

Lane County is embarking with community partners on an effort to understand the causes and impacts of climate change in order to take action.



## **Executive Summary**

Lane County is already experiencing climate-driven changes including higher temperatures, reduced snowpack, increasing wildfire and smoke events, and more extreme storms.

As changes in climate continue, residents can expect increasing severity and frequency of extreme heat and wildfire, larger storms with more precipitation, more prolonged periods of drought, declining snowpack, and significant changes to the forests, rivers, coastal areas, and other natural features in and around Lane County.

In response to this climate reality, Lane County is embarking with community partners on an effort to understand the causes and impacts of climate change in order to take action that reduces the greenhouse gas emissions that are fueling the crisis, while taking steps to build resilience in the face of those changes to protect communities and residents within the county.

Specifically, Lane County and the Geos Institute have partnered with the NAACP and Beyond Toxics to develop and support the Lane Climate Equity and Resilience Task Force (CERTF). This Task Force is charged with identifying climate vulnerabilities and developing resilience strategies using a community-led process.

Information provided in this vulnerability assessment shows how community members participating in the stakeholder workshop see Lane County and its residents affected by climate change now and in the future. This document will serve as the foundation for efforts by the CERTF to develop ecologically sound and socially equitable climate resilience strategies as part of Lane County's Climate Action Plan process.

## **Methods**

Geos Institute completed a Climate Trends Primer and Community Primer and supported the CERTF in hosting a community stakeholder workshop to identify and prioritize vulnerabilities in Lane County in five community systems:

- Built (buildings, roads, bridges, etc.)
- Natural (forests, rivers, wildlife, etc.)
- Cultural (Tribes, immigrant communities, local customs and historical practices)
- Economic (tourism, business, industry, etc.)
- ▶ Human (health, emergency response and preparedness, education)

## **Climate Vulnerabilities**

The following vulnerabilities are presented in priority order as determined by the workshop participants:

Housing supply issues due to climate refugees

Farming and forestry threatened by drought, temperature variability, and wildfire

Threats to the availability, reliability, and capacity within the power grid

Increase in drought stress on plants and wildlife

Reduced ability to produce food in rural areas

Damage to electrical infrastructure due to wildfire

Cost of living increases leading to financial and housing instability

Marine fishing industry and food systems damaged by ocean acidification

Coastal communities threatened by sea level rise

Health risks from reduced air quality and smoke

Threat of wildfire on homes and businesses

Increase in demand for water

Loss of marine life due to ocean acidification

Decrease in water available for natural systems

Health risks from extreme heat

Increasing demands on public safety and social service providers creates more competition for resources

Groundwater sources drying up

Indigenous communities unable to access or manage traditional resources

Species loss as ecosystems transition

Increase in chronic and communicable diseases

Schools closed due to extreme heat and smoke

Increase in demand for energy

Higher rates of stress/mental health concerns leading to an increase in crime/violence

Damage to drinking water from wildfire Toxic algal blooms threatening drinking water Reduced ability to reforest after natural disasters due to high temperatures/drought Supply chain breakdowns and price increases due to disruption Reduction in ability to generate hydropower Increase in risk to emergency communication infrastructure Decreased potential for self-sustainability and ability to grow food Air quality risks increase for walkers, cyclists, and bus riders Increase in unemployment due to climate migration Difficulty meeting greenhouse gas targets Increase in risk to wildlife habitat due to wildfire Reduced soil health in forest ecosystems Existing lack of personal emergency preparedness made worse Outdoor workers at risk from smoke, heat, and wildfire Loss of skilled workforce as people move away Impacts to middle housing stock Health risks from reduced water quality in wells Issues relating to low-income households accessing renewable energy made worse Older levees at risk of failure Stormwater infrastructure at risk from larger storms Increase in salinity of coastal watersheds Increase in urban waste runoff in rivers from floods and wildfires Existing lack of emergency evacuation plans made worse Increase in costs for property and liability insurance Existing limitations in energy transmission are made worse Reduced ability to access culturally relevant foods and other resources Essential services at risk due to flooding Bridges and culverts at risk of failure due to flooding Risks to internet access and reliability Increase in landslide risk to natural systems

Reduced ability to hold ceremonies and community events

Decrease in job stability

Price impacts on lumber and other building materials

Flood risk to transportation infrastructure

Transit travel times may increase

Loss of health insurance coverage due to disruptions in employment

Decline in tourism and recreation due to severe conditions

Damage to sewer infrastructure from wildfire

Dams unable to hold back larger storms

Increase in injuries due to extreme events

## Conclusion

While this list of vulnerabilities is daunting, important work is underway. Developing strategies to address the climate vulnerabilities identified in this report is part of the larger climate planning effort underway through the Lane County Board of Commissioners. That effort includes both adaptation (adapting to changing conditions) and mitigation (reducing greenhouse gas emissions) strategies. By creating these strategies in concert, Lane County and its community partners can implement strategies that have many benefits to people and nature. Robust climate change solutions are positive strategies for the whole community.

