



Fairfax County Climate Adaptation & Resilience Plan

EQAC

March 11, 2020

Climate Adaptation & Resilience Planning

Resilience is the ability of a system to absorb, withstand and bounce back after an adverse event. In the environmental context, it is the collection of policy, infrastructure, services, transportation, energy infrastructure, and planning that position municipalities to resist natural disasters and other dangerous impacts of climate change. Resilience planning should take into consideration:

- Ensuring we are prepared to deliver essential services in times of disruption
- Protecting people, especially vulnerable populations
- Protecting our buildings, roads, infrastructure, and natural resources and capital
- Ensuring safety through improved emergency preparedness and strong communication between relevant agencies and first-responders
- Building structures and systems which are sustainable, flexible and durable

IMPACT	Climate Drivers			
	Temp.	Precip. Variability	Severe Storms	Sea Level Rise
a. More frequent travel and delivery delays and disruptions (e.g., downed trees and power outages).	X	X	X	X
b. Increase in infrastructure (e.g., transportation, utility and water distribution) maintenance or replacement requirements.	X	X	X	X
c. Possible increase in drought events reducing availability of potable water.	X	X		
d. Increase in unhealthy outdoor air quality days.	X			
e. Increased threat of loss to natural capital.	X	X	X	X
f. Increased stress on the urban forest with a decrease in ecosystem services (carbon sequestration, energy conservation, water quality and quantity, air quality and human health benefits).	X	X	X	
g. Possible changes in lifetime and maintenance of external building components (ex. roofs).	X	X	X	
h. Potential impact on reliability of electrical systems and grid due to heating and cooling.	X			
i. Possible increased flood risks to property and infrastructure in flood-prone areas.		X	X	X
j. Increased erosion and sedimentation due to high intensity runoff events.		X	X	
k. Loss or degradation of wetlands due to drought or other factors affecting wetland viability.		X	X	X
l. Loss or migration of tidal wetlands.			X	X
m. Increased demand for potable water supply.	X	X		
n. Energy: Seasonal changes in demand; increased short-term disruptions.	X		X	
o. Expansion of flood-prone areas and increase in flood frequency in tidal and nontidal areas due to changes in precipitation patterns.		X	X	
p. Increased tidal flooding due to sea level rise and/or tidal surges.			X	X



Need for Climate Adaptation & Resilience Plan

- Climate Adaptation & Resilience Plan Recommendations
 - EQAC
 - Fairfax Green Initiatives
- Existing County Efforts
 - Overview of efforts in staff response to 2018 ARE, Climate and Energy #2
 - Need more holistic approach that builds on existing plans, strategies
- Existing Regional Efforts
 - Work from NVRC, COG, surrounding jurisdictions
 - Opportunity to utilize, share resources
 - Need to generate localized data, develop strategies that fit Fairfax County



Local & State Climate Adaptation & Resilience Plans

Municipality	Plan Name	Plan Development Timeframe	Cost of Plan Development	Dedicated Office	Oversight	Community Engagement
Washington, DC Pop: 702,455 Area: 68 mi² Med. Household Income: \$82,372	Climate Ready DC (2016)	~24 months	~\$250,000	Department of Energy & Environment, Urban Sustainability Administration 15 FTE	Deputy Director, Urban Sustainability Administration	10-member internal Advisory Group 13-member Equity Advisory Group in Ward 7 4+ community-wide Community Conversations
Norfolk, VA Pop: 244,703 Area: 54 mi² Med. Household Income: \$49,146	Resiliency Strategy (2015)	~12 months	~1,690,000*	Office of Resilience 4 FTE	Chief Resilience Officer	6 months community-wide outreach 14-member Steering Committee 3 working groups (Coastal, Neighborhood, Economic Resilience)
	Vision 2100 (2016)	~12 months	\$500,000*			6 months community-wide outreach Engaged over 500 residents through social media, community meetings, mapping workshops
Virginia Beach, VA Pop: 452,602 Area: 497 mi² Med. Household Income: \$75,623	Sea Level Wise Adaptation Strategy (Draft, 2020)	Plan emerged from the 5-year Sea Level Wise effort	\$3,844,000*	Department of Public Works, Engineering Group 5 FTE	Director, Department of Public Works	City Manager's Working Group on Sea Level Rise 13 community-wide workshops Engaged over 500 residents through workshops, online portal

* Partially or fully funded through federal or private sector grant programs (e.g. the Rockefeller Foundation, HUD and NOAA).

Proposed Planning Approach

Purpose

Develop a plan that includes strategies to adapt to the changing climate in ways that reduce vulnerabilities and ensure a more equitable and resilient Fairfax County.



Major Plan Elements

1. Assess climate change impacts to the county – Vulnerability & Risk Assessment
2. Engage internal and external stakeholders
3. Develop goals and strategies



Plan Development Process

1. Review, build support and seek approval
2. Facilitate partnerships to accomplish the work
3. Track indicators and evaluate and report on outcomes



Proposed Outreach & Planning Structure

Community

- Residents, workers, public and private sector organizations and businesses
- **Up to 3 facilitated community-wide meetings** (3 meetings toward beginning of planning process to identify priorities, vulnerabilities; online survey toward end of planning process to review adaptation and resilience strategies)
- Surveys, public comment periods

Infrastructure Advisory Group

- County, state and regional agencies that oversee or address infrastructure in their work
- Utilities and authorities
- Building industry groups
- **5 – 6 facilitated meetings** to review climate projections; identify vulnerabilities; develop, assess and prioritize climate adaptation and resilience strategies; and develop implementation roadmap
- Peer review of draft and final products

Community Advisory Group

- County, state and regional agencies that address public safety, public health, social, economic and environmental issues
- 3-4 district representatives designated by each Supervisor
- Nonprofit and special interest groups representing social, environmental and economic realms
- **5 - 6 facilitated meetings** to review climate projections; identify vulnerabilities; develop, assess and prioritize climate adaptation and resilience strategies; and develop implementation roadmap
- Peer review of draft and final products

Steering Committee

- County staff overseeing plan development
- Consultant(s)
- Steering committee will facilitate outreach and develop plan materials

Proposed Framework & Timeline

Conditional on Board approval of resources, additional staff

Phase I – Initiation

Summer 2020 – January 2021

1. Develop Phase I Resources
2. Recruit
3. Negotiate Contract
4. Convene Advisory Groups

Phase II – Vulnerability & Risk Assessment

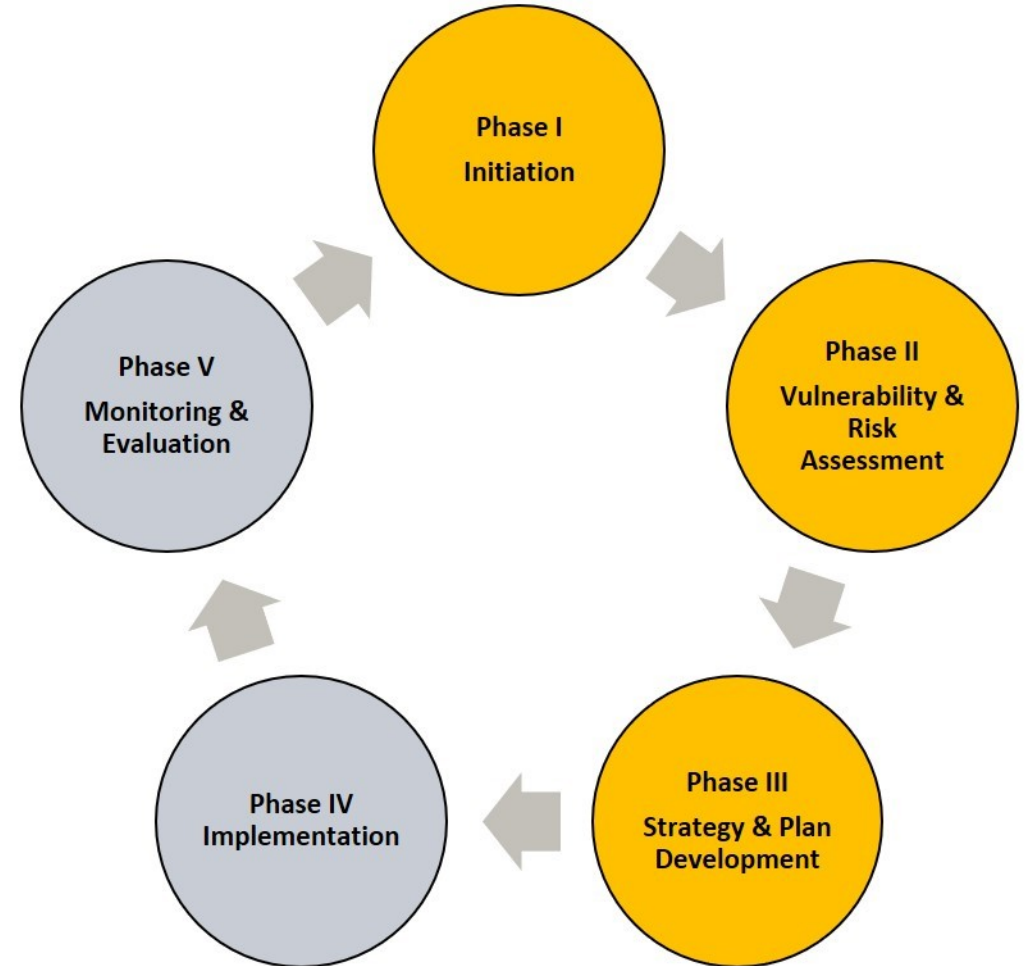
January - Spring 2021

1. Develop Climate Projections for Fairfax County
2. Identify Climate Hazards, Vulnerabilities and Risks
3. Review existing plans and efforts – gap analysis
4. Identify Community-wide Priorities
5. Audit Existing Policies and Plans

Phase III – Strategy & Plan Development

Summer 2021 – Spring 2022

1. Develop and Assess Climate Adaptation & Resilience Strategies
2. Develop Climate Adaptation & Resilience Plan
3. Finalize Plan
4. Seek Plan Approval



Glossary

ARE – Annual Report on the Environment

BOS – Board of Supervisors

BOSEC – Board of Supervisors Environmental Committee

CECAP – Community-wide Energy and Climate Action Plan

COG – Metropolitan Washington Council of Governments

EQAC – Environmental Quality Advisory Council

FTE – Full-time equivalent employee

GMU – George Mason University

NAACP – National Association for the Advancement of Colored People

NOVEC – Northern Virginia Electric Cooperative

NVRC – Northern Virginia Regional Commission

NVSWCD – Northern Virginia Soil and Water Conservation District

WMATA – Washington Metropolitan Area Transit Authority