El Niño Fact Sheet

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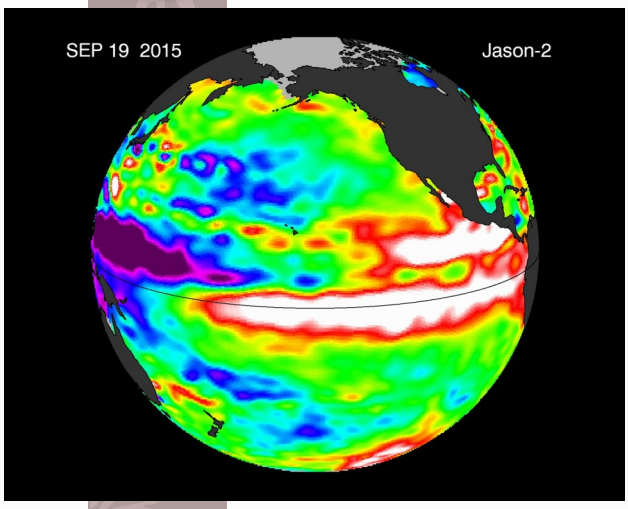
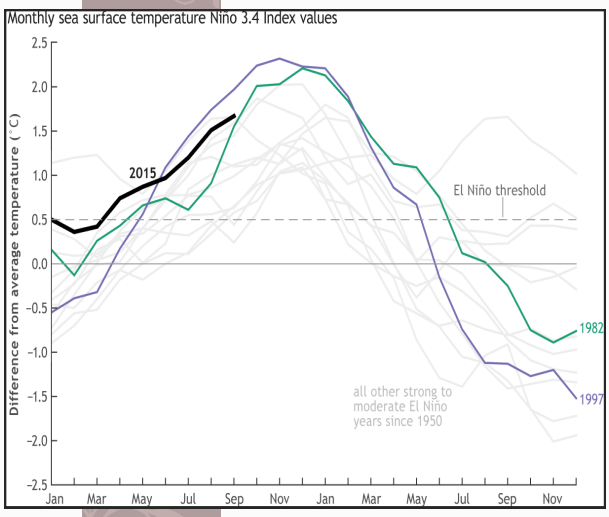
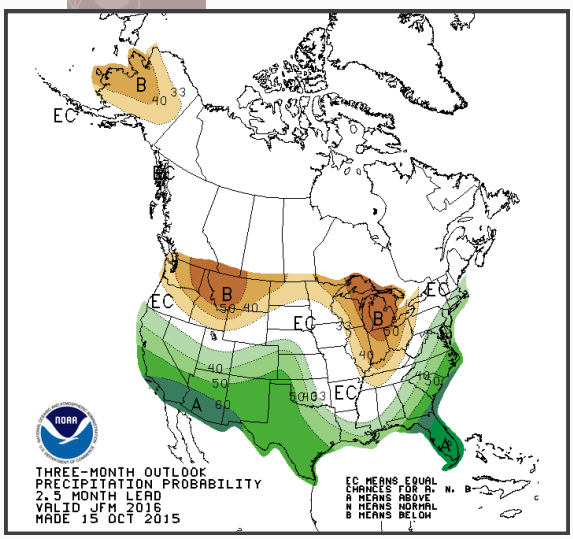


El Niño is a prolonged period of unusually warm Pacific waters that influence weather patterns





What we know:

- Strong El Niño conditions will exist through winter 2015-16
- This will be one of the strongest recorded El Niño episodes since 1950
- Strong El Niño's lead to the most predictable outcomes of increased rainfall in AZ and SoCal
- Odds clearly point towards a wetter than average winter - especially the latter part of the season

Uncertainties:

- Each El Niño is slightly different and there are other weather influences to consider
- There have only been 6 recorded strong El Niño events and only 3 as strong as this year since 1950
- The small sample size of comparative El Niño events limits more certainty in specific winter predictions

What we don't know:

- Even though odds strongly point towards a wet winter, we do not know whether it will be just above average or much above average
- Mountain snowfall may or may not be above average depending on snow levels during the winter

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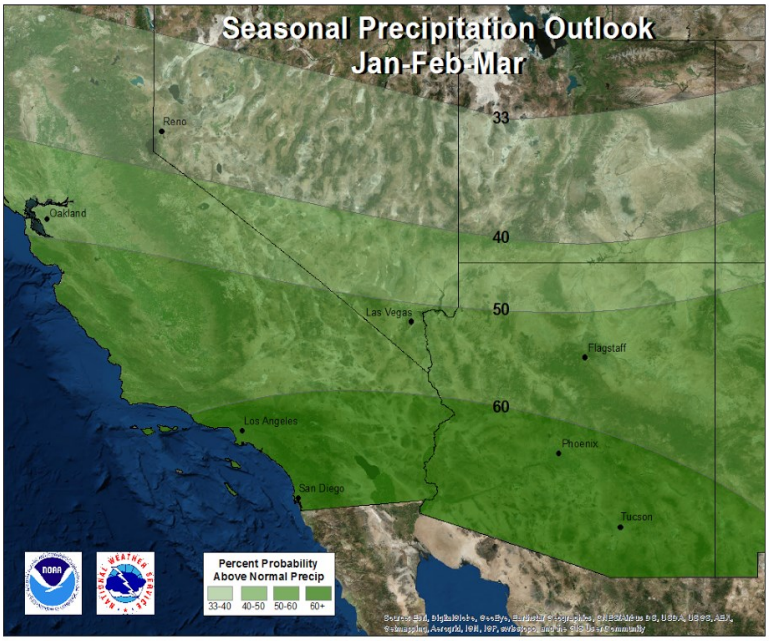
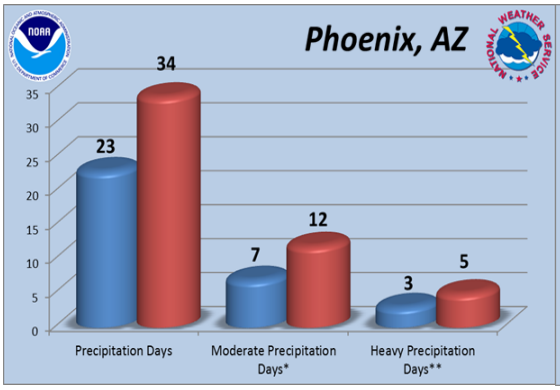
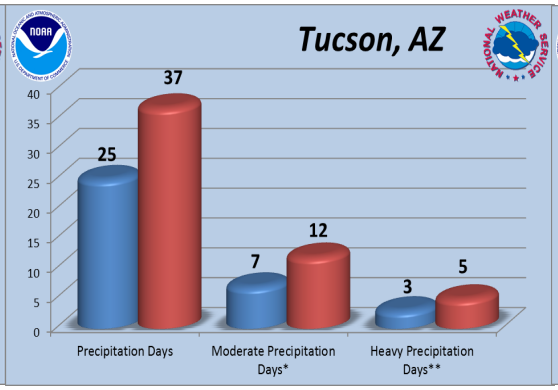
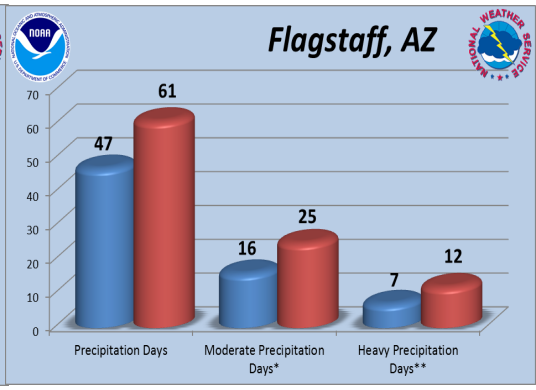


While strong El Niño's provide little predictive skill regarding temperatures, there is an excellent correlation to wetter than normal winters in Arizona and southern California—particularly later in the winter (Jan-Apr). The Climate Prediction Center forecasts better than a 60% chance of a wetter than normal Jan-Mar (leaving only a 5% chance of below normal).

However, each El Niño has a somewhat different "flavor" and even among the strongest episodes, there are notable differences in precipitation amounts and placement . Fortunately, despite typical greater than average precipitation, past strong El Niño events have not produced significant flooding events in Arizona and Southeast California (not saying that it couldn't happen this year). Seasonal mountain snowfall also carries considerable uncertainty, though all the 3 strongest events led to above average snow in Arizona (not shown).



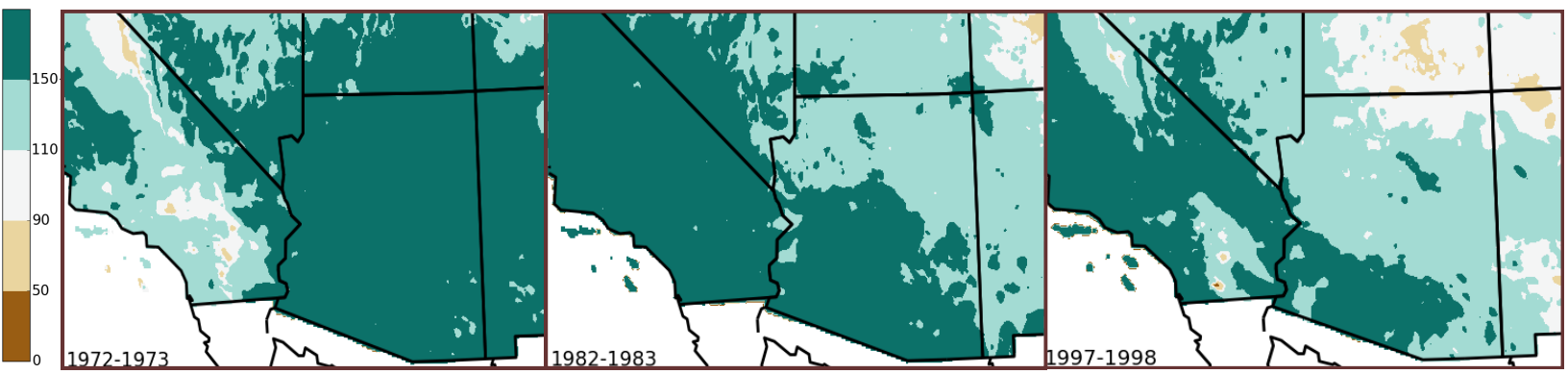




Average Winter Strong El Nino Winters

Number of rainfall days during an average winter (Oct-Apr) versus the average during 6 strong El Niños

(* Moderate = 0.25 inches ** Heavy = 0.50 inches)



October-April Percent Normal Precipitation from last 3 Strongest El Niño Episodes (1972-73, 1982-83, and 1997-98)