

## Public Health Vulnerability Assessment of Climate Impacts and Adaptation Plan

The effects of climate change already can be seen in Oregon's marine environments, forestlands, agriculture, and transportation infrastructure. It is likely that more severe impacts from climate change will begin to affect the state, including the overall health of its residents. **As part of a two-year collaboration, Multnomah County worked with the Oregon Health Authority Public Health Division to develop a climate change adaptation plan to protect the health of its community.** The Centers for Disease Control's five-step Building Resilience Against Climate Effects (BRACE) framework was implemented, which allowed Multnomah County to provide an overview of local climate change and health projections, and for the development of possible interventions that would allow communities and identified vulnerable populations to adapt to predicted changes.

### Role of public health

Changes in the area's climate are likely to have substantial consequences for the health of Multnomah County residents and the way that county and city governments serve the public. Human health will be impacted by the immediate consequences of climate change events. The World Health Organization calls for health professionals at all levels to take leadership roles in climate action planning, because of their community status and the health sector's economic importance.

### Climate health equity

Multnomah County seeks to ensure that the benefits of taking actions to better prepare for climate change are shared by everyone in the community. Putting equity into practice requires looking at relevant questions, data and priority setting needed to advance equity in decision making. In order to ensure the most equitable outcomes possible, these or similar questions should be explored as actions are implemented:

1. Who stands to benefit most from a climate adaptation action? Who will benefit the least?
2. Does the climate adaptation action address root causes of current and historical racial and socioeconomic disparities?
3. How are those most impacted engaged and empowered through development and implementation of this plan?
4. Does the climate adaptation action result in unintended adverse consequences for people of color or low-income communities? If so, how can these impacts be avoided or mitigated?
5. How are public resources and investments distributed geographically?



#### Injury/Morbidity/Mortality

- Extreme weather and storm events
- Rising temperatures



#### Water and Vector-borne Diseases

- Insect and pest outbreaks
- Higher precipitation levels and flood events
- Increased algal blooms due to warming waters
- Changes in habitat and species



#### Respiratory Diseases

- Degraded air quality
- Rising temperatures
- Increased pollen counts
- Increased mold exposure
- Increases in wildfires



#### Malnutrition and Food Security

- Rising sea levels
- Rising temperatures and drought events
- Threatened food supplies



#### Mental Health

- Extreme weather threats and displacement
- Economic stress
- Environmental degradation

Statewide risks to human health

## Climate risks and recommendations

	 <b>Risk 1:</b> Increased average annual air temperature and likelihood of extreme heat events	 <b>Risk 2:</b> Increased respiratory illness and allergic disease	 <b>Risk 3:</b> Impacts of increased summer temperatures and precipitation on vector-borne disease
Monitor	Conduct surveillance, develop a heat vulnerability index, and establish research partnerships to acquire local data.	Conduct surveillance of respiratory illness, develop and analyze the Air Quality Index, and establish research partnerships.	Survey, monitor and coordinate with the Centers for Disease Control.
Inform	Develop educational materials, work with health care and social service providers, and partner with tribes and local offices to coordinate operation of cooling centers.	Develop educational materials and a Clean Air Campaign.	Develop educational materials.
Link people	Develop an early warning system and response plans.	Develop early warning systems and support existing initiatives.	Create a response plan and provide reporting education.
Collaborate	Work with government agencies and organizations to increase greenspace and tree canopy, and improve cooling.	Research community engagement and policymaking processes and research Portland Air Toxics recommendations.	Improve coordination with natural resource managers.

**For more information and/or the full report, contact Multnomah County Environmental Health Services at 503-988-3663.**

The Oregon Health Authority (OHA) is one of nine agencies across the country that received a grant from the Centers for Disease Control and Prevention's National Center for Environmental Health (CDC-NCEH) as part of the Climate-Ready States and Cities Initiative. This program is intended to help agencies address the public health effects of climate change related events. The Climate and Public Health Program is part of the Public Health Division of the Oregon Health Authority.