Rain will come to California - eventually

Local forecaster explains extreme drought, future possibilities

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Is California drying up for good?

Despite the gravity of the current drought, the answer is no, says Scott Borgioli, chief meteorologist for the agriculture-driven Visalia-based weather forecasting service WeatherAg.

Borgioli, Meteorologist Scott Yarbrough and Forecaster Roger Rather, published a report titled “Why all the Extreme Weather in California?” in late January to provide answers to the agriculture community. Farmers call him regularly inquiring how, and in some cases if, they should continue to farm in the area.

For now, Borgioli’s telling them to sit tight. Rain, he said, will come.

California’s best hope for relief from the drought lies in the surface temperatures of the Pacific Ocean around the Equator. Meteorologists now agree an El Niño — a phenomenon wherein ocean temperatures remain higher than average for several months in a row — is on tap for late this summer.

A weak El Niño will likely result in below average rainfall and a strong El Niño will likely result in above average rainfall. Data will be collected throughout the summer and we’ll have a good idea about the strength of the El Niño by the late summer, Borgioli said.

While impossible to predict exactly, the effects of a strong El Niño would likely arrive in the winter.

Beyond this year, California’s chances for rain are subject to a variety of factors. There are five major oscillations — deviations from weather norms — that affect our weather patterns and each operates on its own unique cycle.

Each combination of oscillations results in a different weather pattern.

An interesting combination oscillations came to the rescue in 2010-11, when a strong La Niña, negative Arctic Oscillation, negative Pacific Decadal Oscillation and negative Pacific North American Pattern acted together to bring about an incredibly wet year,

during which the Visalia area received over 14 inches of rain (132 percent of average) and the snow pack peaked at just over 160 percent of average.

Such an event occurring again is certainly possible, Borgioli said. Once the Pacific Decadal Oscillation switches — which it will — we'll get more rain.

Long-term climate change

For the record, Borgioli says, Earth's temperatures have indeed been warming for about 30 years, giving the term "global warming" firm footing in the scientific community. And a warmer planet is responsible for the extreme weather (climate change) witnessed around the world in the last several years.

But the reason for global warming is still a matter of significant debate, Borgioli said. It's likely that people play some role in the weather, but with so little data available prior to the 20th century, there is no way to say for sure whether the current warming trend is out of character for the Earth, he continued.

Long-range models claiming to predict the distant future based on data in tree rings or glaciers simply cannot be trusted, Borgioli said.