

2015-16 El Niño Potential for Arizona

El Niño Update

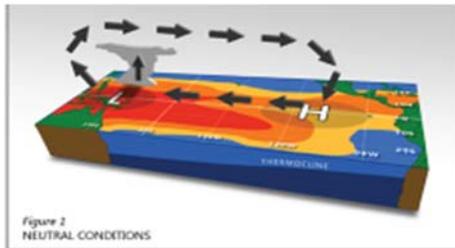
**Lower Santa Cruz River Alliance
Casa Grande, AZ**

**James Walter
Water Resource Operations
Salt River Project**

Earlier this month James Walter with Salt River Project’s Water Resource Operation gave an excellent overview of the potential rainfall for this winter. Mr. Walter discussed how El Niño is created and how this year’s pattern may play out.

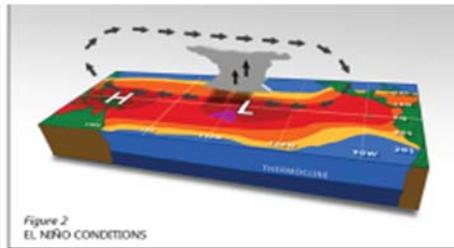
This information serves as a good reminder for farmers, ranchers and everyone in Arizona to check their emergency plans for flooding. Do you know how you’ll take care of your family and your livestock? Do you have flood insurance?

During a normal year warm sea temperatures happen over the west Pacific Ocean; in an El Niño year, the warm sea temperatures happen in the east Pacific. Normally the storms would fall some distance away from the warm sea temperature, still providing moisture for fall, winter and spring rains along the west coast.



Neutral Conditions

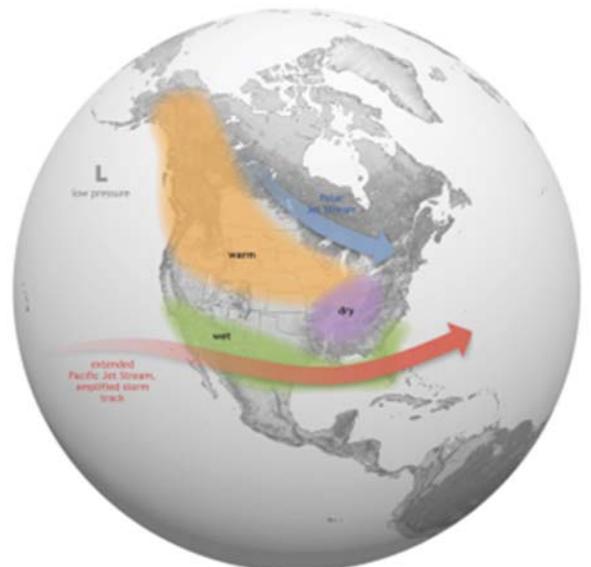
- Strong easterly trade winds
- Warm sea surface temperatures over west Pacific
- High pressure over east Pacific, low pressure over west Pacific
- Thunderstorms (enhanced convection) over west Pacific

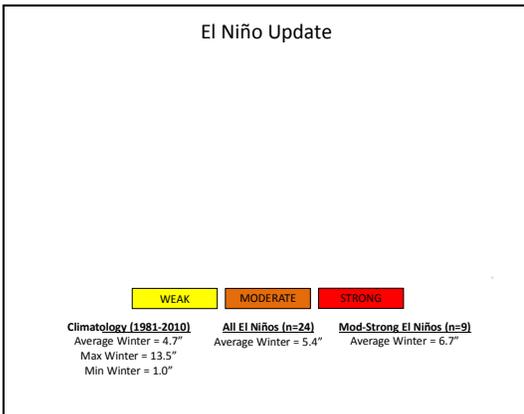


El Niño Conditions

- Weak easterly trade winds (or a reversal to westerly winds)
- Warm sea surface temperatures over the east Pacific to South America
- Pressure systems reversed
- Thunderstorms (enhanced convection) near the date line and eastward

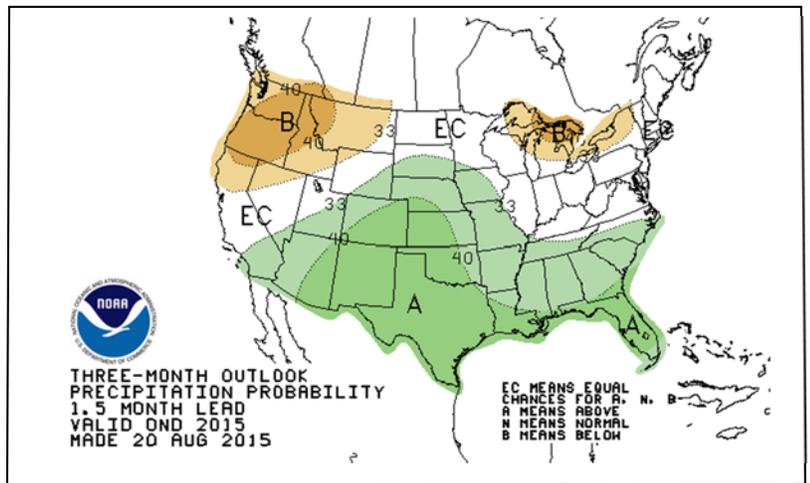
In an El Niño year, the wind pattern changes driving the storms to the southern side instead of the west side forcing the rains more strongly across the southern part of the country – from California eastward.





In Arizona we have seen a relationship between El Niño winters and the amount of rain that falls. Since 1950, when the national weather service began keeping records, there have been a few moderate to strong events tied to El Niño. Out of the 9 moderate to strong El Niños, there have been 7 associated with normal to above normal winter precipitation.

Mr. Walter explained the National Oceanic and Atmospheric Administration (NOAA) produces maps forecasting seasonal precipitation. The map for this fall (October, November and December) shows a greater likelihood of above normal precipitation for Arizona.



The NOAA map for January, February and March shows a darker green area for southern Arizona with the whole state blanketed with the potential for above normal rainfall. These forecasts are not an exact amount of rain, just the likelihood of wet, normal or dry conditions.

