

Latest climate assessment says Oregon is getting warmer

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The [Sixth Oregon Climate Assessment](#)—a legislatively mandated biennial assessment of the state of Oregon-related climate change science and the likely effects of climate change on the state's natural and

human systems—was released in January by the Oregon Climate Change Research Institute, housed at Oregon State University. More than 60 collaborators from around the state contributed to the report, including Portland State researchers Paul Loikith, Andrés Holz and Andrew Fountain.

Temperatures are warming across all four seasons, said Loikith, an associate professor of geography and director of PSU's Climate Science Lab. Extreme heat is getting hotter and more frequent, and [extreme cold](#) is getting less frequent and less severe. Oregon saw more days per year topping 90 degrees and more nights per year warmer than 65 degrees between 2011 and 2020 than between 1951 and 2010, according to the report, the first since the June 2021 heat dome event.

"Warmer temperatures really drive so many of the impacts that we see," Loikith said.

It's the [warmer temperatures](#)—not an increase in wind—that is drying out fuels faster and increasing the likelihood of more extreme fire weather.

"The increasing temperatures are creating an atmosphere that can hold more moisture and by doing that it's pulling moisture from plants, from fuels and from soils," said Holz, an associate professor of geography and director of PSU's Global Environmental Change Lab. "The aridity of the atmosphere and fuels is chronically increasing, so it's drier and drier. That's the key driver of wildfires, especially where fuels are abundant, such as in our westside forests."

The average annual area burned in Oregon's forests is expected to increase by at least 50% and fire seasons are expected to become more extreme than any in recorded history, according to the studies reviewed by the report. The risk to human life and property is considerable,

particularly in western Oregon where communities have little historical experience with major wildfires. Holz said the 2020 Labor Day fires were unique not because of their size or severity but because it was the first time so many people lived close to, and thus were affected by the burning forests.

Warming temperatures are also impacting [glaciers](#) and snowpack, a key source of water for the state that is vanishing. Fountain, professor emeritus of geology and geography, said total precipitation has more or less remained the same for the last century but more precipitation is falling as rain than snow.

"Less snowfall doesn't nourish the glaciers as much and with increasing temperatures in the summer, there's more ice melt," he said.

It's no surprise then that glacier retreat has accelerated, with 20 of Oregon's glaciers disappearing since the mid-late 1900s and no glaciers remaining in the Wallowa Mountains. Fountain said snowpack accumulation is the West's greatest reservoir, storing moisture that ideally melts slowly into reservoirs, supplying residents and farmers with water during the drier months. But now that the state is getting less snow and more rain, the snowpack is melting earlier in the spring, meaning less water is available when the state needs it most.

The assessment indicates there are opportunities and support for policies to advance [climate change mitigation](#) and adaptation in Oregon, but Holz and Fountain warned that [climate change](#) doesn't stop at state or national borders; it's going to require quicker collection action.

"Oregon can do its part in terms of reducing [greenhouse gasses](#) but the atmosphere is relatively well-mixed," Fountain said. "We depend on what's going on in Washington and Idaho and Japan. ... Things are happening, but will they be in time?"

More information: Sixth Oregon Climate Assessment:
[blogs.oregonstate.edu/occri/or ... climate-assessments/](https://blogs.oregonstate.edu/occri/or...climate-assessments/)

Provided by Portland State University

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