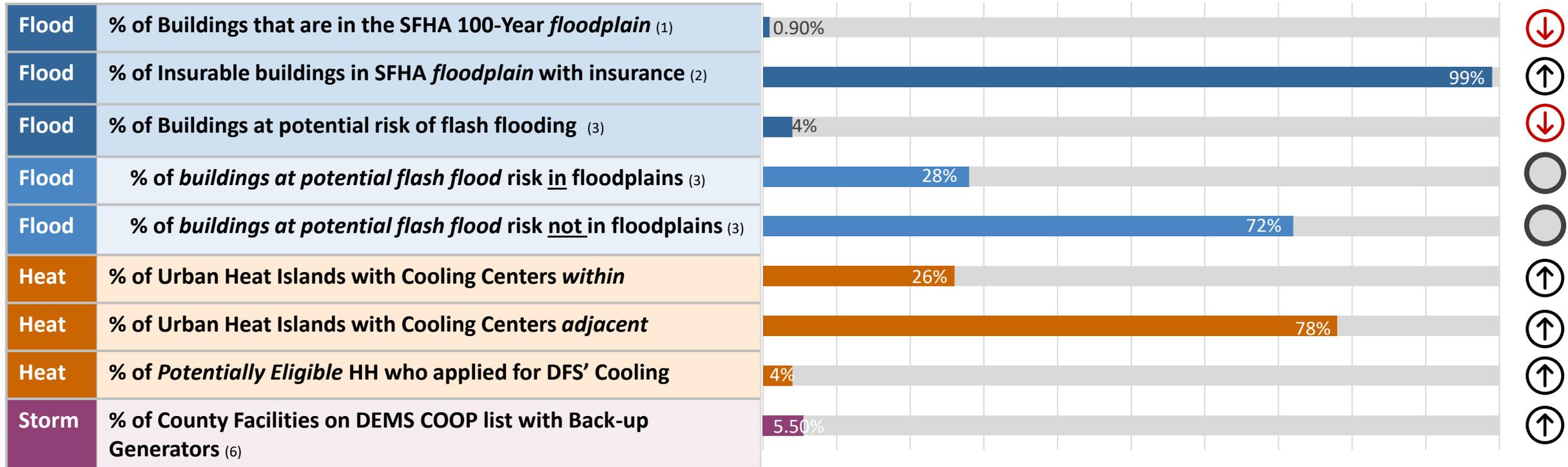


Outcome Tracking: *Resilient Fairfax*

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

⬇️ Goal is to decrease. ⬆️ Goal is to increase. ○ General tracking to understand issues.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%



(1) Data is based on the 2010 FEMA FIRM.

(2) Buildings in the SFHA have a mandatory flood insurance purchase requirement as a condition for obtaining a federally backed mortgage.

(3) Based on DPWES' [Analyzing Flood Risk Story Map](#)



Outcomes: *Resilient Fairfax*

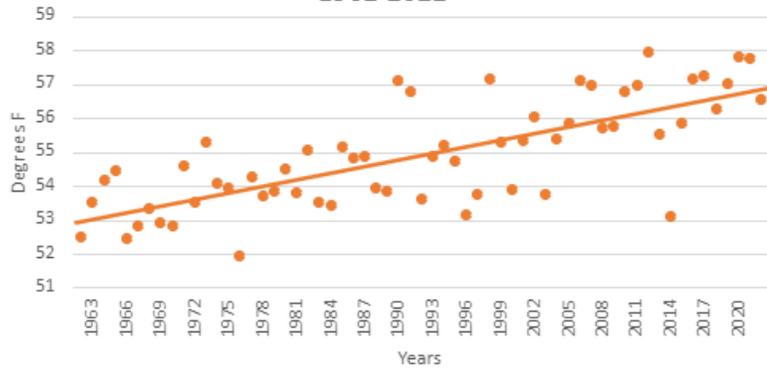
Like running on an accelerating treadmill:

Many resilience metrics are tracking conditions that worsen as we seek resilience improvement.

While “perfect resilience” may not exist, the county’s work ensures we don’t fall off the back of the treadmill.

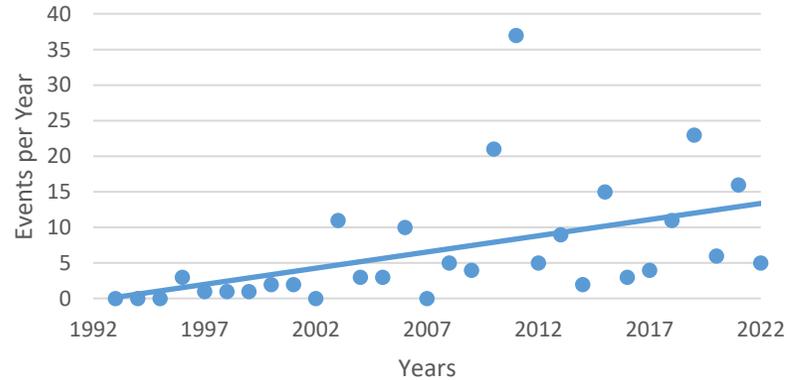
Warmer

Average Temperatures Per Year
in Fairfax County, VA
1962-2022



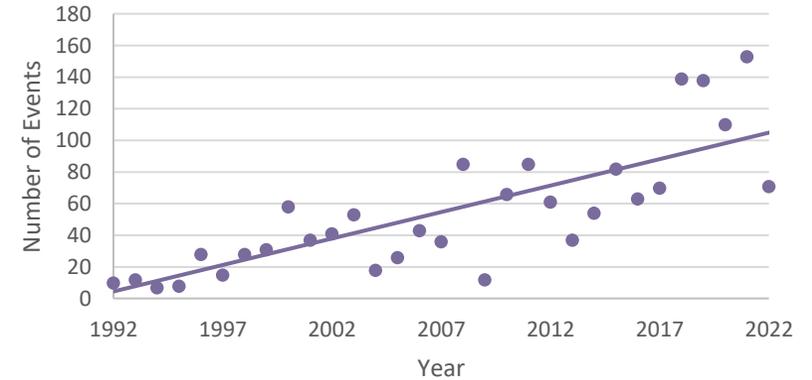
Wetter

Number of Flash Flood Events
in Fairfax County, VA
1992-2022



Weirder

Number of Storm Events Per Year
in Fairfax County, VA
1992-2022



These metrics and more will be on the updated Climate Action Dashboard!



CONTACT INFORMATION: Our office is open to visitors by appointment only. Please call or email from 8:00 a.m. - 4:30 p.m., Monday through Friday.

Share This

703-324-7136 (TY 71) | oeeinfo@fairfaxcounty.gov | 12000 Government Center Pkwy, Suite 533, Fairfax, VA 22035 | @fthgreen | John Merrill, Acting Director

OEEC
What We Do
 The Office of Environmental and Energy Coordination (OEEC) leads the county's interdepartmental activity on environmental and energy plans, policies, and programs, including climate action and resiliency.
[LEARN MORE](#)

Department Resources

- About Us +
- Our Work +
- Latest News and Events +
- Track Our Progress +

Related Resources

- Environmental Quality Advisory Council >
- Recycling and Trash >
- Stormwater >
- Wastewater >
- Trees >
- Noise >
- Environmental Health >

STAY CONNECTED

Search Our Site

Search our site [SEARCH](#) [DEPARTMENT](#)

Grid of site navigation tiles:

- Climate Action Plans
- Climate Action Dashboard** (highlighted with a blue box and arrow)
- County Government Energy Data
- Resources for Businesses
- Resources for Residents
- Request a Speaker

Climate Action Dashboard

Fairfax County government operations by 2040 and community-wide carbon neutrality by 2050. The Climate Action Dashboard includes overall metrics page that focus on emissions reduction (which addresses the cause of climate change) and resiliency (which addresses the effects of climate change) and the Resilient Fairfax plan. Additionally, the dashboard has sector-specific metrics pages for the six key sectors addressed by these plans.

Status: Draft | Moderate | Request Review | Log message | [APPLY](#)

EMISSION REDUCTIONS METRICS

This page focuses on metrics that **address the cause of climate change**: greenhouse gases. These metrics are closely associated with the goals of CECAP.

[Explore Overall Metrics for Emissions Reductions](#)

RESILIENCE METRICS

This page focuses on metrics that **address the effects of climate change**, or Fairfax County's resiliency. These metrics are closely associated with the Resilient Fairfax plan.

[Explore Overall Metrics for Resilience](#)

Sector-Specific Metrics:
 On the following pages, you'll find emission reduction and resiliency metrics related to specific sectors: Buildings, Energy Supply, Transportation, Waste, Natural Resources, and Community Services.

Buildings

Energy Supply

Transportation

Waste

Natural Resources

Community Services

Priorities for CY 2024

Emissions reduction is a global effort; enhancing resilience is a very local activity

- **For emissions reduction:** Identify and quantify gaps in our road to carbon neutrality
 - Federal and state role
 - Market drivers and trends (e.g. electric vehicle manufacturing)
 - Greater visibility and participation by the private sector in Fairfax
- **For resilience:** build on existing policy, public services, capital improvements, and community outreach to enhance resilience
 - Flood risk reduction, heat risk reduction, storm resilience
- **For both:**
 - Grow community-facing programs at scale – from pilots and program launches to sustained success building upon present foundation
 - Enhance visibility of activity, data, and results



Climate Progress Update

Addendum – 2023 Highlights

Implementation of CECAP, OES, and Resilient Fairfax

December 12, 2023



Office of Environmental and Energy Coordination

Highlights: Development Codes, Policies, and Plans

Coordination,
Funding,
Legislation

**Development
Codes, Plans,
Policies**

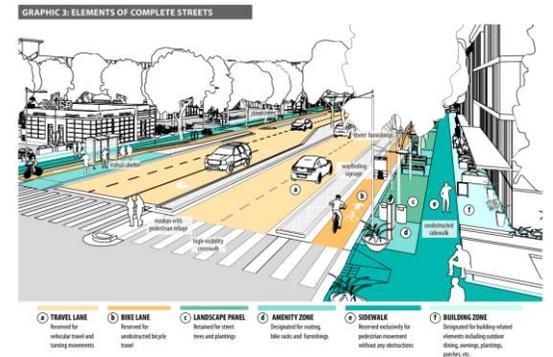
Community
Services, Aid,
Engagement,
Incentives

Natural
Resources

County
Facilities and
Operations

Data and
Research

- **Flood Risk Reduction – (coming back to BOS in March)**
 - 100+ active [stormwater improvement projects](#)
 - DPWES' pending new grant program for floodproofing
 - Flood modeling & analysis to account for climate change
 - Analysis of potential policy & design changes
- **Comprehensive Plan Amendments**
 - Comprehensive Plan amendments for other sections and climate considerations authorized, ongoing
- **Zoning Ordinance Amendments & Other County Codes**
 - ✓ Landscaping and Screening ZOA → included climate resilience
 - ✓ Parking Reimagined
 - Staff research on other potential amendments
- **Urban Design Guideline Amendments**
 - Volume I amendment process has launched, including climate considerations such as cool pavement selection
- **Richmond Highway BRT CBA**
 - ✓ Included climate considerations, Resilient Fairfax data



Highlights: for Residents

Coordination,
Funding,
Legislation

Development
Codes, Plans,
Policies

Community
Services, Aid,
Engagement,
Incentives

Natural
Resources

County
Facilities and
Operations

Data and
Research

Public Information and Outreach

- ✓ **NEW:** Updated website with:
 - Link to EPA Carbon Footprint Calculator
 - Climate Action Dashboard
- ✓ **NEW:** Climate Action Checklists
- ✓ **NEW:** Fact sheets and resources in multiple languages
- ✓ **NEW:** Videos with testimonials from Fairfax County residents
- ✓ **EXPANDED:** Informational campaigns for:
 - Solarize VA & Capital Area Solar Switch
 - Green Business Partners
 - Charge Up Fairfax
 - Energy Conservation Assistance Program

Fairfax County residents
are powering their homes
with solar! **Meet them.**



Transportation Checklist		10 actions you can take on the road to save money and lower your carbon footprint		
Action	Cost Up Front	Yearly Savings	CO2e Reduction (lbs per year)	
1 Estimate your current carbon footprint using an online calculator. Write down your current yearly emissions.	Free	Does Not Apply	Does Not Apply	
2 Walk or bike for at least half of your short trips to nearby destinations (3 miles or less). Please only complete this item if it is safe to do so in your area.	Free	\$\$ \$610	↓↓↓ 3,000	
3 Join a carpool and gain access to free Express HOV lanes, while also saving gas money and reducing emissions.	Free	\$\$\$ \$1,300	↓↓↓ 6,100	
4 Telework (work from home) at least 2 days per week if your job allows it. Reducing your commuting saves significant emissions, money, and time.	Free	\$\$ \$640	↓↓↓ 3,100	
5 Use fuel efficient driving practices: Reduce your top highway speed to 65 mph and coast to gentle stops rather than rapidly accelerating and braking.	Free	\$ \$185	↓↓↓ 1,100	

Highlights: for HOAs

Coordination,
Funding,
Legislation

Development
Codes, Plans,
Policies

Community
Services, Aid,
Engagement,
Incentives

Natural
Resources

County
Facilities and
Operations

Data and
Research

Charge Up Fairfax

Charge Up Fairfax helps community associations, like homeowner associations and condominium associations, access electric vehicle charging for residents and their guests.

Program Milestones

- ✓ Pilot program launched March 9, 2023
- ✓ 5 communities as initial pilot program participants
- ✓ Webpage launched September 5, 2023
- Accepting additional communities into pilot program December 1, 2023
- Launching program at scale in May, 2024

Engagement

- ✓ Charge Up Fairfax Webinar held on September 14, 2023
- ✓ Consumer Connection Program on September 21, 2023
- ✓ Promotional kits distributed to supervisor offices
- ✓ Promoted on social media, through published articles, and via direct outreach to over 60 communities



Highlights: for Residents, Continued

Coordination,
Funding,
Legislation

Development
Codes, Plans,
Policies

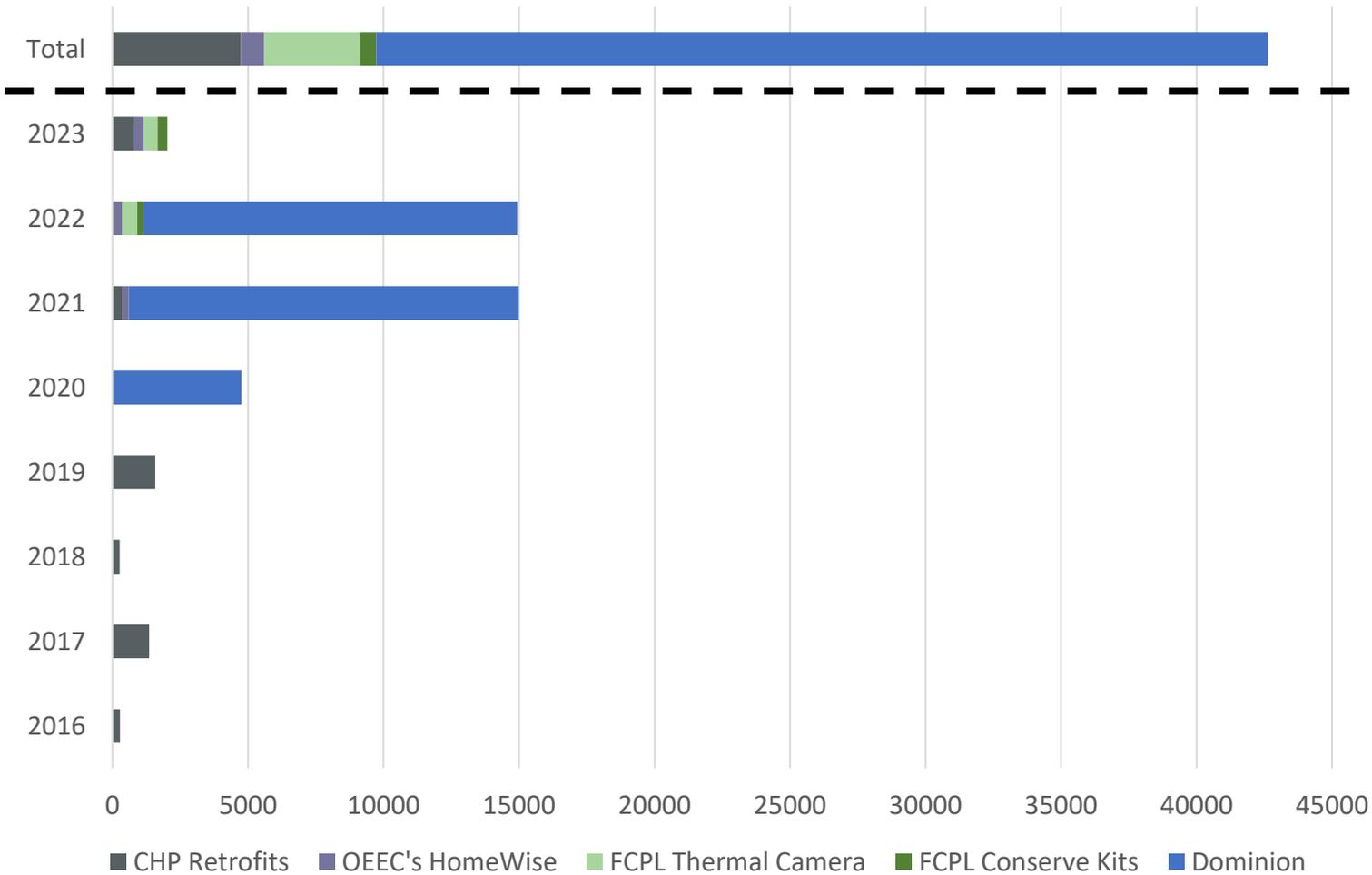
**Community
Services, Aid,
Engagement,
Incentives**

Natural
Resources

County
Facilities and
Operations

Data and
Research

Energy Efficiency Services & Kits



**> 42,000
Households in
Fairfax County
served to date**



Highlights: for Businesses

Coordination,
Funding,
Legislation

Development
Codes, Plans,
Policies

Community
Services, Aid,
Engagement,
Incentives

Natural
Resources

County
Facilities and
Operations

Data and
Research

Green Business Partners

- ✓ Program re-launched in March 2023
- ✓ Forum held in March 2023
 - **70** participants
 - **46** unique businesses
- ✓ Expanded Membership:
 - **16** Members and Leaders,
 - **5** Allies
- ✓ Boosted outreach and engagement:
 - 2 Leader video spotlights completed
 - 2 Webinars (30 participants)
 - Bimonthly e-Newsletters



Highlights: for Residents Cont.

Coordination,
Funding,
Legislation

Development
Codes, Plans,
Policies

Community
Services, Aid,
Engagement,
Incentives

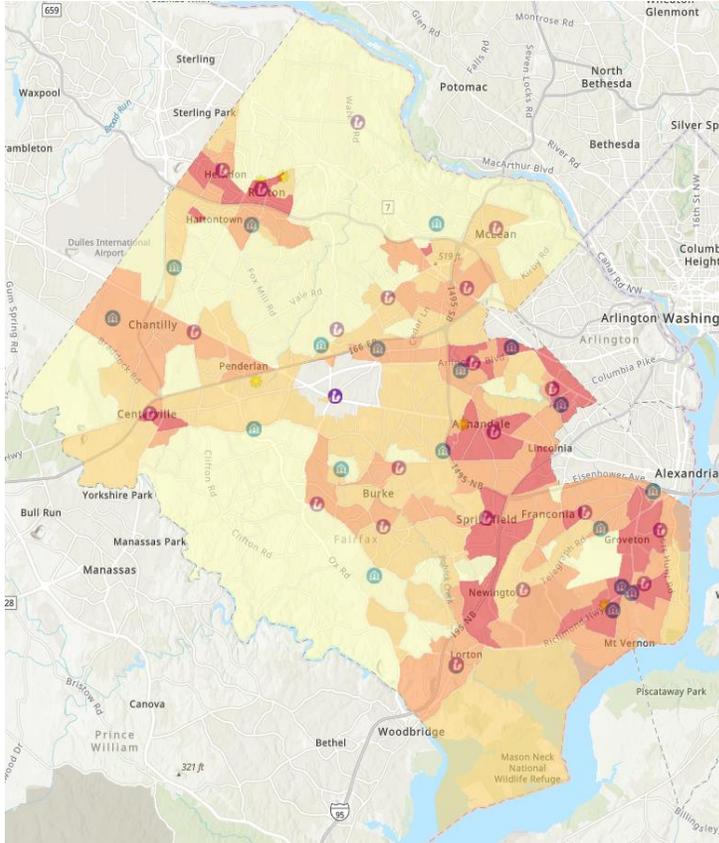
Natural
Resources

County
Facilities and
Operations

Data and
Research

Extreme Heat Services

Cooling Centers, Cooling Assistance, UHI Mapping, Cool Roofs & Pavements, Heat Alerts



1,452

Air conditioning
service requests
approved in 2023

27,000

Supplies distributed
from Cooling Centers

47

Upgraded official
Cooling Centers

- ✓ Temperature data, heat island mapping
- ✓ Heat vulnerability & needs assessments
- ✓ Heat Emergency Workgroup
- ✓ 47 Cooling Centers with upgraded services
- ✓ 251 visits to Cooling Centers in 2023
- ✓ 27,000 supplies distributed from Cooling Centers in 2023
- ✓ Free transportation to Cooling Centers
- ✓ Cooling Center finder map
- ✓ 1,452 Cooling Assistance requests approved from DFS (AC help)
 - Group 3 is continuing interagency coordination
 - Guidance for outdoor workers, outdoor sports being developed
 - Guidance on cool roofs, cool pavements, design strategies



Highlights: for Non-Profits and Places of Worship

Coordination,
Funding,
Legislation

Development
Codes, Plans,
Policies

Community
Services, Aid,
Engagement,
Incentives

Natural
Resources

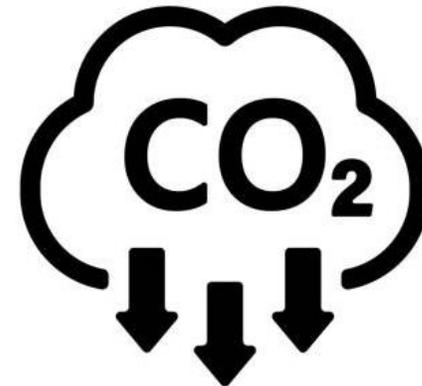
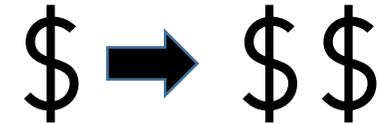
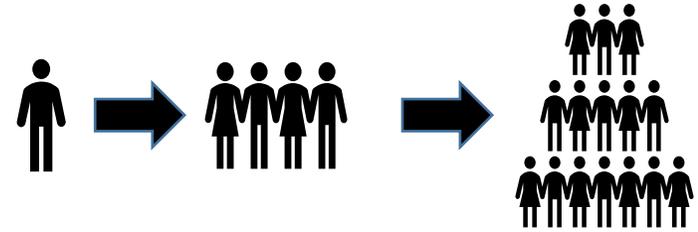
County
Facilities and
Operations

– Data and
Research

Climate Champions Pilot

- Development of a new climate action program for places of worship led by a non-profit organization (FACS)
- 7 FACS webinars with over 100 participants
- FACS recipient of federal grant to build program
- Grant funding to support a new FACS staff
- Updated local incentive program (ECAP) to meet needs of stakeholders
- 15 places of worship started or planning an energy audit or taking climate action

ACCELERATE AND IMPACT



Highlights: For County Government

Coordination,
Funding,
Legislation

Development
Codes, Plans,
Policies

Community
Services, Aid,
Engagement,
Incentives

Natural
Resources

**County
Facilities and
Operations**

Data and
Research

- ✓ **44 county buildings are LEED certified**
 - **Woodlawn Fire Station** – Platinum in 2023
 - **18** certified LEED Gold county buildings
- ✓ **21 energy audits completed to date**
 - **8** in 2023
- ✓ **10 energy retrofits completed since 2021 OES**
 - **2** completed in 2023
- ✓ **4 county buildings with rooftop solar**
 - **18** additional planned by end of 2025
- ✓ **274 EVs and hybrid vehicles in the fleet**
 - **50** Electric & **224** Hybrid Vehicles
 - Incl. two electric trash trucks in 2023
- ✓ **102 EV charging ports on county government property**



Highlights: For County Government, Cont.

Legislation,
Coordination,
Alignment

Development
Codes, Plans,
Policies

Community
Services, Aid,
Engagement,
Incentives

Natural
Resources

**County
Facilities and
Operations**

Data and
Research

Zero Waste

- ✓ Departmental Champions Network Launched, Action Plans in Progress
- ✓ Educational & Training Resources Created (ex: [Champions Toolkit*](#))
- ✓ 2023 Waste Audits Completed (County & Schools Facilities)
- ✓ Three Bin Pilot (Composting) throughout Government Center
- ✓ Reusable Packaging Program Launched - Pallet Wraps at Logistics Center
- ✓ Reusable Foodware - Zero Waste Party Pack Program

Sustainable Procurement

- ✓ “Scope 3” Supply Chain Greenhouse Gas Analysis in Progress
- ✓ Sustainable Procurement Policy in Development
- ✓ 100+ Major Suppliers Joined Corporate Social Responsibility Program

<https://www.fairfaxcounty.gov/procurement/zero-waste-champions-toolkit>



ZERO WASTE
FAIRFAX COUNTY
GOVERNMENT & SCHOOLS

