

Draft Actions for the Community Energy and Sustainability Master Plan
 Prince William County, Virginia
 March 22, 2023

These draft climate adaptation and resiliency actions below are actions the county would take to achieve the climate resiliency and adaptation goals set forth by the Board of County Supervisors. These are proposed actions to be taken to address the vulnerabilities of the county’s people and assets to climate hazards. The County’s Vulnerability Assessment completed in January 2023 identified the following categories most vulnerable to climate hazards: socially vulnerable populations, natural resources, energy resources, transportation, and food/water/shelter resources. The following climate hazards propose the greatest risk to the county’s assets and people: precipitation, extreme temperature, drought, sea level rise, earthquakes, and strong winds/tornados. The actions below are proposed to help the county become more resilient and adaptable to climate change.

CLIMATE ADAPTATION & RESILIENCY ACTIONS				
Action #	Sector	Action Title	Action Description	Climate Benefits (GHG Reduction Potential, and/or Climate Hazard Addressed)
40	BUILDINGS	Develop Adaptation Plans for Critical Facilities	Develop site-level adaptation plans for critical facilities and service areas considering future climate change hazards.	All Climate Hazards
41		Expand Building Insulation Standards to Protect Against Extreme Heat	Increase standards for insulation in new construction buildings and homes for resiliency against extreme heat events.	Low, Extreme Heat
42		Protect Existing Buildings Against Earthquakes	Identify structures for earthquake retrofits and implement retrofits on existing structures.	Earthquakes
43		Protect Existing Buildings Against High Winds	Identify structures for high wind retrofits and implement retrofits on existing structures.	High Winds & Tornados
44		Incentivize Improved Cooling Equipment in Apartments	Incentivize expanded access to reliable, efficient cooling for apartments.	Low, Extreme Heat
45		Incentivize Businesses to Reduce Water Usage	Develop incentives, training and technical assistance programs for significant water use reductions including rainwater and greywater harvesting and onsite blackwater treatment with a focus on industrial and commercial properties.	Low, Drought

Draft Actions for the Community Energy and Sustainability Master Plan
 Prince William County, Virginia
 March 22, 2023

46	INFRASTRUCTURE	Protect County Infrastructure from Flooding	Identify County-owned infrastructure vulnerable to future flooding and evaluate if infrastructure should be elevated, relocated, or floodproofed.	Precipitation
47		Incentivize Nature-based Solutions to Reduce Flooding in Residential Properties	Develop program to provide incentives and promote rain gardens, conservation landscapes, green roofs, water harvesting, and permeable pavement for residential properties.	Precipitation
48		Understand Stormwater Flooding in Areas Outside of the Floodplain	Develop plans for stormwater system upgrades based on future conditions stormwater modeling data and historic flooding information.	Precipitation
49		Improve Water Infrastructure for Extreme Precipitation Events	Update water and drainage infrastructure design standards to address the projected increase in intensity of precipitation, including the use of retrofits and/or green infrastructure in new construction.	Flooding
50		Protect Electrical Infrastructure from High Winds	Partner with energy providers to increase resilience of the electrical grid including hardening infrastructure and/or burying power lines where appropriate.	High Winds & Tornadoes
51		Assess Availability of Backup Power for Critical Infrastructure	Assess the feasibility of switching to clean sources backup power.	High Winds & Tornadoes
52		Invest in Backup Power for Critical Infrastructure	Invest in backup power generation for publicly owned essential services and infrastructure.	High Winds & Tornadoes
53		Urban Heat Island Relief Program	Incentivize urban designs that facilitate air movement to alleviate heat islands (e.g., increasing urban tree cover).	Low, Extreme Heat
54		Adopt Guidelines to Use Nature-based Solutions on County Government Construction	Develop guidelines on how to incorporate nature-based solutions into county projects.	Flooding
55		ENERGY	Improve Grid Resilience During Extreme Weather	Evaluate resilient energy systems such as microgrids or other distributed energy resources

Draft Actions for the Community Energy and Sustainability Master Plan
 Prince William County, Virginia
 March 22, 2023

			within the County to provide stable energy supply during times of extreme weather.	
56	NATURAL RESOURCES	Expand Tax Credits for Conservation of Natural Resources	Expand tax credits for conservation of floodplains and natural buffers, such as wetlands and riverbank tree planting, in vulnerable areas.	Flooding
57		Assess Shoreline Protection and Nature-Based Solutions	Conduct feasibility studies to evaluate shoreline protection measures against erosion and flood, incentivizing nature-based solutions. Develop long-term plans to address sea level rise for at-risk public and private property.	Precipitation & Sea Level Rise
58		Develop Plan to Preserve Estuaries and Wetlands To Reduce Flooding	Map projected future sea levels and identify existing wetlands that may be impacted. Develop a plan to preserve these spaces and use them to mitigate runoff and flood impacts where possible.	Sea Level Rise
59		Restore Streams to Reduce Flooding	Develop stream corridor restoration projects to improve conveyance and mitigate flooding.	Precipitation
60	COMMUNITY	Training for Community Members on Climate Change and Mental Health	Provide professional development training for teachers, support staff and other community members to support child and youth mental health related to climate change.	All Climate Hazards
61		Expand Community Outreach for Education on Climate Change Adaptation	Expand existing “Ready Prince William” Community Outreach and Preparedness Campaign to support the development of accessible technology to provide climate information to individuals and industries to enhance collective understanding.	All Climate Hazards
62		Increase Protection from the Sun at Childcare Centers	Develop guidelines for shade for schools and childcare centers’ grounds.	Low, Extreme Heat
63		Incentivize Technology for Residents to Make Homes Adaptive	Provide incentives or subsidies for residents of low-income housing and rental properties to install or retrofit buildings with climate adaptive technologies to reduce energy, reduce water use, reduce waste heat, and minimize urban heat gain.	Low, Extreme Heat

Draft Actions for the Community Energy and Sustainability Master Plan
 Prince William County, Virginia
 March 22, 2023

64		Plan Alternate Evacuation Routes for Flood-prone Areas	Identify alternate evacuation routes for roads and bridges identified as vulnerable to flooding and/or sea level rise.	Flooding
65	AGRICULTURE	Support Agriculture Resiliency	Identify support for farmers to prepare for and recover from extreme weather, such as access to more accurate weather data, harvest support, drought resistant crops, backup generation, and livestock evacuation.	All Hazards

DRAFT