

U.S. Southwest may face mega-drought this century

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With ongoing climate change, the long view of future drought risk in the U.S. Southwest is not a pretty picture, say scientists.



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Due to global warming, scientists say, the chances of the southwestern United States experiencing a decade-long drought is at least 50 percent, and the chances of a “mega-drought” – one that lasts over 30 years – ranges from 20 to 50 percent over the next century. That’s according to a study by a team of researchers from Cornell University, University of Arizona and U.S. Geological Survey researchers.

Cornell’s Toby Ault is lead author of the study. Ault said:

For the southwestern U.S., I’m not optimistic about avoiding real mega-droughts. As we add greenhouse gases into the atmosphere – and we haven’t put the brakes on stopping this – we are weighting the dice for mega-drought conditions.

As of mid-August 2014, most of California sits in a D4 “exceptional drought,” which is in the most severe category. Oregon, Arizona, New Mexico, Oklahoma and Texas also loiter between moderate and exceptional drought. Ault says climatologists don’t know whether the severe western and southwestern drought will continue, but he said:

With ongoing climate change, this is a glimpse of things to come. It’s a preview of our future.

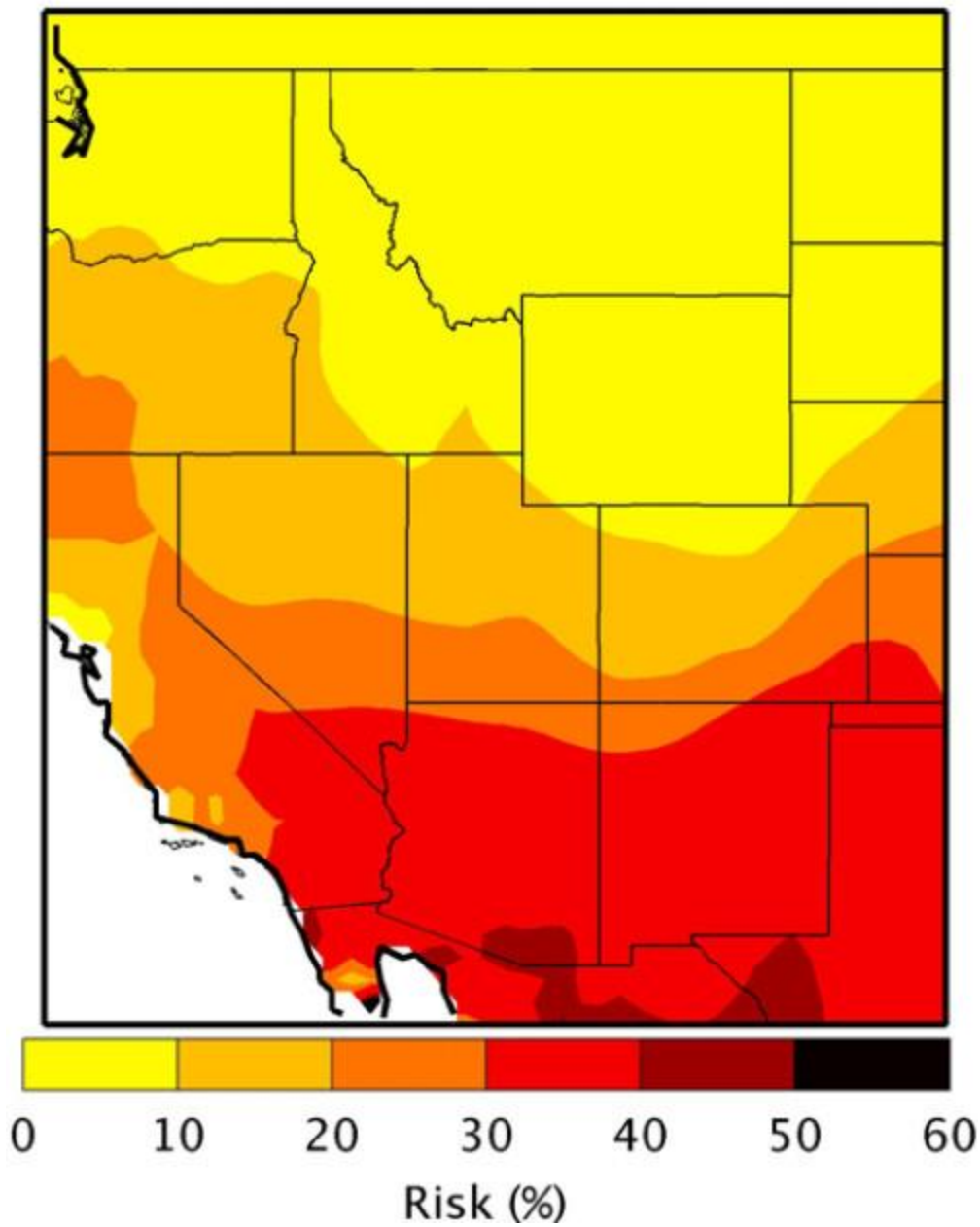
In computer models, while California, Arizona and New Mexico will likely face drought, the researchers show the chances for drought in parts of Washington, Montana and Idaho may decrease.

Beyond the United States, southern Africa, Australia and the Amazon basin are also vulnerable to the possibility of a mega-drought. With increases in temperatures, drought severity will likely worsen, “implying that our results should be viewed as conservative,” the study reports.

Julia Cole is a professor of geosciences and of atmospheric sciences at University of Arizona. She said:

These results help us take the long view of future drought risk in the Southwest – and the picture is not pretty. We hope this opens up new discussions about how to best use and conserve the precious water that we have.

Megadrought Risk



Risk of megadrought in southwestern U.S. Image credit: Toby Ault, Cornell University

Bottom line: With ongoing climate change, the long view of future drought risk in the U.S. Southwest is not a pretty picture, say scientists.