

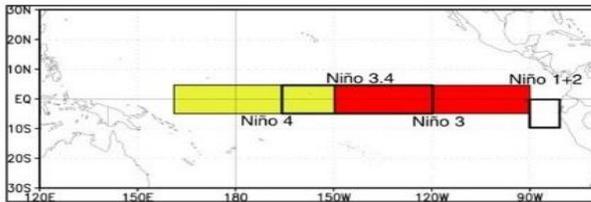
Discussion: Back in September Western Weather Group issued a special weather statement discussing El Niño, the Blob and the potential uncertainties heading into this year's "Godzilla" El Niño. More than halfway through California's wet season, most of the state still sits at slightly below average to slightly above average as far as precipitation is concerned, while the Pacific NW has been considerably wetter than average - A significant difference from how the last El Niño of this magnitude played out in 1997-98. With that said, the Sierra Nevada snowpack is doing quite well thanks to a series of colder storms during the beginning of the season - It is also unusual to see so many "cold" storms during an El Niño year. However, maybe we use the term, "unusual" too casually when it comes to this climate driving phenomenon. Since scientists have developed the means necessary to observe and analyze El Niño, we have only had a sample size of two, of this magnitude to observe in great detail. This leaves the term "unusual" rather vulnerable to subjectivity. Even then, the two previous, had pretty large discrepancies between each other.

This year a few differences between the current El Niño and the 1997-98 El Niño have been fairly obvious. The most significant discrepancy that we noticed in September was the unprecedented sea surface warmth observed throughout the eastern half of the north Pacific as a result of the "Blob." This left us questioning whether or not these temperature anomalies could affect the storm pattern during El Niño and what the affects could be. Despite the "death of the Blob," sea surface temperatures in this region have remained warmer than average, even where temperatures were cooler than average during the 1997-98 El Niño. Additionally, the distribution of warm ocean temperatures in the El Niño regions along the equator is quite different this year, as well. During the 1997-98 event, much warmer sea surface temperatures were observed closer to the coast of South America, while this year, the warmer temperatures are concentrated further west (see graphic). Furthermore, there are other minor climate drivers to consider, such as the Arctic Oscillation (AO), North Atlantic Oscillation (NAO), Pacific-North America Oscillation (PNA), etc. that may be affecting the distribution of moisture and storm track. One, or a combination of these factors may be the reason why El Niño has had a relatively minimal impact on California this year so far. However, this doesn't mean the impacts haven't been felt elsewhere, nor does it mean the rest of the rainy season will be dry.

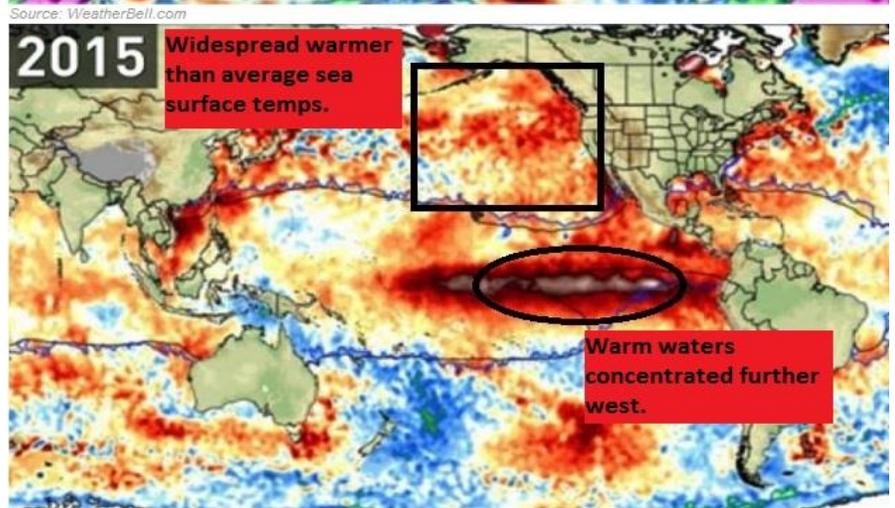
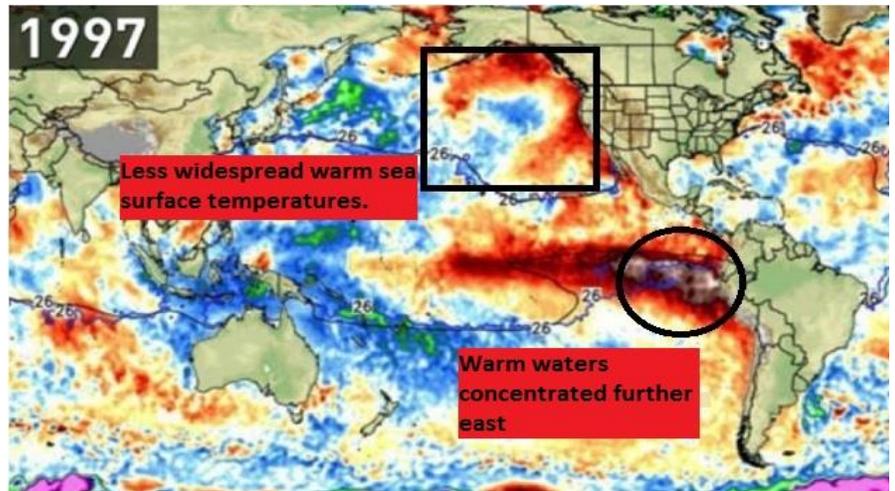
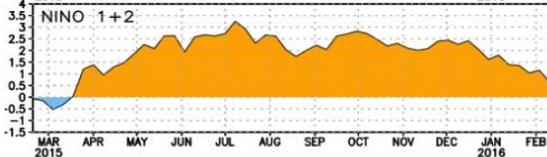
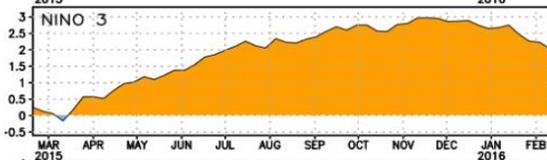
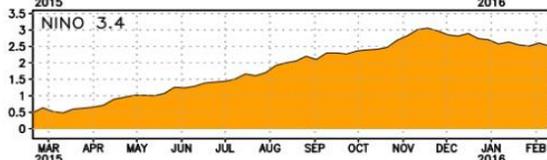
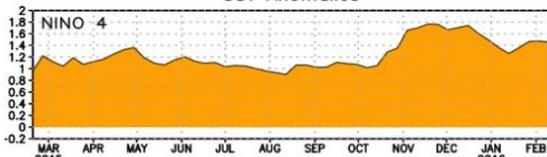
In any case, the answer to the questions, "No El Niño this year, eh?" or "is El Niño over?" are still both no. Though, it is beginning to weaken it is still a strong El Niño and climate models are still favoring a slightly wetter, albeit warmer than average March. That said, it is beginning to look much less likely that California will see anywhere near the amount of precipitation that it did during the 1997-98 or 1982-83 El Niño's despite similarities in overall strength.

Right: Comparison of Sea Surface Temperature anomalies between 1997-98 El Niño and 2015-16 El Niño.

Below: El Niño regions and sea surface temperature anomalies (°C), showing weakening trend.



SST Anomalies



Source: WeatherBell.com

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