

Higher-than-normal fire expected in West

By David Stauth,

CORVALLIS, Ore. – For much of the American West, it's hot, dry and it's going to be a bad fire year.

Researchers have just completed an updated national drought and fire forecast for the next six months, suggesting severe drought in much of California and parts of the Pacific Northwest, along with forest and rangeland fires that correspond somewhat – but not exactly – to the drought conditions.

By far the worst drought conditions, referred to as “extremely dry,” are found in California, western Oregon and Washington, and pockets of North Carolina and northern Wisconsin. Meanwhile, much of the Midwest and Northeast is getting soaked with rain.

Major fires, however, are not anticipated in every place that is dry, while some areas with normal moisture are at high risk of having tens of thousands of acres go up in flames – especially northwest Texas and eastern New Mexico. And along with its ongoing drought, huge fires are indeed projected for much of northern California and the Sierra Nevada range.

Almost all of Texas, the Southwest, California and the Pacific Northwest are expected to have higher-than-normal levels of fire, compared to a base period of 1971-2000. Nationally, the acreage that is expected to burn is about average, but there's an unusual concentration of the activity in the West.

According to Ron Neilson, a professor of botany at Oregon State University and bioclimatologist with the Pacific Northwest Research Station of the USDA Forest Service, a major variable is an ignition source.

“It's usually lightning storms that trigger multiple fires,” Neilson said. “Our computer models are pretty accurate at determining the vegetation, moisture and climatic conditions that set the stage for fire, but can't always predict whether or not something will actually light them.”

Part of what's interesting about this year, Neilson said, is that it appears an El Niño is beginning and there may even be tentative shifts in the Pacific Decadal Oscillation, both of which are large climatic forces that can affect weather on broad regional or global scales.

“Lately we've had unusually turbulent weather in the U.S. for the summer months,” Neilson said. “The Midwest is getting heavier-than-normal rain and we've had some very unusual and powerful storms in the West as well. Everywhere I go people keep saying the weather is just really, really weird.”

The concern, Neilson said, is that an evolving El Niño reinforced by a changing Pacific Decadal Oscillation could be exactly the type of conditions that may set the stage for the broad, turbulent storms that can produce a lot of lightning to start fires.

Among the findings of the latest forecast:

- Severe or extremely dry conditions are now found in almost all of central California and the Sierra Nevada mountain range, much of western Oregon and Washington, and parts of coastal and central North Carolina, central Florida and northern Wisconsin.
- Extreme drought conditions exist north of Los Angeles; in all three directions from San Francisco; in pockets of southwest, west central and northwestern Oregon; and western Washington including the Olympic Peninsula.
- Much of the Midwest is far wetter than usual, along with the Northeast and parts of northern Minnesota and North Dakota.

- Very large amounts of fire are projected for northern California and small parts of southwest Oregon; coastal areas north of Los Angeles; large portions of the Sierra Nevada in California; and a huge area of northwestern Texas and eastern New Mexico.
- Significant amounts of fire that are considered “above normal” are predicted for most of Texas and the Southwest; many parts of Oregon and eastern Washington; and northern Montana.
- Drought doesn’t always mean fire. In the Pacific Northwest, some of the very driest areas, such as the northwestern corner of Oregon and most of western Washington, are not projected to have unusually high levels of fire.
- Almost no areas east of Texas and the Rocky Mountains are expected to have higher-than-normal amounts of fire, except for some small pockets in central Florida, northern Georgia and northwestern Nebraska.
- A total of 3.66 million acres of the U.S. is expected to burn.

These projections, which reflect observed weather conditions through June of 2009, were made with the Mapped Atmosphere-Plant-Soil System developed by researchers from the USDA Forest Service and OSU. The systems have simulated drought and fire back in time to 1895, are constantly updated, and incorporate data from different global climate models, as well as vegetation growth, fuel loads, soil moisture, climatic trends and other factors. Data and findings from the system have been used extensively by the Intergovernmental Panel on Climate Change.

The projections are prepared by Neilson and James Lenihan, also a fire and ecosystem modeler with the Forest Service, and incorporate work from the OSU Spatial Climate Analysis Service. More information can be found on the web at <http://www.fs.fed.us/pnw/mdr/mapss/index.shtml>

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Editor’s Note: Digital maps showing drought conditions and projected fire across the nation are available at these URLs:

Above normal area burned:

<http://www.flickr.com/photos/oregonstateuniversity/3752437783/>

Acres burned in 2009:

<http://www.flickr.com/photos/oregonstateuniversity/3752441739/>

Drought severity:

<http://www.flickr.com/photos/oregonstateuniversity/3753240774/>