

Climate and Health Outlook

ISSUED FEBRUARY 2023

The Climate and Health Outlook is an effort to inform health professionals and the public on how our health may be affected in the coming month(s) by climate events and to provide resources for proactive action. An [associated webpage](#) includes additional resources and information.

In the [coming months](#), the Southeast, most of the southern Great Plains, and parts of the Southwest will experience temperatures 0.9–3.6 °F (0.5–2 °C) warmer than normal. The Northeast and parts of the Midwest will experience temperatures 0.45–1.8 °F (0.25–1 °C) warmer than normal. Warming winters can cause earlier and longer allergy seasons and contribute to earlier onset of vector-borne diseases such as Lyme disease.



Northern Great Plains: Drought is favored to persist in Nebraska and parts of Montana, North Dakota, South Dakota, and Wyoming.



Northwest: Drought is favored to persist in parts of southern Idaho and eastern Oregon. Drought improvement and removal is favored in western Oregon.



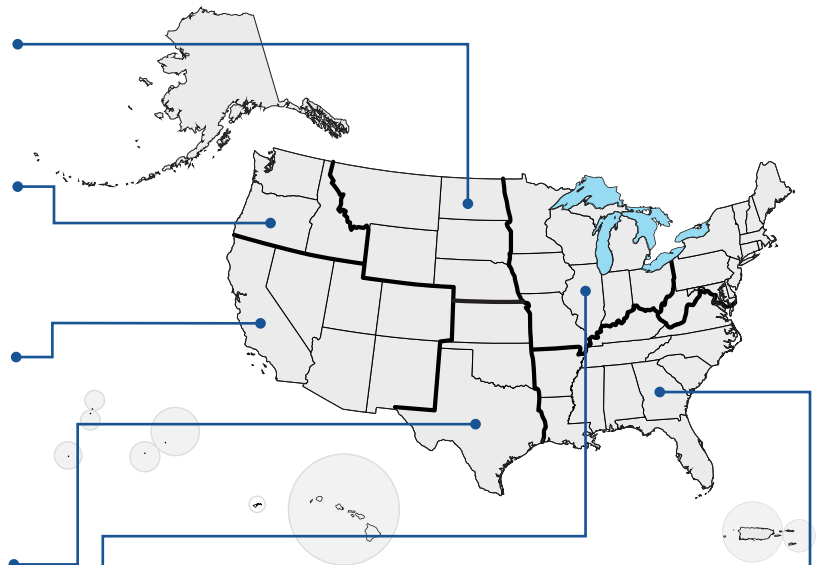
Southwest: Drought is favored to persist in much of California, Nevada, and Utah as well as parts of Arizona, Colorado, and New Mexico. Drought improvement and removal is favored in north-western California.



Southern Great Plains: Drought is favored to persist or develop in parts of Texas, except for a small pocket in eastern Texas, where removal is favored. Drought is favored to persist in parts of Kansas and Oklahoma; however, drought improvement and removal is favored in the eastern parts of these states. Above normal wildland fire* potential is forecast for portions of southern and western Texas. Below normal wildland fire potential is forecast for portions of eastern Oklahoma.



Midwest: Drought is favored to persist in parts of Iowa and Minnesota as well as small portions of Missouri and Wisconsin. Drought improvement and removal is favored in parts of Michigan as well as small portions of Illinois, Indiana, Missouri, and Ohio.



Southeast: Drought is favored to persist or develop in parts of Florida. Drought is favored to persist along the eastern shores of Georgia, North Carolina, South Carolina, and Virginia as well as a small portion of Louisiana. Drought removal is favored in small portions of Arkansas and Alabama. Above normal wildland fire potential is forecast for northeast Florida and the Georgia coast.



Drought



Wildfire

*Smoke from wildfires can impact health hundreds of miles from the site of the fire.

Developed with data from the National Oceanic and Atmospheric Administration and the National Interagency Fire Center.

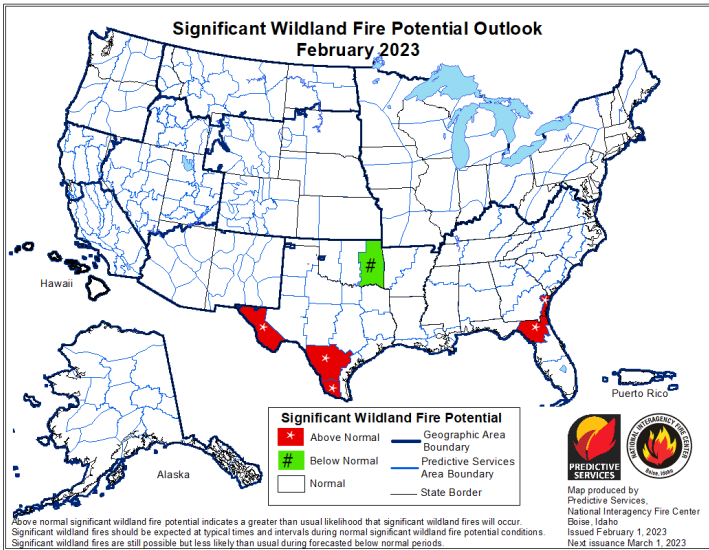


Figure. [The National Significant Wildland Fire Potential Outlook](#) identifies areas with above, below, and near normal significant fire potential using the most recent weather, climate, and fuels data available. This outlook is designed to inform decision makers on proactive wildland fire management.

Significant fire activity was minimal across the US during January; however, isolated large fires were reported in central Oklahoma and central Florida. In February, above normal significant fire potential is forecast across the west Texas mountains. Above normal potential is also forecast in northeast Florida and the Georgia coast. However, below normal potential is forecast in eastern Oklahoma in February before returning to normal in March. Eastern Oklahoma typically sees a rapid increase in the probability of large fires in late winter and early spring, but because of the wintry weather early in the month and anticipated precipitation, below normal significant fire potential is forecast for February.

Who is at high risk in the counties with above normal wildland fire potential in February?

Wildland fires are occurring more frequently in the United States and present a health hazard for populations living close to a fire. As indicated in the map to the left, **69 counties** across **3 states** are projected to have above-normal wildfire potential in February. In these counties, the total population at risk is **9,166,336 people**. Of these counties:

- 12 (17%)** have a high number* of people aged 65 or over, living alone.
- 52 (75%)** have a high number of people without health insurance.
- 38 (55%)** have a high number of uninsured children.
- 27 (39%)** have a high number of people with frequent mental distress.
- 1 (2%)** have a high number of adults with asthma.
- 19 (28%)** have a high number of adults with coronary heart disease.
- 36 (52%)** have a high number of people living in poverty.
- 19 (28%)** have a high number of people with electricity-dependent medical equipment and enrolled in the HHS emPOWER program.
- 36 (52%)** have a high number of people in mobile homes.
- 22 (32%)** have a high number of people with one or more disabilities.
- 43 (62%)** are identified as highly vulnerable by CDC’s Social Vulnerability Index.

*“A high number” indicates that these counties are in the top quartile for this indicator compared to other counties.

2022 National Fire Activity Synopsis

Nationally, **68,988 wildfires were reported in 2022**, compared to 58,985 wildfires reported in 2021. Reported wildfires consumed **7,577,183 acres nationally**, compared to 7,125,643 acres in 2021. In 2022, the reported number of wildfires nationwide was noticeably higher than the 10-year average, while acres burned nationwide varied little from the 10-year average. However, there was considerable variation among the geographic areas. Alaska and the Southern Areas (AL, AZ, AR, FL, GA, KY, LA, MS, NM, NC, OK, SC, TN, TX, and VA) saw an increase in the number of fires when compared to their average fire statistics, and burned significantly more acreage. The Alaska Area burned greater than 170% of its average acres. The Southwest Area (AZ and NM) was 25% below its average number of fires, while burning greater than 90% more acres than average. The Southern California and Northwest Areas (OR and WA) were near their 10-year average for numbers of fires. However, in 2022, California accounted for the **highest number of structures lost to wildfire in one state**, including 492 residences. The other Areas in the country were noticeably lower than their 10-year averages for fire occurrences. For more information, see the [NIFC Wildland Fire Summary and Statistics Annual Report 2022](#).

U.S. Monthly Drought Outlook Drought Tendency During the Valid Period

Valid for February 2023
Released January 31, 2023

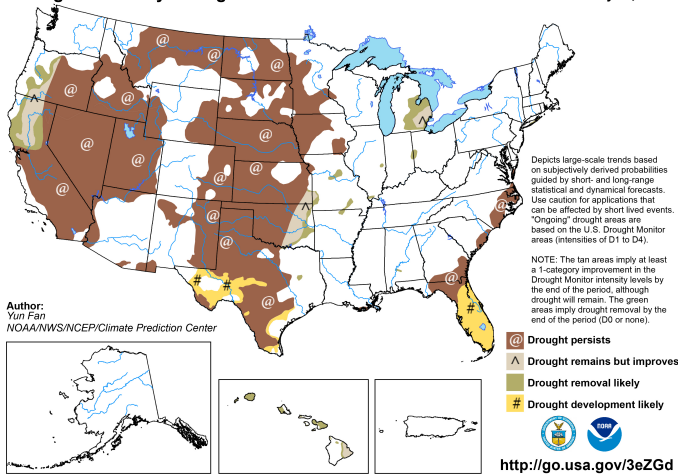


Figure. The National Weather Service Climate Prediction Center's Monthly Drought Outlook is issued at the end of each calendar month and is valid for the upcoming month. The outlook predicts whether drought will persist, develop, improve, or be removed over the next 30 days or so. For more information, please refer to drought.gov.

For February, drought is expected to improve over northern California and west-central Oregon, and to persist over the rest of the West, northern Rockies, and Great Plains, with potential drought development over parts of southern and western Texas. Existing drought is expected to improve in parts of eastern Texas to northern South Carolina, Oklahoma, and Arkansas. Drought improvement is favored across much of the Mississippi, Tennessee, and Ohio Valleys. Existing drought conditions across the Southeast are expected to persist with drought development likely throughout the Florida Peninsula by the end of the month. In Hawai'i, drought improvement or removal is anticipated across the Islands.

Drought can have direct and indirect impacts on health—increasing incidence of illness among people living in the affected area and worsening mental health outcomes as livelihoods are challenged.

Who is at high risk in the counties projected to have drought in February?

As indicated in the map to the left, **1,083 counties** across **26 states** are projected to have persistent/remaining drought or drought development in February. In these counties, the total population at risk is **109,253,219 people** and, of those, **1,325,890 people** work in agriculture. Of these counties:

- 360 (33%)** have a high number* of people aged 65 or over, living alone.
- 364 (34%)** have a high number of people living in rural areas.
- 210 (19%)** have a high number of people living in poverty.
- 129 (12%)** have a high number of people with frequent mental distress.
- 78 (7%)** have a high number of adults with asthma.
- 401 (37%)** have a high number of people without health insurance.
- 513 (47%)** have a high number of uninsured children.
- 137 (13%)** have a high number of Black or African American persons.
- 227 (21%)** have a high number of people with severe housing cost burden.
- 210 (19%)** have a high number of people in mobile homes.
- 176 (16%)** have a high number of people with one or more disabilities.
- 255 (24%)** are identified as highly vulnerable by CDC's Social Vulnerability Index.

*"A high number" indicates that these counties are in the top quartile for this indicator compared to other counties.

Drought Affects Health in Many Ways

Drought increases the risk for a diverse range of health outcomes. For example:



Low crop yields can result in rising food prices and shortages, potentially leading to **malnutrition**.



Dry soil can increase the number of particulates such as **dust and pollen** that are suspended in the air, which can irritate the bronchial passages and lungs.



Dust storms can spread the fungus that causes coccidioidomycosis (**Valley Fever**).



If there isn't enough water to flow, waterways may become stagnant breeding grounds for **disease vectors** such as mosquitos as well as viruses and bacteria.



Drought's complex economic consequences can increase **mood disorders, domestic violence, and suicide**.



Long-term droughts can cause **poor-quality drinking water** and leave inadequate water for hygiene and sanitation.

THANK YOU to the partners who provide invaluable information, expertise, and data for the Climate and Health Outlook series:



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