OREGON HEALTH AUTHORITY

Public Health Division
Climate and Health Program

Climate and Health in Oregon

2025 Report Executive Summary

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Accelerating climate change is directly affecting the health of people in Oregon, and those impacts are not felt equally. Increasing instances of extreme heat, wildfire smoke, and water insecurity worsen public health across the state, while exacerbating existing health inequities. This report summarizes information about climate change hazards in the state in 2025 and recent decades. Moreover, it discusses related impacts to people's health, and actions of the public health system, partner agencies and local communities to protect everyone in the state from these risks no matter where and who they are.

Climate hazards and health impacts

Climate hazards and related health outcomes in 2025

In 2025, climate hazards and related health outcomes in Oregon included:

- **Heat:** 2025 was the state's third warmest year on record, with early-season heat in June breaking temperature records and causing the year's highest daily number of heat-related illnesses. Early-season extreme heat represents a greater threat to public health compared to extreme heat in late summer, after the population has largely adapted to warmer seasonal temperatures. Oregon recorded 9 heat-related deaths, continuing a trend of higher annual deaths since the 2021 heat dome due to more extreme heat events and better recognition of heat as a contributing cause.

- **Wildfire smoke:** Wildfire acreage burned in 2025 was less than half of the state's wildfire season average, contributing to moderate smoke levels across Oregon. Smoke-related health impacts were modest, though a period of elevated smoke from late August through October was estimated to contribute to short-term increases in non-infectious respiratory illness emergency and urgent care visits. The pattern of wildfire smoke-related respiratory health impacts in 2025 was largely consistent with the long-term seasonal pattern of wildfire smoke events.
- **Climate change and mental health:** An annual statewide health survey of 11th graders asked about climate-related distress for the first time in 2024. Results became available in 2025: 71% reported experiencing stress about the future due to climate change, and 37% said these feelings negatively affected their lives.
- **Water Insecurity:** About half the state experienced moderate to severe drought from July through September. Oregon Health Authority (OHA) investigated 51 suspected harmful algae bloom events, issued 20 freshwater recreational use health advisories, and detected record-high microcystin and saxitoxin levels that exceeded recreational use values by orders of magnitude.
- **Vector-borne Disease:** For the second year in a row, routine mosquito surveillance identified Aedes aegypti in Jackson County, a mosquito species predominantly found in tropical and subtropical areas and the primary vector for diseases like dengue and Zika.

Trends in climate hazards and related health outcomes

Because climate impacts unfold over many years, multiyear trends in climate hazards and related health outcomes show how the burden of these hazards is changing across Oregon over time. This report presents information about climate hazards over the past 20 years (2006–2025) and related health outcomes over the past 10 years (2016–2025). Nearly all have increased:

- **Heat hazards:** Trends in extreme heat events (multiple days of high temperatures) and heat index (how hot it feels) from 2006 to 2025 show consistent increases in heat burden across the state. Rural parts of the state experienced higher cumulative heat impacts over this 20-year period (i.e., total number of days of extreme heat events). Over the same period, urban counties in western Oregon had a more rapid increase in average daytime maximum heat index.

Extreme heat events in Oregon (5-Year averages):

2006–2010: 12 Days

2021–2025: 22 Days

- **Heat-related illness:** Extreme events, rather than gradual changes in temperature alone, drove generally increasing rates of emergency department and urgent care visits for heat-related illness from 2016 to 2025. Heat-related illnesses were highest in 2021 due to the 2021 heat dome. Southern, Central, and Eastern Oregon experienced some of the highest annual heat-related illness visit rates from 2016 to 2025. Across all population subgroups, heat-related illness rates were highest among adults 65 years and older, males, and people identifying as American Indian or Alaska Native and Native Hawaiian or Pacific Islander.
- **Wildfire smoke hazards:** The annual number of statewide wildfire smoke days increased substantially over the past two decades. Rural Southern and Central Oregon experienced the highest total number of days with smoke. Multnomah and Washington experienced the most rapid annual increase in concentrations of smoke-related particles in the air.

Wildfire smoke days in Oregon
(5-Year averages):
2006–2010: 11 Days
2021–2025: 33 Days

- **Non-infectious respiratory illness (NIRI):** More than 5,100 NIRI visits were estimated to be attributable to seasonal smoke particles 2.5 microns in size, known as "$PM_{2.5}$" from 2016 to 2025. The highest number of annual smoke-related NIRI visits occurred in 2017, 2020, and 2022.
- **Compound wildfire smoke and extreme heat:** Days of co-occurring wildfire smoke and extreme heat event days are becoming more frequent in Oregon, which may have greater effects on health than when these hazards occur separately. These events consistently peaked in August and September, suggesting that health messaging, particularly in the run-up to August and September, should emphasize that wildfire smoke related health risks are influenced by levels of heat exposure.
- **Drought:** Over the last 20 years, Oregon experienced multiple drought periods, including widespread drought in 2015 and 2021. Southwestern, Central and Eastern Oregon experienced more severe, widespread and consistent drought conditions during 2015 and 2020–2023 compared to areas in western Oregon. In 2021, approximately 50% of the state experienced extreme or exceptional drought, which coincided with the heat dome that occurred in June and July of that year. Drought's impact on health is complex and difficult to measure, but it can decrease water quantity and quality, negatively impact air quality, and increase the risk of wildfire and extreme heat. Drought can also cause mental health strain in rural communities whose agricultural livelihoods and domestic well water drinking supplies are put at risk.

Public health system action on climate and health

The Governor and Oregon Legislature continued investment in climate resilience through Oregon's public health system, growing a robust infrastructure to help Oregonians adapt to climate change hazards. New and continuing actions in 2025 include:

Public health modernization seeding climate resilience across public health system partners. The state's investments to modernize Oregon's public health system are helping OHA, the Nine Federally Recognized Tribes in Oregon, local public health authorities (LPHAs) and community-based organizations (CBOs) implement policies and programs that strengthen capacity to prepare for and respond to more frequent wildfires, heat waves and other extreme weather events, with a focus on the communities most vulnerable to these hazards.

Tracking collective climate and health progress. Understanding who is impacted by climate hazards is essential for prioritizing limited resources for interventions where they are most needed. Oregon's Public Health Advisory Board (PHAB) Public Health Accountability Metrics set expectations that LPHAs identify how much, where and who in their communities are impacted by climate hazards like extreme heat and wildfire smoke. LPHAs must develop strategies and partnerships to reduce risks, while OHA supports their technical needs and accountability for results.

Medicaid home changes for health supports for people in transition. People experiencing major life transitions such as being at risk of houselessness or transitioning out of foster care or incarceration are often at increased risk from climate change-driven hazards as they may have fewer resources to access heat- and smoke-resilient housing. In 2024, the Oregon Health Plan (OHP) began distributing devices to protect people from climate events, and as of December 2025, procured and delivered thousands of air conditioners, air filtration devices, air filter replacements, heaters, and portable power supply devices to eligible patients.

OHA's Healthy Homes Grant Program funds organizations that help low-income households impacted by environmental justice factors extend the usable life and maximize energy efficiency of residences, and improve residents' health and safety. OHA has awarded $24.6 million of state funding through competitive grants to 34 organizations, and $3.3 million of state funds in non-competitive grants to the Nine Federally Recognized Tribes in Oregon, as well as $1.8 million in federal funds to reduce greenhouse gas (GHG) emissions while weatherizing homes. From late 2024 through 2025, OHA's grantees served 481 households across 25 counties.

Notable climate and health collaborations with state and federal partners

State and local public health agencies do not control the policies governing air, water, land, or natural resources. Advancing climate resilience requires a "health in all policies" approach—one that embeds health considerations into the decisions of agencies responsible for environmental protection and natural resource management. In 2025, OHA continued to collaborate with state and federal agency partners on climate adaptation and mitigation programs and policies. Notable initiatives include:

Oregon Environmental Justice Mapping Tool is under development by the Oregon Environmental Justice Council (EJC), with technical, administrative and outreach support provided by OHA and the Department of Environmental Quality (DEQ). The tool will provide environmental, health outcome and geographic information about communities disproportionately affected by environmental stressors to inform state policies, programs, and investment decisions.

Plan for a Resilient Oregon. The Office of the Governor is leading the development of the Plan for a Resilient Oregon (PRO), a statewide resilience strategy to support communities in Oregon to prepare for and recover from severe disasters. The PRO team began convening a monthly Statewide Resilience Forum (SRF) in late 2025 to gather input from regional focus groups, agency partners, and other subject matter experts. OHA participates as a member of the SRF, providing feedback on the draft strategies and tactics. The PRO will be published in September of 2026.

Governor's Executive Order 25–26. Governor Tina Kotek signed Executive Order 25-26 (EO 25-26) in October 2025, directing state agencies to promote the climate resilience of natural and working lands and waters. OHA is named in the executive order, and in 2026 will engage with an interagency group developing workplans to implement EO 25-26. OHA's actions will fall within the "fostering community and wildfire resilience" directive, focused on public health system climate and health work, supporting expanded use of prescribed fire while protecting public health, protecting drinking water systems, and expanding water reuse.

DEQ's Carbon Pollution Reduction Grant. Actions and investments to reduce GHGs can simultaneously benefit human health. DEQ and the Oregon Department of Energy (ODOE) lead Oregon's GHG reduction efforts, including investing a $197 million Climate Pollution Reduction Grant (CPRG) awarded by the Environmental Protection Agency (EPA) in 2024. OHA is supporting DEQ's final report for the grant by synthesizing information from 22 submitted LPHA Climate and Health Adaptation Plans. These county-level or regional plans document local climate priorities and opportunities to achieve both GHG reduction and health co-benefits.

Smoke management and prescribed fire. The Oregon Department of Forestry (ODF) and DEQ implement the Oregon Smoke Management Program in consultation with OHA. OHA advises the agencies on policies and practices to reduce smoke impacts to vulnerable populations from prescribed fire. These forest treatments do generate smoke, but are planned, allowing commumities to prepare, and over time can reduce wildfire risks and smoke. An ODF-initiated review of the state's Smoke Management Rules, with DEQ and OHA engagement, is expected to conclude with adoption of a new rule package by early 2027. The three agencies are working collaboratively to identify opportunities to update the rules to promote increased pace and scale of prescribed fire in Oregon while protecting public health.

Oregon Climate Action Commission (OCAC) tracks trends in GHG emissions, makes recommendations to the Oregon Legislature about actions that will improve state and local efforts to reduce emissions, and works to prepare communities for the effects of climate change. Since 2024, OHA's director has served as a named ex-officio (non-voting) OCAC commissioner. OHA participates regularly to inform OCAC deliberations and reports with climate and health information, including OCAC's biennial report to the Oregon Legislature.

Read the full *Climate and Health in Oregon* 2025 Report.

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Phone: 971-673-0977
climate.health@odhsoha.oregon.gov

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