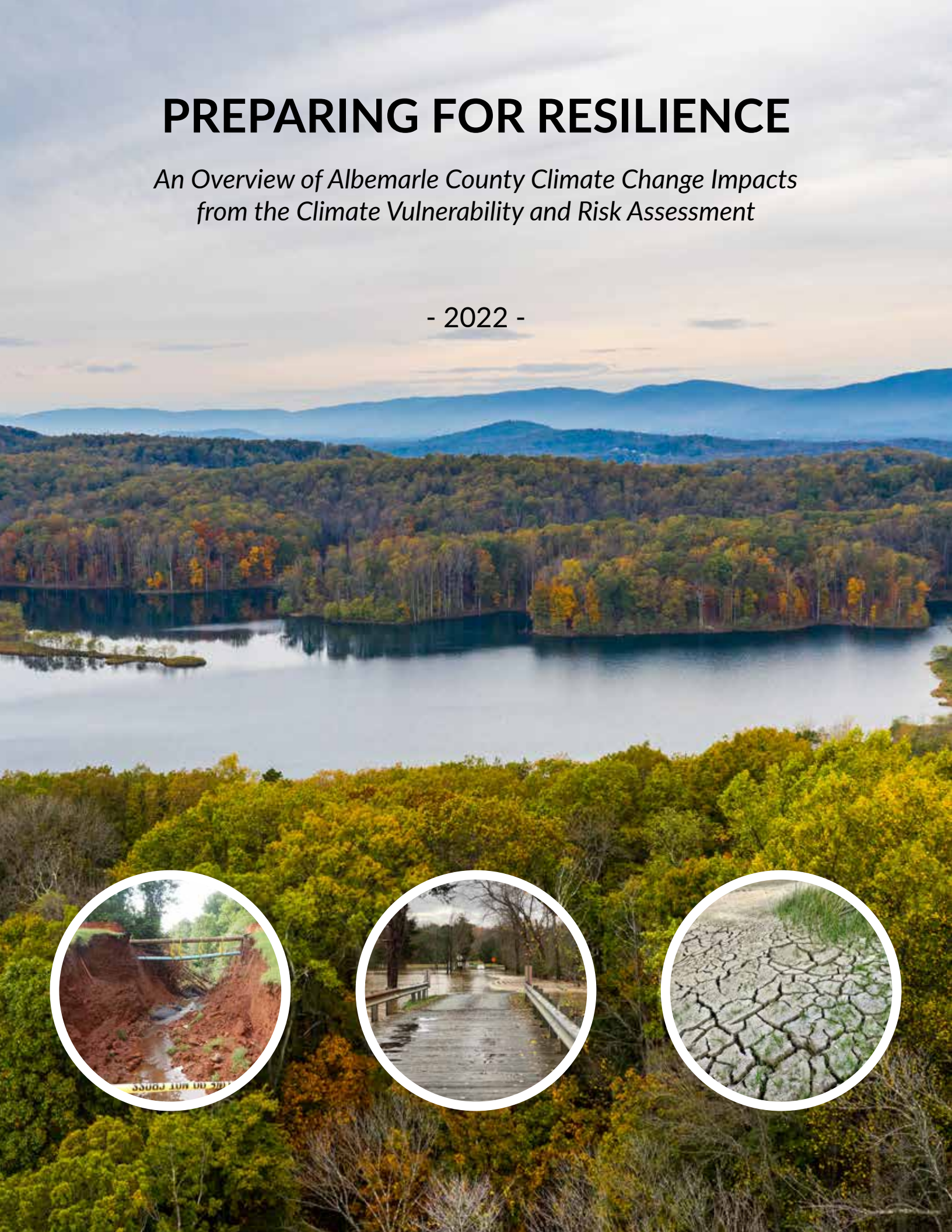
PREPARING FOR RESILIENCE

An Overview of Albemarle County Climate Change Impacts from the Climate Vulnerability and Risk Assessment

- 2022 -



ACKNOWLEDGMENTS

Albemarle County

in partnership with

The D·N·Batten FOUNDATION

Piedmont Environmental Council

Prepared by: Green Fin Studio

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HOW TO READ THIS DOCUMENT

This document presents climate change information under two color-coded main headings because **CHANGING TEMPERATURES** and **CHANGING PRECIPITATION** are at the root of most of the expected climate-driven vulnerabilities and risks in Albemarle County.

Each main heading contains information on current conditions and projected changes. Following this information, there are several subheadings that detail local impacts of climate change on different aspects of Albemarle County. These have the main heading above and the area of impact in the title box. Each area of impact also has an associated icon that can be found in the full Albemarle County Climate Vulnerability and Risk Assessment as well.

CHANGING TEMPERATURES

ECONOMIC IMPACTS

There are also case studies that allow a closer look at a specific topic. They also have the main heading above the title box. Look for the magnifying glass and the words "A Closer Look" to spot these.

CHANGING PRECIPITATION

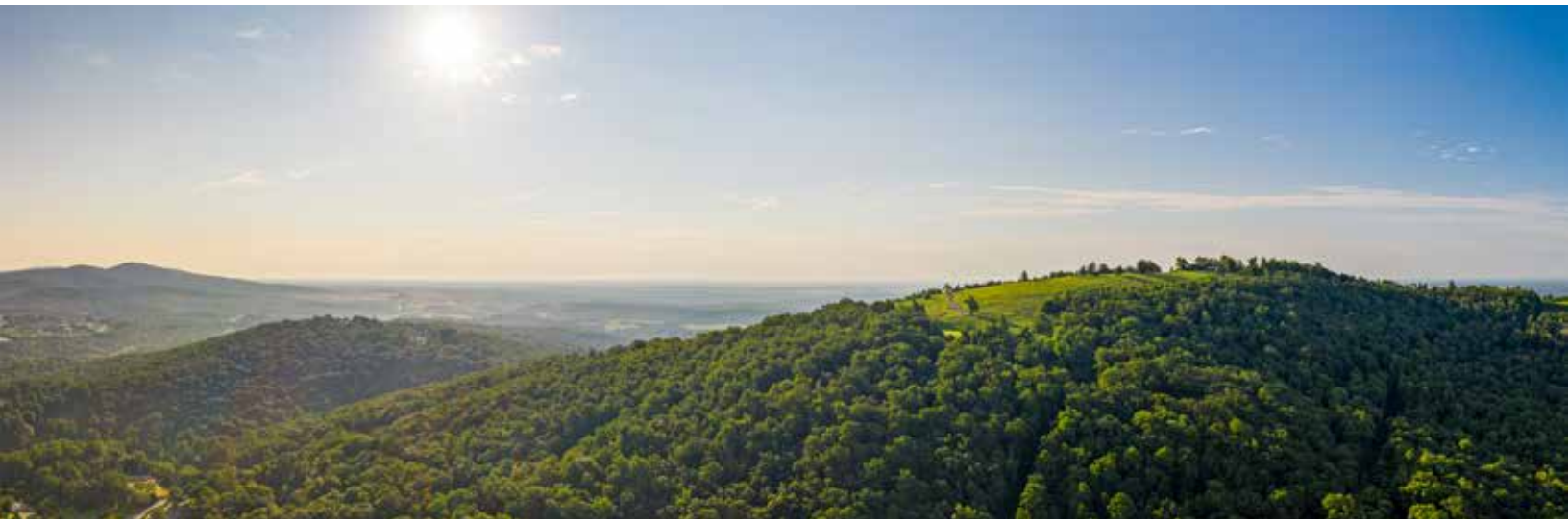
A Closer Look: Water Management

Lastly, there are quotes from experts or community members under most of the case studies; these are distinguishable by a yellow background and white quotation marks. Visit pecva.org/climate to watch the associated video interviews and hear from the experts themselves.

FROM THE EXPERT

First and Last Name, Position and Affiliation

"This is a quote from a local expert about the specific topics discussed in the section where it appears. It often gives first-hand insight into local climate impacts or who will be most vulnerable to those impacts. Each quote is directly related to a video that includes this expert speaking. View the videos at PEC's climate website, pecva.org/climate."



Drone photography of Montalto by Hugh Kenny, Piedmont Environmental Council

CLIMATE CHANGE AND ALBEMARLE COUNTY

Climate change is happening now and experts and the science tells us that we should expect it to intensify in the coming years and decades. The time has come for Albemarle County to prepare for the dramatic shifts in temperatures, precipitation, and seasonal patterns that climate change is bringing to our region. These changes impact the things we care about and that characterize Albemarle, including our communities, economy, and environment.

Planning for resilience so that we can best adapt to climate change and reduce harmful impacts, requires thoughtful planning that includes community members who will be most affected. To that end, the Board of Supervisors has called on County staff to create a climate adaptation and resilience plan to address these challenges.

The first step in this effort is to assess in more detail the hazards that the county can expect, who and what will be most exposed, and where there is greater vulnerability to adverse impacts. Based on an extensive review of the best available science, modeling, and data analysis, the *Albemarle County Climate Vulnerability and Risk Assessment* does just this; its key takeaways can be found here in the following pages.

The second step in building community resilience in the face of climate change is to engage our community to design responsive strategies that meet community needs, reduce exposure where possible, and address vulnerabilities.

Foremost among strategies to build resilience are those that address the root cause, climate change itself. We need to prepare for the changes that are now unavoidable, but we also need to prevent the worst of climate change. The County's Climate Action Plan (2020) guides our work to meet targets set by the Board of Supervisors to reduce greenhouse gas emissions in the community by 45% from 2008 levels by 2030 and to achieve zero net emissions by 2050. Planning for adaptation and resilience will complement our work to mitigate climate change.

This document presents key highlights from the *Climate Vulnerability and Risk Assessment* (albemarle.org/climate), completed in 2022 to inform the County's climate adaptation and resilience planning. The next step in the process is to engage our community so that we can move forward collectively and address the climate risks identified here and in the full report. Follow communications from the County via email, social media, and the PEC website to stay informed and understand how you can play a role in creating a climate adaptation and resilience plan to meet the challenges ahead.

Drone photography of Ragged Mountain Reservoir by Hugh Kenny, Piedmont Environmental Council

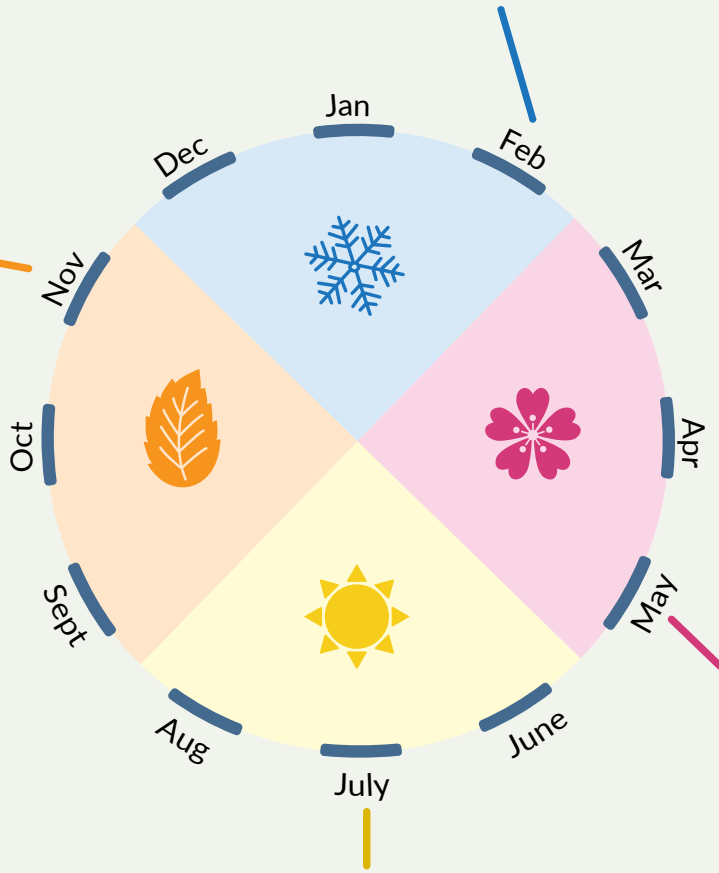
OVERVIEW

"People notice that the weather is changing, and I think it's our job as professionals and as community members to really sound the alarm—that it's not just the weather, it's the climate that's changing." —Dr. Irène Mathieu, UVA Health pediatrician

We can't avoid climate change in Albemarle County. It's already here, and changes that we might notice and think of as weird weather are actually part of a larger pattern of higher temperatures, more precipitation, and, counterintuitively, more drought. This document will walk you through the current conditions and coming changes in the county so that you are better prepared to join the conversation around planning for Albemarle County's future.

The graphic below is a great place to start; it gives a quick overview of what will be discussed on the following pages.

THE DRIEST MONTH
in Albemarle County will only get drier, with droughts impacting households, the economy, and our natural resources.



THE FIRST FROST
is usually in November in Albemarle County, but it will come later with a changing climate—allowing pests to flourish for longer.

THE LAST FROST
is usually in April in Albemarle County, but it will become unpredictable, leading to loss of crops and impacts to wildlife.

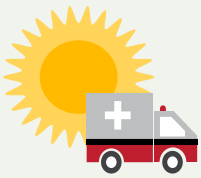
THE WETTEST MONTH
in Albemarle County will only get wetter, causing more flooded roads, buildings, and infrastucture.

THE HOTTEST MONTH
in Albemarle County will only get hotter and more dangerous. The extreme heat will lead to illness (and even death), economic losses, and stressed infrastructure.

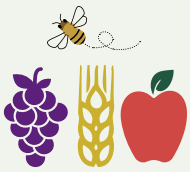
INTRODUCTION

Albemarle County will be hotter and both wetter and drier, but it's not just a future problem—the change has already started.

Global climate change is making our weather less predictable than in previous decades. Impacts from climate change are not just something our children or grandchildren will face—they're happening now.



We are already experiencing hotter summers and the associated health impacts.



Seasonal cycles are shifting and impacting important plants and animals, like crops and pollinators.

We are experiencing more flooding *and* more drought as rain events become concentrated into fewer, bigger storms between dry periods, and reservoirs can't replenish as quickly as in the past.

Over time, the impacts from climate change will increasingly affect our community's health, economic prosperity, infrastructure, and natural resources. Our Albemarle County community will experience the costs of climate change. By understanding the risks and arming yourself with the science-based information, you can join the climate conversation and community efforts to build resilience in the county.

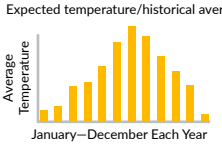
This document summarizes a few key findings of a larger report, the *Albemarle County Vulnerability and Risk Assessment* (albemarle.org/climate). At that web address, you can also learn about how the County is preparing for climate change and reducing greenhouse gas emissions.

TERMS TO KNOW

Weather
The state of the atmosphere with respect to heat or cold, wetness or dryness, calm or storm, clearness or cloudiness

Can change in a minute

Climate
The average course or condition of the weather at a place, usually over a period of years as exhibited by temperature, wind velocity, and precipitation



A pattern over decades

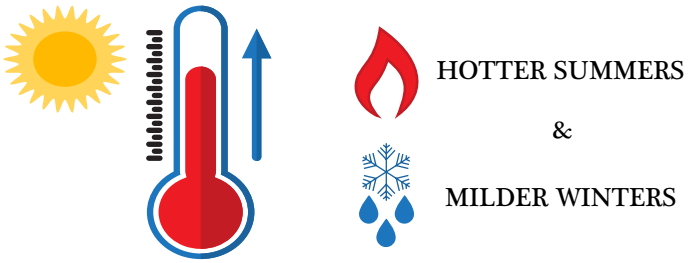
CHANGING TEMPERATURES

TODAY

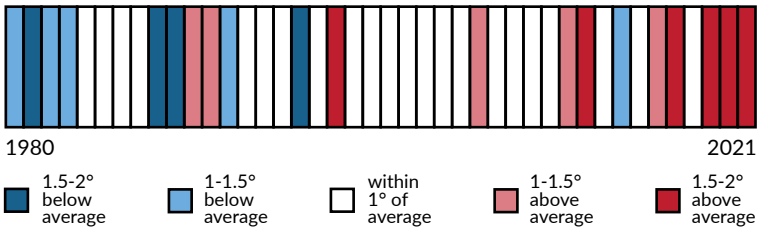
The temperature in Albemarle County has been rising at an accelerating rate. Since 1920, average temperatures have increased about 0.2 degrees per decade; since 1980, that rate of warming has tripled. The timing of seasonal changes—like when flowers bloom or mosquitoes are active—has shifted as well.

Have you been noticing hotter temperatures recently? They are already here and impacting our community. We spend more money cooling our homes in the summer, local farms face even tighter profit margins, and our health is at stake. Read A Closer Look: Human Health to learn more about climate change and heat-related illness.

The graph to the right shows that the average annual temperature has increased since 1980. When compared to the long-term average from 1980-2021, the blue years were cooler and the red years were warmer. The overall trend is more warm, red years as we approach 2021.[1]



Average annual temperature versus long-term average



Data accessible from https://www.ncdc.noaa.gov/cag/.

1. "Chapter 2: Climate," *Albemarle County Climate Vulnerability and Risk Assessment* (2022), albemarle.org/climate.

Drone photography of Scottsville, VA by Hugh Kenny, Piedmont Environmental Council

A Closer Look: Human Health

Heat-related illnesses occur when the body is unable to cool down. Heat stroke is the most dangerous and can be fatal. These illnesses will increase as temperatures rise, but many people are already feeling the effects, such as those who work outside, the elderly, children, and households below poverty level. Households in heat islands—areas that experience higher temperatures due to buildings, roads and other structures absorbing and re-emitting heat from the sun—are particularly vulnerable. They occur in urbanized areas and cause the temperature to be hotter during the day and stay hot at night.

FROM THE EXPERT

Dr. Irène Mathieu, UVA Health pediatrician

"With climate change, we're seeing greater numbers of days where the low temperature does not drop below 70°. What that means, particularly for those kids who live in homes without air conditioning, of which there are many in our community, they aren't able to lower their body temperature appropriately—that means sleep is just not as efficient for them in terms of clearing out all of the waste products in our brains and our bodies that happens when we sleep. This could have long-term health implications that are really difficult to predict at this point."

Maintaining existing trees and planting new ones are key ways to combat rising temperatures. The photos below, taken on the same day at the same time in two area playgrounds, show how trees, and the shade they provide, play a crucial role in lowering temperatures.

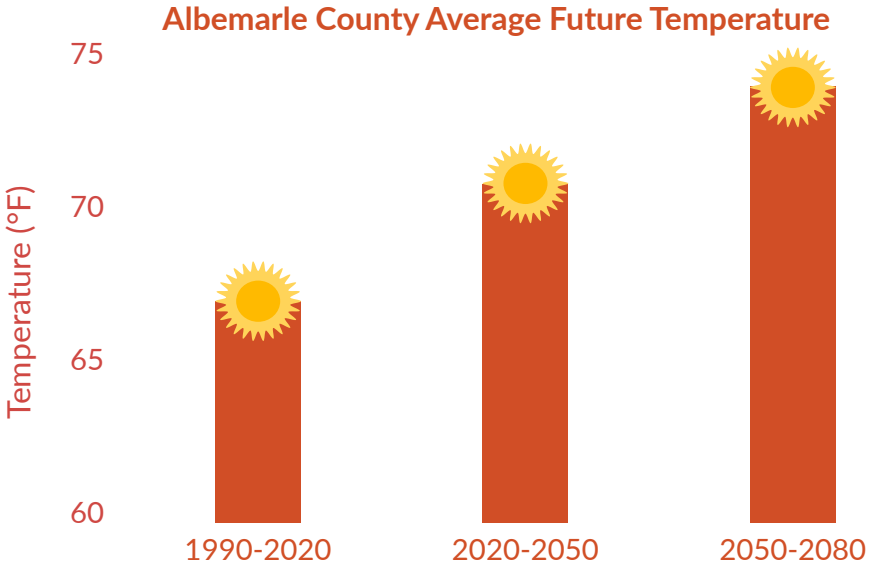
A playground with trees: below 85°F

A playground without trees: above 100°F

Photos provided by Peggy and Jake Van Yahres.

WHAT TO EXPECT

Just like meteorologists use hurricane models to predict the path of storms, climate scientists use models to forecast the future climate. Climate models use past and current data to anticipate what future conditions will be like. As with a weatherman forecasting a storm, the prediction might not be 100% correct in all aspects, but it allows us to plan our day, or in this case, allows the County to plan for a changing climate.



Original data accessible from the Department of Energy: https://esgf-node.llnl.gov/projects/cmip5/

The graph to the left shows how average temperature is expected to change under the business-as-usual scenario in which emissions increase through the end of the century. This aligns with the current trajectory, though significant global action to reduce greenhouse gases would improve outcomes.

We can expect that the temperature in Albemarle will continue to rise, impacting our communities, the economy, our infrastructure, and the environment.[2]

A Closer Look: Community Wellbeing

FROM THE EXPERT

Dr. Andrea Douglas, Executive Director, Jefferson School African American Heritage Center

> What we think about when we're talking about environmental justice is that it's also about an ecosystem - it's not just about the heating of the globe, but also the implications of that heat on people's abilities to live within a quality of life. Who is most impacted by that is usually marginalized communities.

Although the effects of climate change will be seen everywhere, the impacts and costs will not fall equally on all people. Reports from the Intergovernmental Panel on Climate Change (IPCC) predict that vulnerable, poor, and/or historically marginalized communities (like women, people of color, nations in the Global South) will be affected most severely by flooding, drought, heat waves, and more. Increasingly severe weather patterns resulting from climate change will exacerbate food insecurity, economic hardship, negative health outcomes, and other harms. For instance, people in poverty are more vulnerable to heat islands during heat waves and the associated housing burden from higher utility costs. Women, children, and the elderly will also experience comparatively greater harmful impacts to health and wellbeing.

2. "Chapter 2: Climate," *Albemarle County Climate Vulnerability and Risk Assessment* (2022), albemarle.org/climate.

CHANGING TEMPERATURES

COMMUNITY IMPACTS

Rising average temperatures mean extreme heat in the summer will be paired with fewer, less predictable frosts, increasing health risks and raising the cost of living.

While milder winters with less snow might seem like a good thing, they will help mosquitoes, ticks, and other pests proliferate. That means will see more cases of illnesses they carry, such as Lyme Disease and West Nile virus.[3]

On the home front, the cost of cooling a house will rise due to an increase in days when air conditioning will be preferred.[4]

5-7x
more heat advisories (when the heat index is >100°F) by 2050

19-23
more days of tick activity by 2050

25-30
more days of mosquito activity by 2050

Over 2x
increase in the cost of cooling a home by 2050

CHANGING TEMPERATURES

INFRASTRUCTURAL IMPACTS

Transportation will be less reliable and blackouts will be more likely.

Roads, railways, and bridges have temperature limits. When these structures fail, they can cause damage to vehicles and endanger lives.

If the electrical grid overheats, circuit breakers shut off the power to prevent equipment damage, leading to blackouts that exacerbate the risk of heat illness and death.[5]

28-38
more days of heat stress on transport by 2050

8-11
more days of electrical grid stress by 2050

Photo of Old Mill Trail, courtesy of Albemarle County

3. "Chapter 7: Pests and Diseases," *Albemarle County Climate Vulnerability and Risk Assessment* (2022), albemarle.org/climate.
4. "Chapter 3: Extreme Heat," *Climate Vulnerability and Risk Assessment.*
5. "Chapter 3: Extreme Heat," *Climate Vulnerability and Risk Assessment.*

CHANGING TEMPERATURES
ECONOMIC IMPACTS

The agricultural industry, in particular, will suffer losses.

Higher temperatures mean unsafe conditions for outdoor workers. This will impact the agriculture, construction, and recreation industries, among others. Since 1980, Virginia has already seen a 20% reduction in productivity due to extreme heat.[6]

Unpredictable frosts preceded by warm weather can kill delicate blooms (see A Closer Look: Local Agriculture & Pollinators on the next page). Fruit orchards contribute substantially to the economy and character of Albemarle County:[7]

Apple trees require a certain number of cold hours in the winter in order to fruit; as temperatures warm, "high chill" varieties like Honeycrisp and Red Delicious may not be able to fruit in Albemarle County.

Grape varieties like Chardonnay, Pinot Noir, Sauvignon Blanc, and Riesling are not heat tolerant and may not perform well in the County as temperatures rise.

CHANGING TEMPERATURES
ENVIRONMENTAL IMPACTS

Higher temperatures and seasonal shifts will alter natural landscapes.

As with agriculture, changing seasonal cycles can cause pests to become more damaging to the county's natural resources, including forests, rural landscapes, and historic sites.[8]

Warm weather causes insects to become active earlier in the year. This change has a domino effect that disrupts other animals and plants in our landscape.

Birds that rely on insects for food are laying their eggs a month earlier than in the 1900s.[9]

6. Shindell, Drew, et al. "Temporal and spatial distribution of health, labor, and crop benefits of climate change mitigation in the United States." *Proceedings of the National Academy of Sciences* 118.46 (2021).
7. "Chapter 3: Extreme Heat," *Albemarle County Climate Vulnerability and Risk Assessment* (2022), albemarle.org/climate.
8. "Chapter 7: Pests and Diseases," *Climate Vulnerability and Risk Assessment*.
9. Bates, John M., et al. "Climate change affects bird nesting phenology: Comparing contemporary field and historical museum nesting records." *Journal of Animal Ecology* (2022).

A Closer Look: Local Agriculture & Pollinators

Increasing temperature is only half of the problem for many plants, and the animals that depend on them, like honeybees. When temperatures are unseasonably warm in the early spring, many trees and other plants will begin to flower, even if it is earlier than usual. If a cold snap occurs after those warm temperatures, the unpredictable frost will cause the new buds and blooms to die.

Dead flowers in an orchard means that those flowers never mature into harvestable fruit, resulting in agricultural losses. Those flowers also act as a food source for bees and other pollinators. In the honey production industry, this might mean feeding the hives sugary water to hold them over, although this artificial nectar is not an ideal food source. For native pollinator species, there is no added safety of a beekeeper to help maintain populations.

FROM THE EXPERT

Brian Morse, co-founder, Virginia Forestry and Wildlife Group

> Climate change is certainly having an impact. I have the disadvantage of living that and seeing that almost every day. Part of my job is to fix systems that are either broken or are struggling and to enhance them for species that are declining... It seems like each year we're seeing more and more struggles with honeybees, new pests, new challenges and weather conditions.

CHANGING TEMPERATURES
CONCLUSIONS

1. Temperature is already rising at an accelerating rate and impacting daily life.

2. Temperature will continue to rise and endanger human health, the economy, infrastructure, and our environment.

Everything is connected with climate, and there will likely also be unexpected impacts of increasing temperatures not discussed here. See the full *Albemarle County Climate Vulnerability and Risk Assessment* (albemarle.org/climate) to learn more. Temperature is directly related to precipitation patterns—keep reading for how precipitation patterns are affecting us now and will impact our community in the future.

CHANGING PRECIPITATION

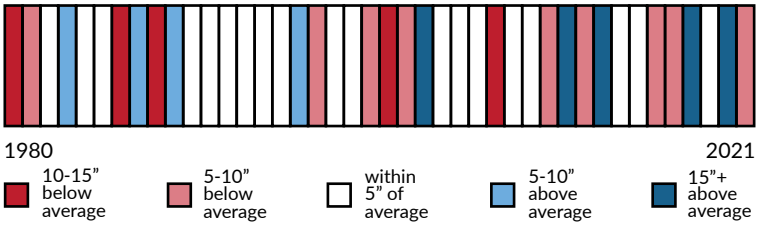
TODAY

The amount of precipitation that falls in Albemarle County, as either rain or snow, has been increasing at an accelerating rate. Over the last 100 years, total annual precipitation increased at a rate of about 0.48 inches per decade; since 1980, that rate of increase has doubled to over an inch per decade. However, that increase in total precipitation hides a counterintuitive climate trend—drought is also increasing.

Albemarle County is hit by more intense storms that bring a lot of rain and flooding, but that water moves fast and rates of evaporation have also increased—we're left with the conundrum of more rain but drier conditions. Read A Closer Look: Water Management below to learn more about how the County is managing our water supply.

The graph to the right shows average annual precipitation. When compared to the average precipitation across the years of 1980-2021, the blue years were wetter and the red years were drier. We have been experiencing more heavy rainfall events in recent years that contribute to wetter years. In fact, 2018 set a record with 70 inches of precipitation in the county.[10]

Average annual precipitation versus long-term average



Data accessible from https://www.ncdc.noaa.gov/cag/

CHANGING PRECIPITATION
A Closer Look: Water Management

Water is a fundamental human need. The County has a long history of planning water use to ensure that there is enough to go around. However, the plans that are in place today were largely spurred by a dramatic drought in the early 2000's.

FROM THE EXPERT

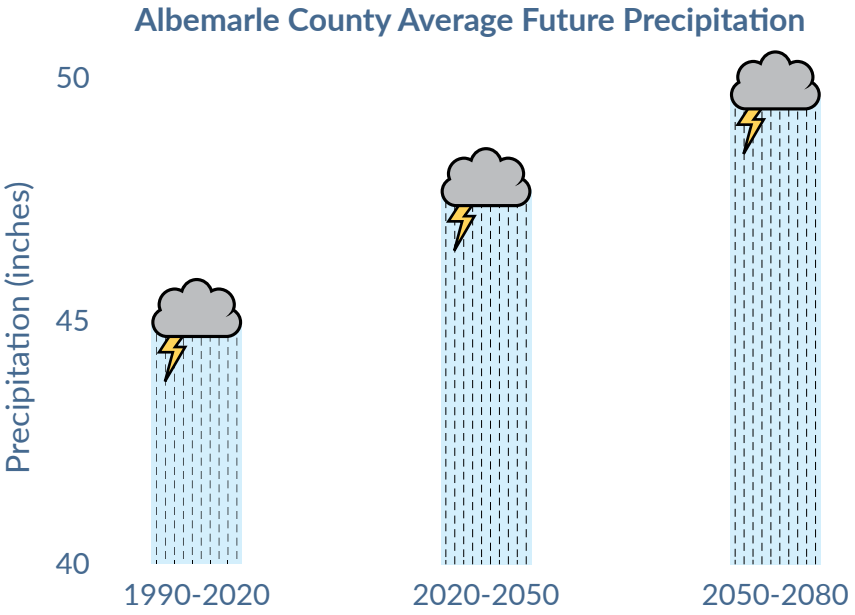
Dr. Liz Palmer, Board Member, Albemarle County Service Authority

"We were about 60 days, I believe, away from running out of water entirely at one point. We did restrict watering lawns, car washes, we were using paper plates... in restaurants. And we were asking restaurants not to serve water unless they were asked to do so. It was a very, very scary time, we were not sure how we were going to make it through. It happened to rain, so we were saved... But it taught us a lesson that we really needed to get moving on this."

10. "Chapter 2: Climate," *Albemarle County Climate Vulnerability and Risk Assessment* (2022), albemarle.org/climate.

WHAT TO EXPECT

As discussed in the Changing Temperatures: What to Expect section, climate models use past and current data to anticipate what future conditions will be like. Though the prediction might not be 100% correct in all aspects, it allows the County to plan for the future.



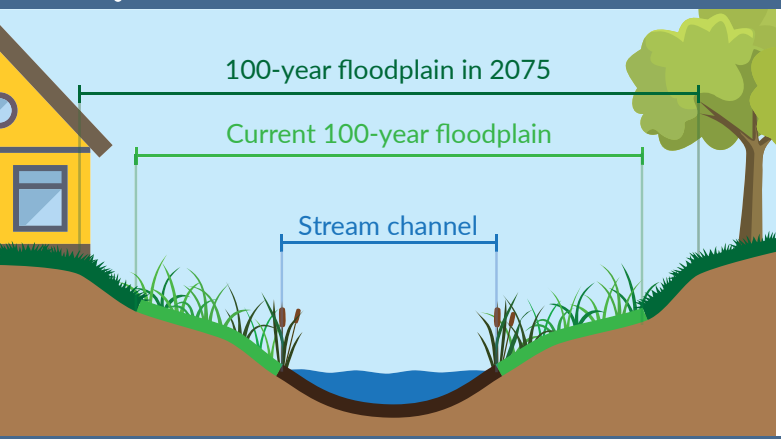
Original data accessible from the Department of Energy: https://esgf-node.llnl.gov/projects/cmip5/

The graph to the left shows how precipitation will change under the business-as-usual scenario in which emissions increase through the end of the century. This aligns with the current trajectory, though significant global action to reduce greenhouse gases could improve outcomes.

Keep in mind that the average expected precipitation levels can hide extremes—we will experience drier months and less frequent, more intense rain events.

Precipitation patterns in Albemarle County will be less predictable and more extreme, impacting on our communities, economy, infrastructure, and environment.[11]

A Closer Look: Floodplains



Floodplains are low-lying areas of the landscape adjacent to rivers that are subject to flooding after storms. If your house is in a floodplain, it has a high likelihood of flooding.

Albemarle County's floodplains are expanding, slowly but surely.[12] This means more properties—including homes, businesses, hospitals, and schools—have the potential to flood.

A Closer Look: Drought Emergency

The best available data indicate that we should prepare for extended periods of drought in the future. During a drought emergency, prohibited, non-essential water uses include:[13]

- unrestricted irrigation of lawns, golf courses, and athletic fields
- washing paved surfaces and mobile equipment such as cars
- using water for ornamental fountains, misting machines, and reflecting pools
- filling and topping off outdoor swimming pools
- water served at restaurants without a customer's request

11. "Chapter 2: Climate," *Albemarle County Climate Vulnerability and Risk Assessment* (2022), albemarle.org/climate.
12. "Chapter 6: Flood," *Climate Vulnerability and Risk Assessment*.
13. "Chapter 4: Drought," *Climate Vulnerability and Risk Assessment*.

CHANGING PRECIPITATION
COMMUNITY IMPACTS

Flooding can endanger lives and homes while drought can cause financial hardship for those already struggling in our community.

Flooding can make roads impassable, impacting the ability of emergency services to reach people in need. It can also damage homes, and larger floodplains can mean more people paying for flood insurance.[14]

Increased probability of drought will lead to water restrictions to protect potable water. Households and businesses will also have to pay more for water, which can be a heavy burden on lower-income community members.[15]

Over 6x
increased probability of drought by 2050

$500,000
lost to elevated water costs for our community

CHANGING PRECIPITATION
INFRASTRUCTURAL IMPACTS

Too little and too much water both pose challenges to infrastructure.

Drought challenges water utilities and requires careful planning and management to ensure that everyone has enough water during times of scarcity.[16]

Flooding can damage buildings and property. Excessive stormwater can also overwhelm the capacity of pipes and water systems, leading to the degradation of the infrastructure our community relies on.[17]

Photo courtesy of Albemarle County Fire Rescue staff

14. "Chapter 6: Flood," *Albemarle County Climate Vulnerability and Risk Assessment* (2022), albemarle.org/climate.
15. "Chapter 4: Drought," *Climate Vulnerability and Risk Assessment*.
16. "Chapter 4: Drought," *Climate Vulnerability and Risk Assessment*.
17. "Chapter 6: Flood," *Climate Vulnerability and Risk Assessment*.

CHANGING PRECIPITATION

ECONOMIC IMPACTS

Flooding and drought will both result in impacts to local agricultural operations and other businesses.

There are already 80 Albemarle County businesses in the 100-year floodplain that will likely be exposed to flood damage, and this number will only increase. In addition to expensive repairs from flood damage, flood insurance costs will also add financial strain.[18]

Crops will experience unpredictable conditions and may require more irrigation. Different varieties of crops may need to be planted. A season's harvest could be lost to drought or flooding.

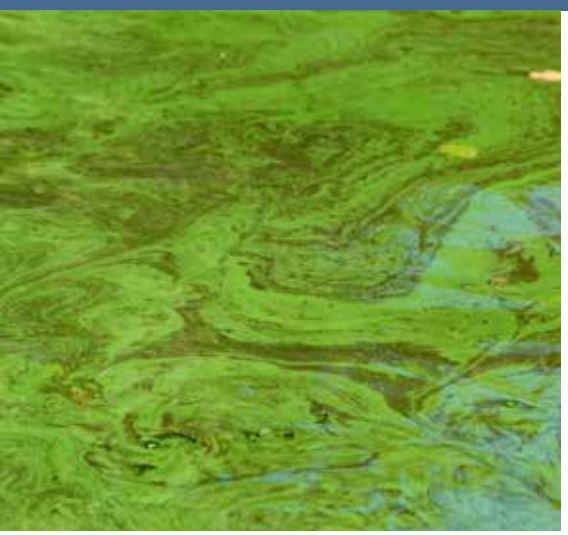
Additional industries will be impacted by drought, including golf courses, mining operations, and car washes.[19]

130
businesses in the 100-year floodplain by 2075

Over 2x
increase in the value of agricultural losses due to drought by 2050

CHANGING PRECIPITATION

ENVIRONMENTAL IMPACTS



The imbalance of water input will cause the disruption of local watersheds.

Intense rain will cause heavy erosion and more pollutants to enter waterways. The landscape will also be degraded by drought, especially in waters affected by algal blooms.[20] During a drought, there is less water in a stream or lake. The volume of water that remains gets warm more quickly and receives more sunlight. These conditions stimulate an overgrowth of algae, which can be toxic to people and animals and restrict recreation.

3 to 6
more algal bloom outbreaks by 2050

18. "Chapter 6: Flood," *Albemarle County Climate Vulnerability and Risk Assessment* (2022), albemarle.org/climate.
19. "Chapter 4: Drought," *Climate Vulnerability and Risk Assessment*.
20. "Chapter 4: Drought," *Climate Vulnerability and Risk Assessment*.

A Closer Look: Flooding Impacts

Flooding isn't just a coastal issue, it is affecting Albemarle County as well. Heavy storms can cause rivers to overflow their banks and reservoirs to overflow. Inland flooding damages buildings and infrastructure, like our stormwater and sewer systems, roadways, and bridges. High water can also claim lives.

The rural village of Esmont has had problems with flooding since it was a railroad and quarry community in the early 1900s. When the local creek floods, community drainage systems are often clogged with storm debris. To make matters worse, rural areas are often slow to receive cleanup assistance. These conditions have impacted property values and threatened the historical buildings that give Esmont its unique character.

FROM THE COMMUNITY

Mark Otis, Esmont Resident

"The flooding used to be once every 25 years, now it's about once a year. Our houses and property are at risk, as well as connectivity to transportation. It's become a very regular occurrence that roads are closed."

Unfortunately, Esmont is not alone in experiencing the impacts of flooding; many communities across the county are seeing or will see homes, businesses, and historic sites threatened by inland flooding.

CHANGING PRECIPITATION
CONCLUSIONS

1. More precipitation is falling—especially in the form of heavy storm events.

2. Drought events are becoming more common.

3. Flooding and drought will continue to intensify and endanger human health, the economy, infrastructure, and our environment.

Everything is connected with climate, and there will likely also be unexpected impacts of increasing precipitation and drought not discussed here. For example, precipitation and drought are connected to wildfires, which are still fairly low risk in Albemarle County, but an increasing risk nonetheless. See the full *Albemarle County Climate Vulnerability and Risk Assessment* (albemarle.org/climate) to learn more.

THE PATH FORWARD

DON'T LEAVE ALBEMARLE'S FUTURE TO CHANCE.

This document presents key highlights from the *Climate Vulnerability and Risk Assessment* (albemarle.org/climate), completed in 2022 to inform the County's climate adaptation and resilience planning. The next step in the process is to engage our community so that we can move forward collectively and address the climate risks identified here and in the full report. Follow communications from the County via email, social media, and the PEC website to stay informed and understand how you can play a role in creating a climate adaptation and resilience plan to meet the challenges ahead.

JOIN THE CLIMATE CONVERSATION:

Visit Albemarle County's Climate Protection Program page for information about how we are responding to climate change, including building resilience and reducing our greenhouse gas emissions.[21]

Watch the recording of Climate Action Together: A Roundtable Discussion About Local Implications of Climate Change to get caught up on the conversation.[22]

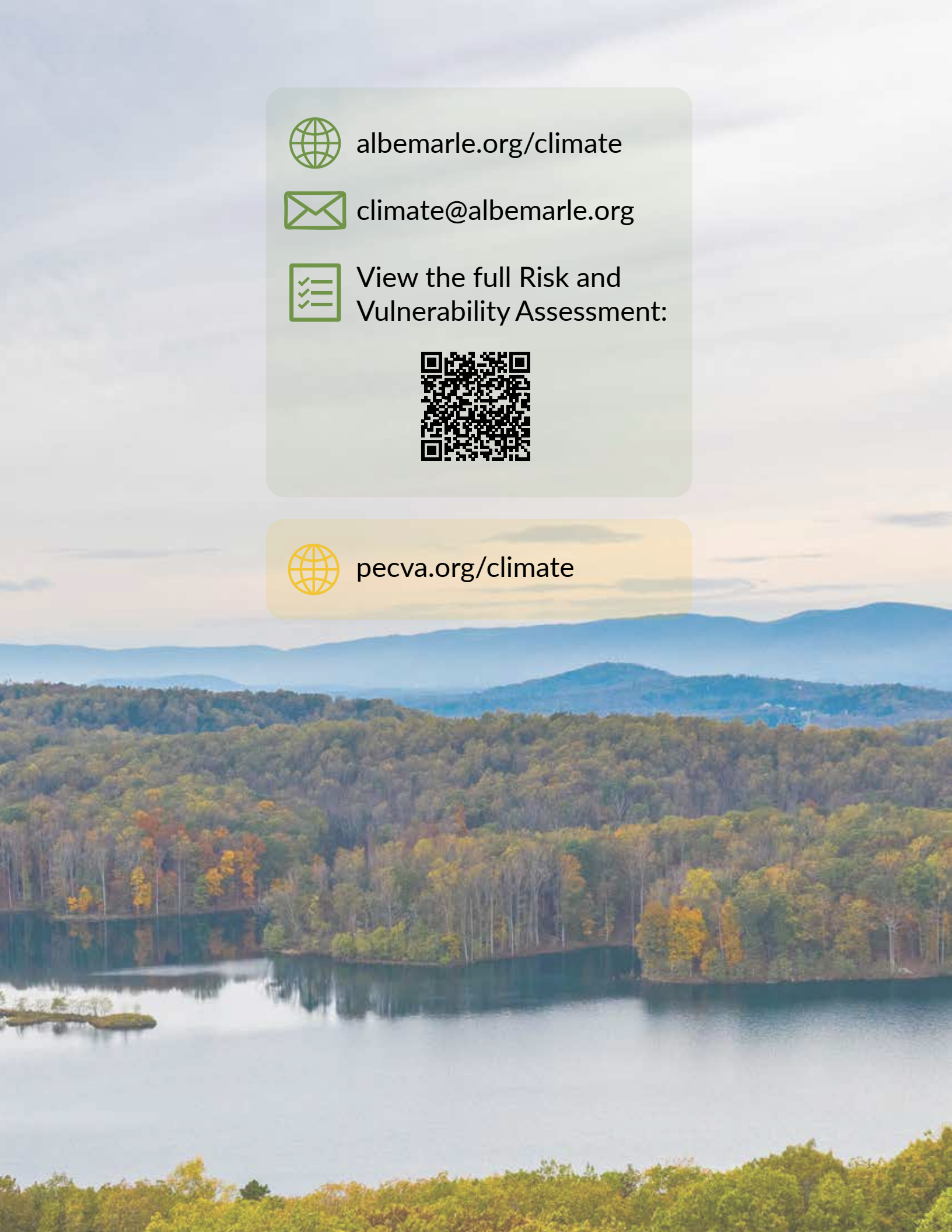
Stay connected by signing up to receive email updates on climate programs, events, and progress.[23]

Are you part of a stakeholder group who would like to learn more about how to support climate action planning in Albemarle County? Contact us at climate@albemarle.org to inquire about a meeting.

There are also individual actions you can take on your own land or in our community to make Albemarle County a little greener—learn more at the County's Environmental Stewardship Hub.[24]

Watch interviews with local residents to hear how they are being impacted by climate change, as well as their suggestions for getting involved, at pecva.org/climate.

21. albemarle.org/climate
22. bit.ly/ClimateActionTogetherRoundtable
23. https://bit.ly/AlbemarleClimateActionEmail
24. www.albemarle.org/community/environmental-stewardship-in-albemarle-county



albemarle.org/climate

climate@albemarle.org

View the full Risk and Vulnerability Assessment:

pecva.org/climate