

Wildfire Smoke Health Risks

Wildfires will get worse with climate change, not only endangering those near the blazes, but also threatening the health of millions of Americans from wildfire smoke that can drift hundreds of miles, according to a new report by the Natural Resources Defense Council.

As a result, communities must protect themselves from the health risks arising from exposure to wildfire smoke-including asthma attacks, pneumonia, and more serious chronic lung diseases. And the report, titled "Where There's Fire, There's Smoke," suggests the country take action to curb the threat of climate change.

"There's trouble in the wind: What blazes in Texas rarely stays in Texas. Wildfire smoke can pose serious health risks to people hundreds of miles away from the sources of fires," said Kim Knowlton, a senior scientist in NRDC's Health and Environment Program, who directed the analysis. "Wildfire smoke already clouds the skies of millions of Americans and because climate change will fuel more wildfires, that danger will rise.

"Communities need safeguards against this smoky peril, and our country needs standards to curb the unlimited carbon pollution from power plants that's driving climate change."

The study, based on smoke data from the 2011 wildfire season, one of the worst in recent decades, found that the area affected by smoke is 50 times greater than the area burned by fire. About two-thirds of Americans-nearly 212 million people-lived in counties affected by smoke conditions in 2011. Many states had large wildfires that year, but the study found that among the top 20 most affected states, six with no major fires nonetheless had to cope with more than a week of medium- to high-density smoke conditions during the year.

The states with the greatest numbers of residents affected by wildfire smoke conditions for a week or longer in 2011, according to the report, were Texas, Illinois, Florida, Missouri, Georgia, Louisiana, Michigan, Alabama, Oklahoma and Iowa.

The report found that in 2011:

- * Texas ranked 1st nationally because more than 25 million people lived in areas with wildfire smoke conditions for one week or more.
- * Illinois ranked 2nd with 11.9 million residents in affected areas.
- * Florida ranked 3rd with 11.2 million residents in affected areas.
- * Missouri ranked 4th with 5.9 million residents in affected areas.
- * Georgia ranked 5th, with 5.7 million residents in affected areas.
- * Louisiana ranked 6th, with 4.5 million residents in affected areas.
- * Michigan ranked 7th, with 3.93 million residents in affected areas.
- * Alabama ranked 8th, with 3.92 million residents in affected areas.
- * Oklahoma ranked 9th, with 3.7 million residents in affected areas.
- * Iowa ranked 10th, with 3 million residents in affected areas.

Other states where large numbers of people lived in areas with smoky conditions include, ranked in order, are Arkansas, Mississippi, Kansas, Tennessee, Colorado, New Mexico, Nebraska, Indiana, South Carolina and Minnesota. Altogether, more than one-third of the states experienced medium-to-high density smoke conditions for a week or longer, the report shows.

"The clear takeaway is that wildfires, smoke and the conditions that increase fire risk are national health concerns that spread well beyond the borders of local fire perimeters, conditions that are only projected to worsen with climate change," the report says. NRDC used smoke data from federal weather satellites and also looked at the locations of Environmental Protection Agency ground-based air quality monitoring stations.

Climate change is fueling droughts that are projected to intensify in the future in across much of the United States as a result of less rainfall and more evaporation, turning wild-land vegetation tinder-dry. It also is projected to fuel more frequent, longer lasting extreme heat and lengthen warm-weather seasons, reducing moisture and setting the stage for fire risks, the report says.

NRDC's report was released today during a national telephone press conference led by Knowlton and Dr. Patrick L. Kinney, professor, Environmental Health Sciences, Mailman School of Public Health, Columbia University, and director, Columbia Climate and Health Program.

The report shows steps some states are taking to protect their communities and suggests actions individuals can take if they know they are in a high-smoke period.

"Families can lessen the health risks from smoke by staying indoors or limiting outside physical activity," Knowlton said. "You can keep smoke levels low inside the house by closing the windows and running the air conditioner on 'recirculate.'

"We also need better monitoring and early-warning systems for growing health threats, so people will know when the air is unhealthy for vulnerable groups. That's part of making climate change preparedness a national priority. With fire, smoke and other air pollution threats increasingly affected by climate change, all states should be putting health protections in their climate adaptation plans.

"Finally, we must engage in prevention," said Knowlton. "Climate change threatens the health of every American. We have an obligation to them and future generations we cannot shy from. The president has outlined a plan that rightly takes aim at the heart of the problem, and it deserves our support."

Read "Where There's Fire, There's Smoke" issue brief here:
nrdc.org/health/impacts-of-wildfire-smoke/

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