



Portland: 15 days above WHO guidelines

for fine particulate matter

200 µg/m3 fine particulate matter (PM2.5), daily average

On Sept. 13, Portland saw PM2.5 levels 10 times higher than the limit recommended by the World Health Organization

80

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30-day rolling average

Ryan Brennecke/The Bulletin file

Traffic and pedestrians travel through the haze at the intersection of Third Street and Greenwood Avenue in Bend on Sept. 11.

problem. Wildfires

and agricultural

fires significantly

contributed to air

Air quality

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While no fine-particle pollution is considered to be safe, the World Health Organization's about target is 10 parts per cubic meter or less. In 2020, the U.S. average was 9.6, and 38% of U.S. cities exceeded the target level compared to 21% in 2019.

The country's worst annual average was in Yosemite Lakes, California, 37.8

micrograms per cubic meter. The highest U.S. reading was 4,709.3 during heavy smoke in Weed, California, on Sept. 13.

In September, 24 of the world's top 25 most polluted cities were in California and Oregon, the report said. Leading the list was Happy Camp, California, with a monthly average of 154.4 micrograms per

cubic meter. The city with the lowest fine pollution levels recorded was Waimea, Hawaii, with 2.2.

Worldwide, fine-particle pollution dropped in 84% of countries and 65% of cities included in the analysis. The company measured air quality at groundbased monitoring stations in 106 countries. About half of all European cities still missed the WHO target.

The country with the worst air quality was Bangladesh, with an annual average of 77.1 micrograms per cubic meter. All but one of the world's 50 most polluted cities are in Bangladesh, China, India and Pakistan.

Fire was not just a U.S. problem. Wildfires and agricultural fires significantly contributed to air pollution in Australia, Siberia, South America, Indonesia and Africa.

During a fire, the concentration of tiny pollution particles soars and increases the risk of acute respiratory problems such as asthma attacks.

"You might get up to a thousand (parts per million) in some of these places that are just downwind of a really bad fire in California," said Jeffrey Pierce, an associate professor at Col-

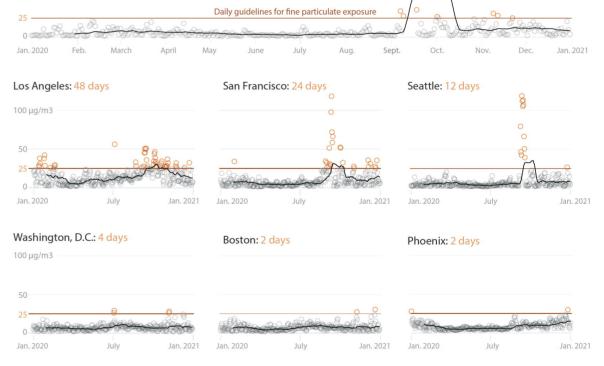
orado State University Fire was not just a U.S. who studies the health effects of wildfire smoke. "But generally those only last for a few days or few weeks at most. What we don't know is, if you get hit by really high concentrations, is pollution in Australia, it the same as if you just took that and averaged Siberia, South America, it over a long period of Indonesia and Africa. time?"

For example, per-

haps one large fire raises the annual average in an area from 10 to 20 micrograms per cubic meter. Epidemiologists are trying to figure out whether that is more — or less harmful to a person's long-term health than year-round exposure to 20.

The working hypothesis is that they are the same, Pierce said.

Now that wildfires are becoming larger and more common while fossil-fuel emissions have trended downward in the United States for decades, a better question may be which type of pollution is more toxic. Unfortunately, new research from the Scripps Institution of Oceanography suggests that wildfire smoke may be significantly worse.



Change in pollution levels from 2019 to 2020

