



Albemarle County

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AGENDA DATE: 6/15/2022

TITLE:
Climate Vulnerability Assessment Reports

SUBJECT/PROPOSAL/REQUEST: Receive the recently completed Climate Vulnerability and Risk Assessment and companion overview, which will support the upcoming climate resilience planning process

ITEM TYPE: Consent Information Item

STAFF CONTACT(S): Richardson, Henry, Stewart, Harper, Dayley

PRESENTER (S): Gabe Dayley

LEGAL REVIEW: Not Required

REVIEWED BY: Jeffrey B. Richardson

BACKGROUND: Albemarle County's Climate Action Plan, adopted by the Board of Supervisors on October 7, 2020, commits the County to developing a Climate Adaptation and Resilience Plan. The County's Climate Action Plan focuses on mitigation-strategies to reduce the severity of global climate change. In contrast, a Climate Adaptation and Resilience Plan will guide the community in preparing for the local impacts of climate change, some of which we are already experiencing. To build local resilience to climate change, it is first necessary to assess how climate change will affect us here in Albemarle County. The Climate Vulnerability and Risk Assessment represents this first step in preparing our community for climate change.

The Assessment was prepared by the Sobis consulting firm with contributions from Albemarle County staff and in partnership with the Piedmont Environmental Council and Resilient Virginia. It was supported through a generous grant from the DN Batten Foundation.

STRATEGIC PLAN: Mission - To enhance the well-being and quality of life for all community members through the provision of the of the highest level of public service consistent with the prudent use of public

funds.

DISCUSSION: The Climate Vulnerability and Risk Assessment (Attachment A) analyzes five areas of information related to how climate change will affect us in Albemarle County. Specifically, the report addresses:

- 1) major changes to temperature and precipitation by 2050 and 2075 that will drive acute shifts in weather patterns and specific hazards;
- 2) the primary hazards that our community is most likely to face on those time horizons, including extreme heat, drought, wildfire, flooding, pests and disease, and disruptions to seasonal weather patterns;
- 3) the groups and areas of our community that will be most exposed to these hazards, which may vary by hazard (e.g., a drought will affect the whole county, whereas a flash flood might affect a specific area);
- 4) social, economic, ecological, and infrastructural conditions that may make some community members, businesses, and habitats more vulnerable to these hazards; and
- 5) the harmful impacts that are likely to occur when a hazardous event takes place.

The Assessment found that the county will experience more temperature and precipitation extremes in the coming decades, which will lead to adverse social, economic, ecological, and infrastructural impacts. The report quantifies impacts for the years 2050 and 2075 and under two future climate change scenarios-low emissions and high emissions-based on research by the Intergovernmental Panel on Climate Change (IPCC).

The following are a sample of the report's major forecasted impacts for Albemarle County for the year 2050 under the *high* emission scenario:

- Albemarle County will experience triple the number of days with temperatures above 95°F and five to nine times as many days with evening temperatures greater than 75°F, which can exacerbate heat illness.
- Approximately 37,000 additional people will be exposed to heat island effect, and rates of heat illness will double.
- The probability of a major drought occurring will increase sixfold, and average annual agricultural losses due to drought will increase more than two-and-a-half times.
- The number of days when more than two inches of rain falls is expected to double.
- We will experience an additional month per year of mosquito activity, increasing the prevalence of vector-borne illness.

These projected impacts illuminate the urgency and importance of climate adaptation and resilience planning. Understanding the information in the Climate Vulnerability and Risk Assessment will enable staff to facilitate a more equitable and inclusive planning process, and ultimately to create a plan with more effective adaptation and resilience strategies.

BUDGET IMPACT: There is no budget impact associated with receipt of this report.

RECOMMENDATION:

Staff recommends that the Board of Supervisors receives and reads the Albemarle County Climate Vulnerability and Risk Assessment and companion overview, *Preparing for Resilience: An Overview of the Albemarle County Climate Vulnerability and Risk Assessment* (published separately).

ATTACHMENTS:

A - Albemarle County Climate Vulnerability and Risk Assessment