

Resilient Fairfax

Climate Adaptation and **Resilience** Plan

Public Meeting #4

May 24, 2022 6:30 pm

of Environmental and Energy Coordination CADMUS **CADMUS**

Welcome!

Resilient Fairfax Public Meeting #4



Meeting Goals & Reminders

Meeting Objectives:

- Overview of the Resilient Fairfax Plan
- Walk-through of how to comment on the draft plan in the Konveio platform
- Answer any questions regarding public comment process

Reminders:

- Meeting is being recorded. The demo of Konveio will be available for reference
- For Resilient Fairfax questions, please email ResilientFairfax@fairfaxcounty.gov
- For other questions or comments, please contact <a>OEECinfo@fairfaxcounty.gov





Agenda

I. Project Background & Recap
II. Contents of Resilient Fairfax
III. How to Comment
IV. Open Q&A
V. Next Steps

Background: What is the OEEC?

Fairfax County Office of Environmental and Energy Coordination (OEEC)

- Established July 2019
- County-wide coordination on environment, energy, sustainability
- Ability to coordinate across <u>all</u> county departments
 - ✓ Reports directly to County Executive
 - ✓ Independent office; not tucked under another department
 - Example: The Resilient Fairfax team is led by OEEC and includes 20 county departments
- Primary focus areas: climate planning and action, energy management, sustainability and innovation, community programs (i.e. HomeWise, Energy Action Fairfax)
- **Coordinates with**: county departments, regional authorities, utilities, state and federal government agencies, businesses, organizations, and residents to effectively advance these policies and programs





Background: What does the OEEC do?

	1. Community Programs	CARBON-FREE FAIRFAX CARBON-FREE FAIRFAX Step Up to Savings							
	2. Climate Planning	 Resilient Fairfax: Adaptation & resilience to climate effects like heat, storms, flooding CECAP: Emissions reduction to lower our contributions to global climate change 							
	3. Making County Operations Greener	 Carbon Neutral Counties Operational Energy Strategy, Energy Dashboard and Energy Services Company (ESCO) Solar Power Purchase Agreements (PPAs) Environmental Improvement Program (EIP) Joint Environmental Task Force (JET) Fairfax Employees for Environmental Excellence (FEEE) 							
€ €	4. General Environmental Coordination	 Environmental coordination with other county departments State & local environmental policy coordination Environmental coordination with neighboring jurisdictions & regional groups Fairfax Green Initiatives #1 and #2 Environmental Quality Advisory Council (EQAC) Sustainability Initiatives 							



Background: Difference Between the Climate Plans?

Fairfax County is working to address both the cause and the effects of climate change

CECAP & Carbon-Free Fairfax



<u>Cause</u>: Doing our part to reduce emissions that globally contribute to climate change

- *Examples:* Transition to renewable energy, energy efficiency, waste reduction, alternative transportation
- *Plan led by:* Community, because 95% of emissions are from the community
- *Planning Process:* January 2020 July 2021
- Current Status: Implementation

Resilient Fairfax



<u>Effects</u>: Adaptation & resilience to climate hazards

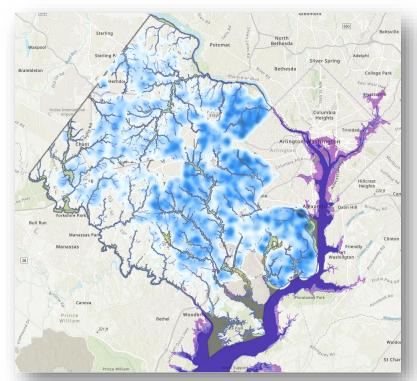
- *Examples*: Ability to better handle flooding, extreme temperatures, extreme weather, health hazards, precipitation pattern changes
- *Plan led by:* government, because responsible for infrastructure and service upgrades
- Planning process: Feb 2021 Fall 2022 planning process
- Current status: Draft plan released for comment



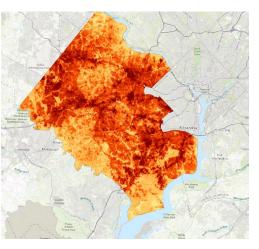
Background: Why Resilient Fairfax?

Origins of Resilient Fairfax

- Board of Supervisors Direction
 - o Environmental Vision
 - o Fairfax Green Initiatives Board Matter
- To strengthen our resilience to increasing storm severity, flooding, extreme heat, sea level rise and other effects already seen in the county
 - Example: Single 2019 storm event had a financial impact of \$14.8 million











Resilient Fairfax: Planning Process



1. What climate conditions and hazards do we face now? In the future?

- o Climate Projections Report
- $\,\circ\,$ Temperatures, precipitation, flooding, storm severity, drought

2. Where are we vulnerable?

- <u>Climate Vulnerability and Risk Assessment</u>
- Homes, businesses, neighborhoods, infrastructure, services & operations, people in path of climate effects

3. How are we currently doing in terms of resilience?

- <u>Audit of Existing Policies, Plans, and Programs</u>
- $\,\circ\,$ Which programs are working well? Where do we have gaps?

4. Which strategies will strengthen our resilience?

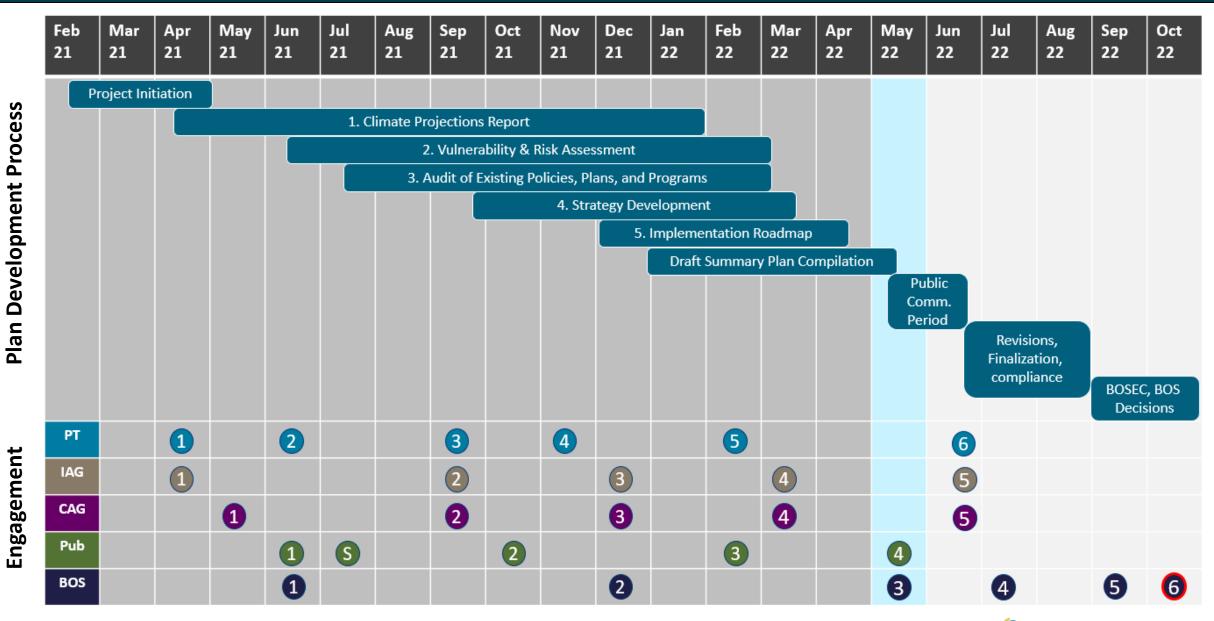
- o Adaptation and Resilience Strategies (available in full plan)
- Physical upgrades, policies, design standards, services, staffing, procedural changes, agency coordination, etc.

5. What is the path to implementation?

- o Implementation Roadmap (available in full plan)
- $\,\circ\,$ Funding sources, staffing, timelines



Resilient Fairfax Planning Timeline



Coffice of Environmental and Energy Coordination

Resilient Fairfax Key Players

Project Managers	Office of Environmental and Energy Coordination (OEEC) Staff	OFFICE OF Environmental and Energy Coordination FAIRFAX COUNTY
Consultants	Cadmus, WSP, NspireGreen	CADMUS NSP CADMUS
Planning Team	 County departments and agencies 20 departments 40 individuals 	
Infrastructure Advisory Group (IAG)	 Infrastructure managers and utilities at the local, regional, state, and federal levels 28 entities 50 individuals 	
Community Advisory Group (CAG)	Representatives of each Supervisor District, advocacy organizations, non- profits, community groups • 33 representatives	Image: Solution of the solution



How does Resilient Fairfax fit with related initiatives?



Alignment at multiple levels

- ✓ Data that is shared, consistent, and complementary
- ✓ Staff collaboration
- Plan alignment at multiple levels of government
- ✓ Strategy and project alignment across multiple departments and plans
- ✓ Funding coordination and opportunities

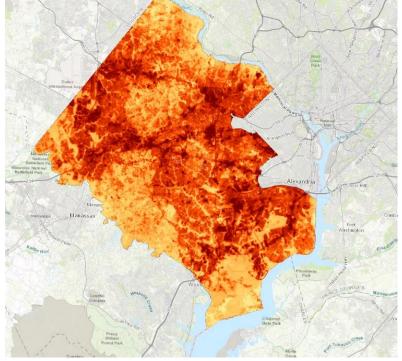


Recap: Climate Projections Report

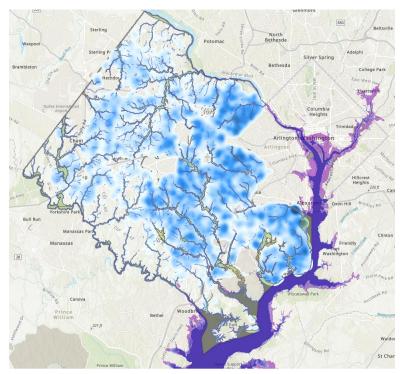
Warmer

Wetter

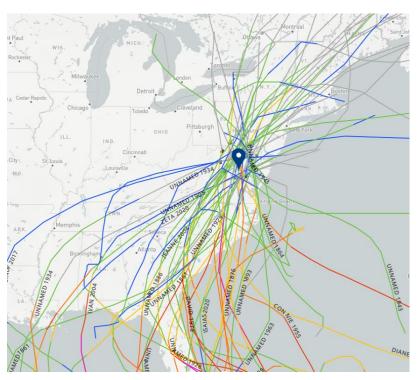
Weirder



- Annual temperature <u>rise 4.4 8°F</u> by 2085
- Extreme heat days projected to increase from 7 to 70 days per year by 2085
- Urban Heat Island Effect on top of temperature increase

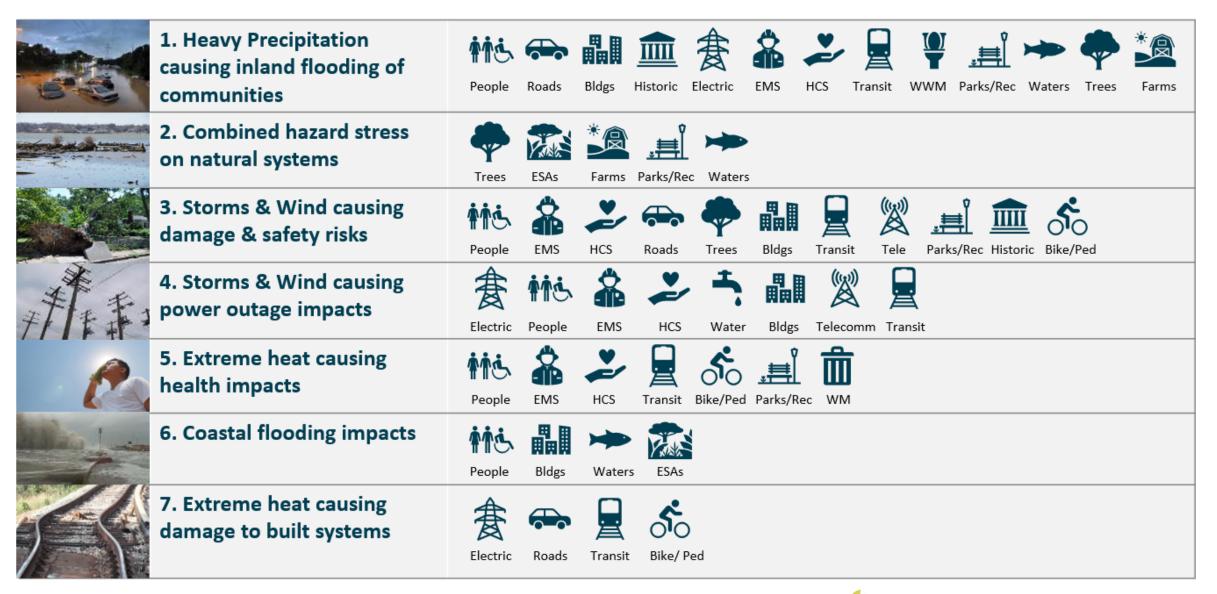


- Annual and seasonal precipitation increase
- **Precipitation intensity** increase across all return periods
- Sea level rise of 3 feet --> Potomac River



- Severe storm strength increase, including tropical storms, derechos, hurricanes, nor'easters
- Unseasonably warm/cool temperatures
- Periods of no precipitation followed by sudden, heavy precipitation

Recap: Top Vulnerability Groups





Recap: Audit of Existing Policies, Plans, and Programs

"How are we currently doing in terms of climate resilience?"

- ✓ 100+ Policies, Plans, and Programs reviewed by Consultants, Planning Team, IAG, CAG
 ✓ 50 Questions
- ✓ 8 categories

Category		Summary			
<u>×</u>	Governance	Strong	Climate commitments, coordination, funding, staff		
	Water Infrastructure	Strong	Drinking water, stormwater, wastewater plans & policies		
Pine	Natural & Cultural Resources	Strong	Floodplain regs, insurance, NR protections, incentives		
	Transportation Infrastructure	Neutral	Transportation assessments, design, standards, upgrades		
	Buildings & Sites	Neutral	Building code, site design, permitting, incentives		
食	Energy Infrastructure	Neutral	Grid assessments, back-up power, energy storage policies		
\Leftrightarrow	Interdisciplinary/ Other	Neutral	Data, resources, emergency management, incentives		
†† ₫	Population Services	Neutral	ID vulnerabilities, engagement, investments, resources		

Resilient Fairfax Strategy Pillars



- Resilience into county plans and policies
- Resilience data collection
- Resilience funding
- Continued interagency coordination

- Network of safe & resilient spaces
- Community capacity to prepare for, withstand, and recover from events
- Climate-ready development

- Resilience in major county infrastructure decisions
- County building & facility resiliency
- Advocacy for external infrastructure resiliency, i.e., energy grid & transit
- Protection of natural resources that enhance resilience
- Restoration of damaged areas with nature-based and natural solutions





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Public Comment Period

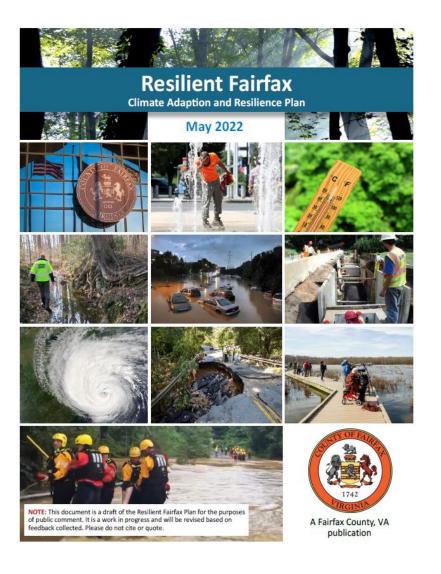
- May 16 June 15
- Interactive PDF webpage for easier commenting
- Includes links to:
 - o Draft Resilient Fairfax Summary Plan
 - Summarizes all technical reports, strategies, and Implementation Roadmap
 - $\circ~$ Detailed Technical Reports and Resources
 - <u>Climate Projections Report</u>
 - <u>Audit of Existing Policies, Plans, and Programs</u>
 - Vulnerability and Risk Assessment



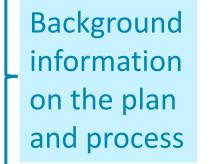


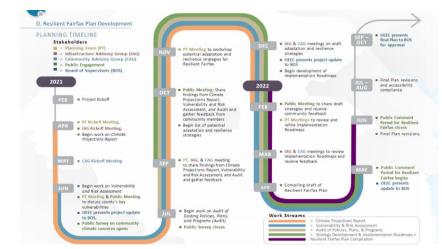


- Introduction
- Resilient Fairfax Development Process
- Stakeholder Engagement
- Equity in Climate Resilience
- Climate Projections: Warmer, Wetter, Weirder
- Vulnerabilities & Risks
- Audit of Existing Policies, Plans, and Programs
- Strategies and Implementation Roadmaps
- Moving Forward



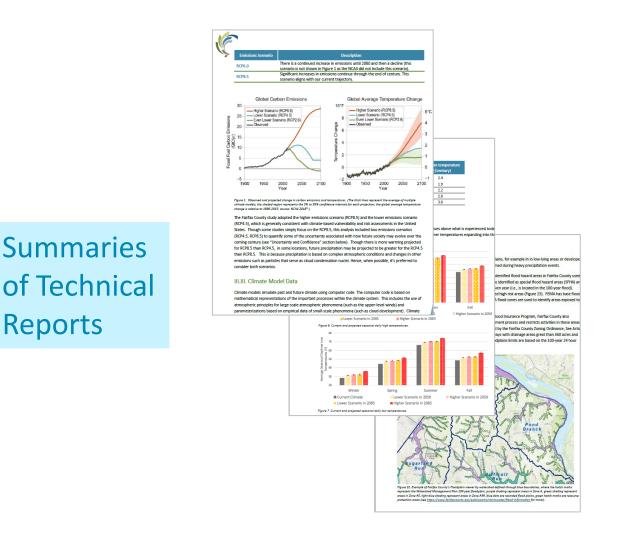
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How we will enhance our resilience

Resilient Fairfax Snapshot of Strategies

Vision	Integrated Action Planning			Climate Ready Communities			Resilient Infrastructure and Buildings		Adaptive Environments		
Goals (Abbrev.)	IAP.1. Climate in Countywide General Planning	IAP.2. Data Collection for Resilience	IAP.3. Funding Plan	IAP.4. Agency Collaboration	CRC.1. Safe & Resilient Spaces	CRC.2. Community Capacity	CRC.3. Climate Ready Development	RIB.1. Resilient County Government Buildings and Infrastructure	RIB.2. Advocacy for External Resilient Infrastructure Action	AE.1. Protection of Natural Resources	AE.2. Restoration of Natural Resources
Priority Strategies (Bold) & Additional Strategies (Non-Bold)	IAP.1a. Inventory and Update the Comprehensive Plan to Enhance Resilience	IAP.2a. Develop Resilience Metrics and a Tracking System for Ongoing Assessment of Community Resilience and Improvements	IAP.3a. Develop a County Climate Fund	IAP.4a. Establish a Long-Term Interagency Collaboration System	CRC.1a. Pursue Development of a Network of Resilience Hubs in Climate- Vulnerable Areas Of The County	CRC.2a. Provide Community Aid and Engagement to Alleviate Resilience Needs	and Implement a Flood-Risk	RIB.1a. Update Capital Improvement Program Process to Include Climate Resilience Considerations	RIB.2a. Advocate and Partner for Energy Resilience	AE.1a. Develop a Consolidated Natural Resources Management Plan	AE.2a. Pursue Green Infrastructure Projects That Provide Climate Resilience Benefits
	IAP.1b. Update Strategic Plan to Enhance Climate Resilience	IAP.2b. Support Climate Research and Data Collection	IAP.3b. Pursue Federal and State Funding Opportunities	IAP.4b. Build County Staff Capacity to Lead on Climate Resilience Planning and Implementation	CRC.1b. Develop Adaptation Action Areas Where Resilience Action is Prioritized	CRC.2b. Launch a Climate Resilience Education Program	CRC.3b. Propose County Incentive and Assistance Programs That Reduce Heat- Related Climate Risk	RIB.1b. Enhance Flood Resilience of County Buildings and Other Facilities	RIB.2b. Advocate for Resilience Updates to the Building Code	AE.1b. Pursue Partnerships and Financing to Conserve And Protect Environmentally Sensitive Areas	AE.2b. Support Continued Stream Corridor Restoration
	IAP.1c. Complete Climate Health Plan	IAP.2c. Create Consolidated Database of Flood-Prone Areas	IAP.3c. Identify Funding for Long-Term Data Collection		CRC.1c. Expand Targeted Tree Plantings	CRC.2c. Support Resilience Related Workforce Development	CRC.3c. Pursue Zoning Ordinance Amendments to Enhance Resilience	RIB.1c. Enhance Energy Resilience for County Buildings and Facilities	RIB.2c. Advocate and Partner with Transportation Agencies to Support Transportation Resilience	AE.1c. Update Requirements for Conservations Easements	AE.2c. Support Urban Reforestation
	IAP.1d. Coordinate Hazard Mitigation and Emergency Management Planning with Climate Resilience Planning	IAP.2d. Continue to Collect Rainfall Data	IAP.3d. Identify Additional Funding Opportunities		CRC.1d. Enhance C-PACE Program Outreach and Technical Assistance	CRC.2d. Expand Warning System.	CRC.3d. Update the Public Facilities Manual	RIB.1d. Enhance Heat Resilience for County Buildings and Facilities		AE.1d. Integrate Climate Change Considerations into Urban Forestry Program	AE.2d. Explore Living Shoreline Opportunities
		IAP.2e. Create Database to Track Hazard Mitigation Action				I		RIB.1e. Update A/E Procurement	1		AE.2e. Restore Wetlands and Floodplains
		IAP.2f. Continue to Collect Tree Canopy Data						RIB.5f. Climate Projections in WW planning			AE.11f. Explore Regenerative Agriculture Opportunities
		IAP.2g. Continue to Collect Lidar Data							-		·
	IAP.2h Collect Climate Change and Vector- Borne Disease Data 4 PILLARS, 11 GOALS, 18 PRIORITY STRATEGIES										

Resilient Fairfax Pillars: Integrated Action Planning

Integration of climate in planning and coordination ensures resiliency is at the forefront of county initiatives.

A county with integrated action planning is:

- Monitoring progress, supporting transparency, and informing implementation
- ✓ Integrating climate change preparedness across county operations
- ✓ Advocating for resilience action beyond county control (e.g., public transit, building codes, energy resilience)
- Positioning county to be competitive for state and federal funding opportunities
- Building new funding streams and providing dedicated funding source to support county's climate goals







Resilient Fairfax Pillars: Climate Ready Communities

A well-connected and prepared community is better able to respond to and recover from climate impacts.

Climate Ready Communities have:

- ✓ Strong social cohesion to support community response to climate hazards
- ✓ Homes and neighborhoods that are prepared for flooding, extreme heat, storms, and power outages
- ✓ Resources easily accessible to all members before, during, and after climate events
- ✓ Historical inequities addressed and the needs of the most vulnerable populations prioritized







Resilient Fairfax Pillars: Resilient Infrastructure & Buildings

Infrastructure and buildings that can withstand climate impacts, keep residents safe, reduce service disruptions, and improve countywide resilience.

Resilient infrastructure and buildings ...

- ✓ Can withstand heat, flooding, and severe storms
- ✓ Are built and prepared for future conditions
- ✓ Are energy-resilient, energy efficient, and leverage diverse & clean energy sources with back up power
- Support safe movement to jobs, homes, and other points of interest



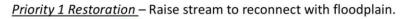


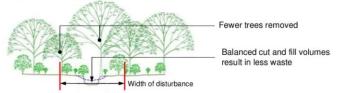
Resilient Fairfax Pillars: Adaptive Environments

Natural environments that are protected and restored to improve overall county resilience to climate impacts.

Adaptive Environments in Fairfax include:

- ✓ Green infrastructure that enhances neighborhood resilience to heat and flooding
- Ecosystems that are able to thrive, provide ecosystem services and natural resilience, and be accessible to the public
- Environmentally sensitive areas that are protected and conserved
- ✓ Future conditions are considered in natural resources planning







Pimmit Run Tributary Stream Restoration





Implementation Roadmaps

Resilient Infrastructure and Buildings Implementation Roadmaps

County Infrastructure Decisions: Incorporate Climate Goal RIB.1 Projections and Resilience into County Infrastructure Decisions

STRATEGY Update Capital Improvement Program Process to RIB.1a Include Climate Resilience Considerations.

Strategy Description: The Capital Improvement Program (CIP) is Fairfax County's five-year roadmap for creating, maintaining, and funding present and future capital infrastructure requirements. It provides the framework for the investment in and planning of capital projects. This strategy promotes revising the CIP evaluation and project prioritization process to integrate climate resilience into capital projects and to consider impacts and consequences from projected extreme heat, heavy precipitation, coastal flooding, severe storms, and other climatic conditions into infrastructure planning and development. These climate hazards can impact function, maintenance costs, and lifespan. Integration of climate projections and resilience enhancements into the county's CIP will ensure continued provision of critical county services that protect public health and safety and that capital investments provide their intended function and benefit over their lifespan.

Climate Hazards Addressed:

					<u>*</u> 化	,		
	Lead:		DMB, DPWES, OEEC					
	Partners:		DEMS, FCDOT, DPWES, UFMD, FCPA, OCA, One Fairfax, UFMD					
	Time	eline:	Medium-Ter	m (2-5 years)				
	😂 Cost	:	\$\$\$ (\$500k -	1 million)				

Implementation Actions:

Review the existing CIP process to identify revisions needed to embed consideration of: climate change projections, potential risks from climate hazards, and resiliency enhancements for the county's infrastructure and facilities. Resilience enhancements should consider ways a project could enhance overall community resilience. Explore screening criteria and identify selection criteria for projects that support the county's resilience goals. Identify pathways to prioritize implementation and funding for climate resilience projects.

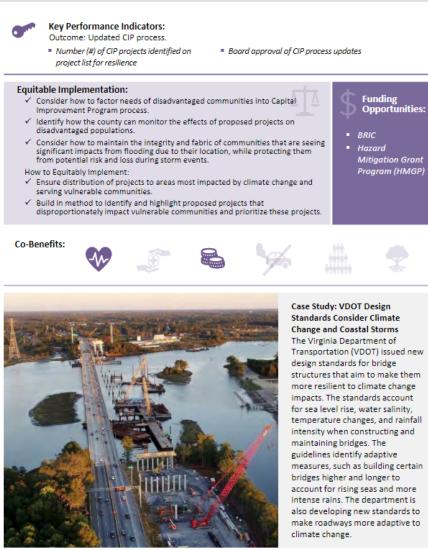
Build a project list of identified resilience projects, including those identified in the Flood Risk Reduction plan and the Hazard Mitigation Plan. Integrate One Fairfax and build upon the completed analysis of the Vulnerability and Risk Assessment to prioritize projects that support the needs of vulnerable populations and/or address top climate risks to the county.

Partner with staff responsible for capital improvement evaluation, project management, and implementation to draft proposed revisions.

Proceed through revision and approval processes to encourage capital projects that mitigate risk and build resilience to future projected extreme heat, heavy precipitation, coastal flooding, and severe storms. Coordinate

iv. with the department responsible for asset management or use in advance of project approval to ensure there are no adverse impacts.

Monitor and evaluate CIP implementation results and project outcomes. Adjust process and/or prioritization ٧. criteria if needed.



Resilient Fairfax: Climate Adaptation & Resilience Plan



✓ Action Steps

✓ Leads

✓ Partners

✓ Timeline

✓ Cost

✓ KPIs

✓ Equity

✓ Co-benefits

Implementation Roadmaps

Key Definition Clarifications

- Timeline = Estimated time to <u>complete</u> the specific Implementation Actions listed for each prioritized strategy.
 Not timeline to start the strategy



Cost = Estimated operational/consultant scale of investment to complete the specific Implementation Actions listed for each prioritized strategy.
 Not construction cost, nor annual cost



 Leads and Partners = County departments and agencies responsible for leading the county government's implementation of the strategy at hand.
 As always, the general public and community groups will also be engaged in the processes.





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Konveio



Resilient Fairfax

Climate Adaptation and Resilience Plan

Resilient Fairfax is a program to help Fairfax County become more resilient to changing conditions and climate change-related hazards such as extreme heat, severe storms, and flooding. The draft Resilient Fairfax Climate Adaptation and Resilience Plan will be available for public review and comment from May 16, 2022 until June 15, 2022. Please click on the icon below to view the plan and provide feedback.

Select Language 🔻

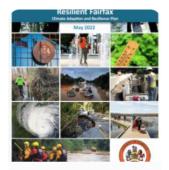
Upcoming Public Meeting

The Resilient Fairfax Team will be hosting the fourth public meeting on **May 24th at 6:30 pm** to share information about the plan, walk through the Konveio commenting platform, and provide opportunity for the public to ask questions and provide feedback.

Follow **this link** to register for the public meeting.

Contact Us

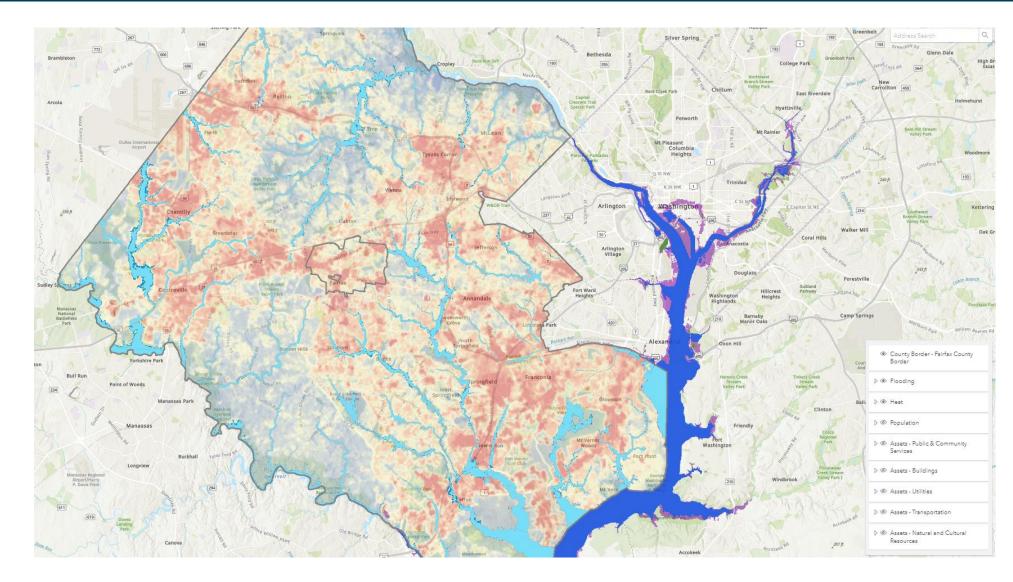
Interactive website to collect public comment on draft Resilient Fairfax Plan



Draft Resilient Fairfax Plan



Interactive Climate Map Viewer



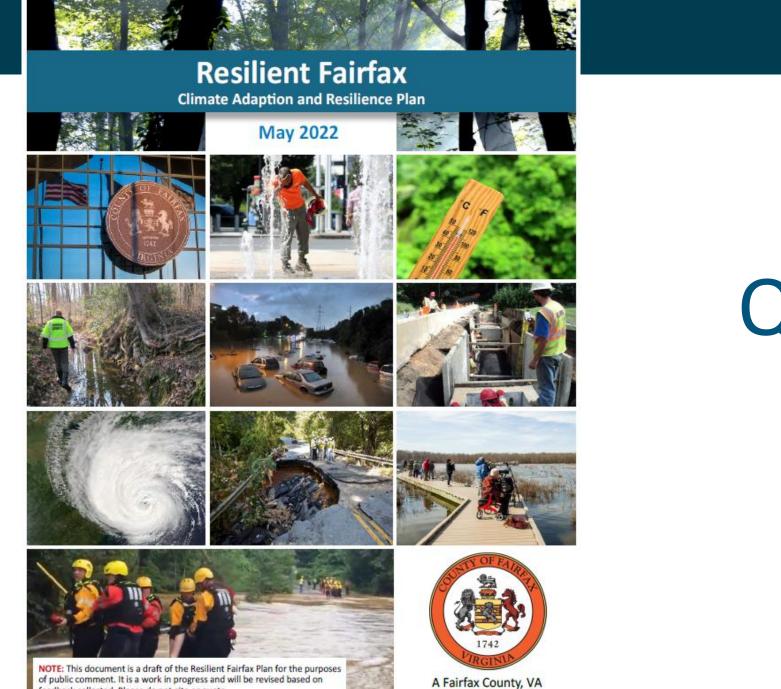
Resilient Fairfax Interactive Map Viewer





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publication

feedback collected. Please do not cite or quote.

Questions?





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Next Steps

- Collect Public and Advisory Group Comment on Draft Resilient Fairfax Plan (May 16 – June 15)
- Update the Draft Resilient Fairfax Plan based on Public and Advisory Group feedback (Summer-Fall 2022)
- □ Present to Board of Supervisors for approval (Fall 2022)

- Please contact <u>ResilientFairfax@fairfaxcounty.gov</u> with any questions or comments about Resilient Fairfax.
- Please contact OEECinfo@fairfaxcounty.gov with any questions or comments about other initiatives.





publication

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Thank you!

Contacts:

- **Resilient Fairfax Inbox** Resilient.Fairfax@fairfaxcounty.gov
- Matt Meyers | Division Manager, Project Director Matthew.Meyers@fairfaxcounty.gov
- Allison Homer | Planner IV, Project Manager Allison.Homer@fairfaxcounty.gov

- Draft Resilient Fairfax Plan
- Longer technical reports that provide additional detail
 - Climate Projections Report
 - Climate Vulnerability and Risk Assessment
 - Audit of Existing Policies, Plans, and Programs
- Climate Viewer Map

