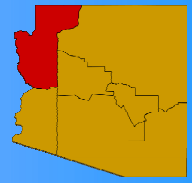




# Northwest Arizona Climate Summary

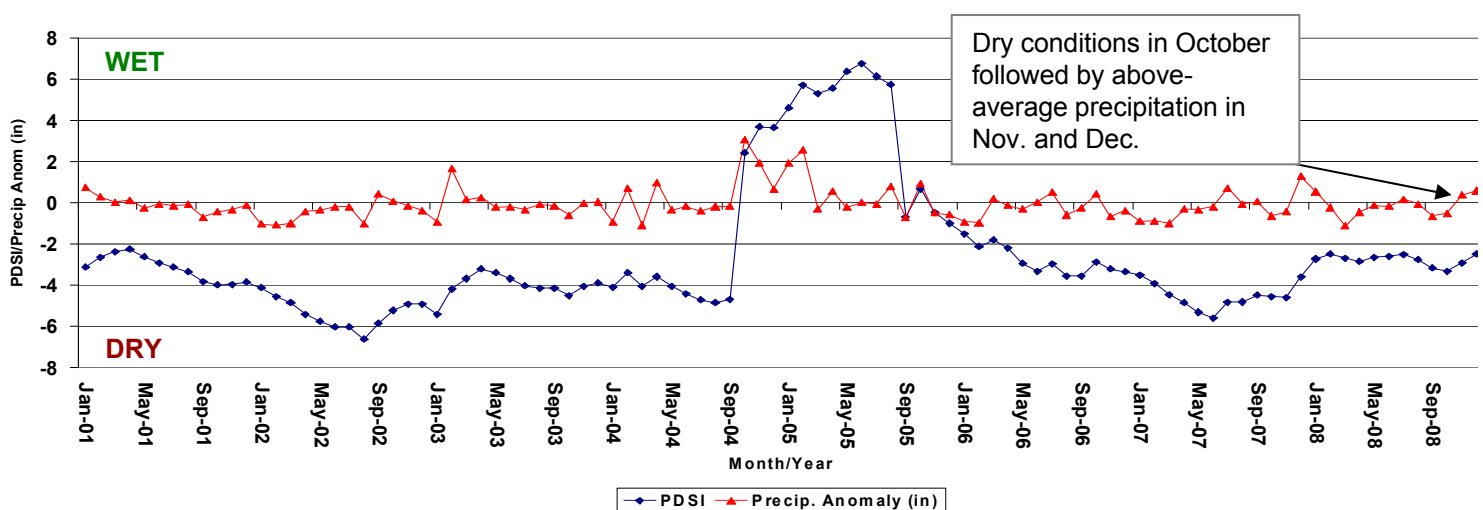
## Winter 2008-2009



**February 2, 2009** – Relatively warm and dry conditions in September and October were followed by a quick transition to cool and wet weather in late November. October was quite dry across northwestern Arizona with most locations observing less than 50% of average precipitation for the month. Temperatures were also quite warm with most locations reporting temperatures 3 to 4 °F above average. Warm and dry conditions persisted through the beginning and middle of November before winter weather settled in late in the month. A trough of low pressure set up across the western U.S. late in November, helping to guide storm systems and cool air down from the Pacific Northwest into the desert Southwest. This storm track continued through December producing a series of winter weather events that brought substantial precipitation in the form of rain and snow to the region. Volunteer precipitation observations (Rainlog; <http://www.rainlog.org>) around the Kingman area reported precipitation amounts in excess of 1 inch from several of these December winter storms. Overall, total precipitation for November and December ranged from 3 to 5 inches across northwest Arizona which is slightly above-average for this period. The trough was replaced by a ridge of high pressure across the western U.S in early January, bringing much warmer and drier weather to Arizona. This pattern persisted for much of January, leaving below-average precipitation and short-term drought conditions in its wake.

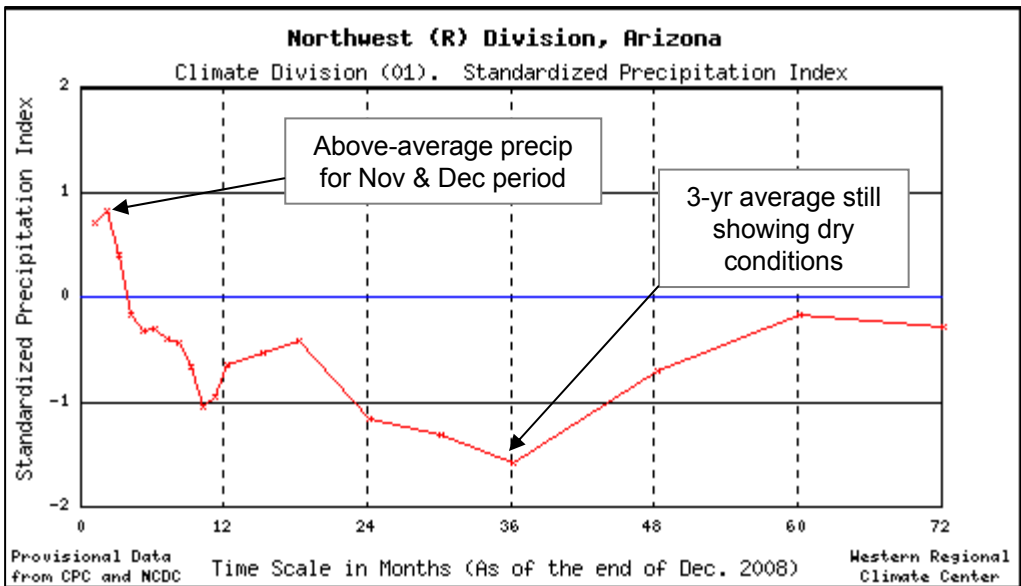
Late winter (February-March-April) precipitation forecasts issued by the NOAA Climate Prediction Center indicate an increased chance of drier-than-average conditions for much of the southwest U.S. This forecast is based on the return of La Niña conditions across the equatorial Pacific Ocean. The cooler-than-average sea surface temperatures in the Pacific that are indicative of a La Niña event typically create a circulation pattern that favors a more northerly winter storm track across the western U.S. This typically produces above-average precipitation in the Pacific Northwest and below-average precipitation across the Southwest U.S. Seasonal temperature forecasts indicate an increased chance of above-average temperatures during this late winter period as well. This forecast is based on the expectation that trends in above-average winter temperatures will continue through this season as well. (More information on forecasts can be found at <http://www.cpc.noaa.gov>).

Northwest Arizona Palmer Drought Severity Index and Precip. Anomaly: Jan. 2001 - Dec. 2008



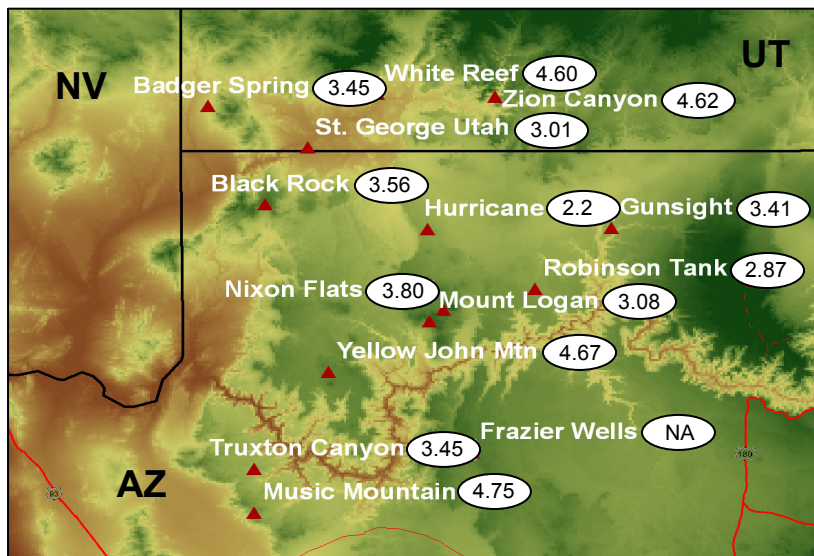
Fall was relatively warm and dry with both September and October recording below-average precipitation and above-average temperatures. November brought some welcome relief to the short-term drought conditions with slightly above-average precipitation. The relatively wet and cool conditions continued through December with another shot of above-average precipitation. Even with the two months of above-average precipitation, short to medium term drought conditions remain as reflected in the negative PDSI values through December of 2008.

# Northwest Arizona Climate Summary – Winter 2008-2009



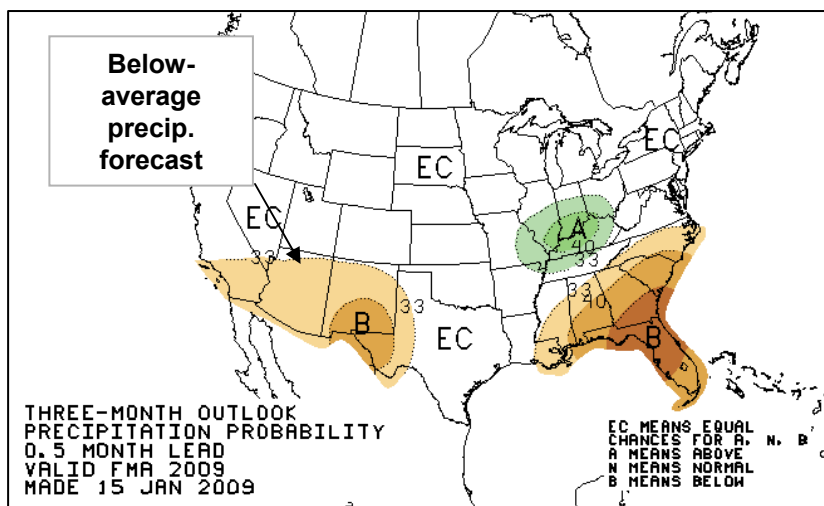
The SPI represents precipitation levels over different time-scales in standard deviation units. The time scales represent individual comparison periods (for example, 12-month time-scale represents total precip over last 12 months compared to historical record of same period). The -1.5 SPI value at 36 months continues to indicate long-term drought conditions over the past 3 year period. The above average precipitation observed during November and December is reflected in the SPI value near 1 at the two month lag.

Precipitation totals collected at Remote Automated Weather Sites (RAWS) across northwest Arizona and southwest Utah were generally between 3 and 5 inches for the three month period between Nov-Jan 2009. Most of this precipitation fell in late November and December, while January was relatively dry. Precipitation amounts were fairly consistent from north to south with Music Mountain, Yellow John Mountain, White Reef, and Zion Canyon all reporting amounts greater than 4 inches. Hurricane was the driest spot with only 2.2 inches of precipitation observed during this period. **Note:** Total amounts may be underestimated if precipitation fell as snow. Find more information and data at <http://raws.dri.edu>.



Total precipitation from Nov 1<sup>st</sup> – Jan 31<sup>st</sup> from RAWS sites. Precipitation listed in inches at each location. Data from <http://raws.dri.edu>

The February-March-April seasonal precipitation forecast from the NOAA Climate Prediction Center indicates a slightly increased chance (>33% relative to chances of average and above average precipitation) of below average precipitation across much of the Southwest including portions of northern Arizona. La Niña conditions have settled in again across the equatorial Pacific Ocean and are expected to influence storm tracks for the remainder of the winter season. La Niña events typically bring drier-than-average conditions to the Southwest U.S. during the winter. Stay tuned to forecast updates each month at <http://www.cpc.ncep.noaa.gov>.



[http://www.cpc.noaa.gov/products/predictions/long\\_range/lead01/off01\\_prpc.gif](http://www.cpc.noaa.gov/products/predictions/long_range/lead01/off01_prpc.gif)