

Causes of Calif. drought are natural, not man-made, study says

Doyle Rice, USA Today, 12-8-14

Natural weather patterns and climate variability, not man-made global warming, are causing the historic drought that's parching California, says a study out today from federal scientists.

"It's important to note that California's drought, while extreme, is not an uncommon occurrence for the state," said Richard Seager, report lead author and professor with Columbia University's Lamont Doherty Earth Observatory. The report, "Causes and Predictability of the 2011-14 California Drought," was sponsored by the National Oceanic and Atmospheric Administration (NOAA).

The report did not appear in a peer-reviewed journal, but was reviewed by other NOAA scientists.

"In fact, multi-year droughts appear regularly in the state's climate record, and it's a safe bet that a similar event will happen again," he said.

The persistent weather pattern over the past several years has featured a warm, dry ridge of high pressure over the eastern North Pacific Ocean and western North America. Such high-pressure ridges prevent clouds from forming and precipitation from falling.

The current study notes that this ridge — which has resulted in decreased rain and snowfall since 2011 — is almost opposite to what computer models predict will result from human-induced climate change.

The NOAA report shows that mid-winter precipitation is actually projected to increase due to human-induced climate change over most of the state. Seager said that a low-pressure system, not a high-pressure system, would likely form off the California coast because of climate change.

Low pressure creates clouds and precipitation.

Some outside climate scientists criticized the report, saying it didn't take into effect how record warmth worsened the drought.

"The authors of the new report would really have us believe that is merely a coincidence and has nothing to do with the impact of human-caused climate change?," Penn State meteorologist Michael Mann wrote in the *Huffington Post* Monday. "Frankly, I don't find that even remotely plausible."

Mann cites the fact that the NOAA report focuses primarily on the lack of precipitation, not the unusually high temperatures that have been measured in the oceans as well as across the state of California.

So far this year, California is having its warmest year in 120 years of weather records, the National Climatic Data Center reported Monday.

Peer-reviewed studies are divided on whether the drought can be blamed on climate change.