



# Northwest Arizona Climate Summary

## Winter 2007-08

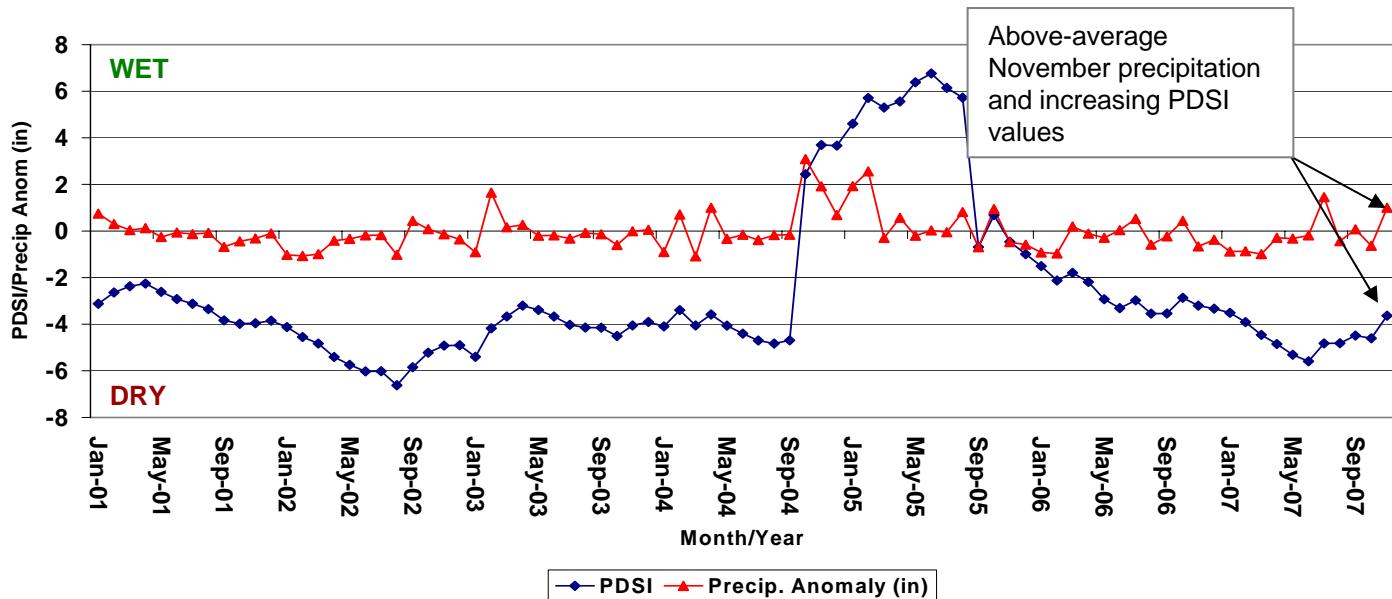


**January 2, 2008** – Fall of 2007 started off dry for northwest Arizona, but ended relatively cool and wet. October was warm and dry with most locations across the region recording no measurable precipitation. Temperatures were close to average with Kingman reporting an October mean temperature of 63.3 °F. The ridge of high pressure that brought the warm and dry conditions in October persisted until the middle of November keeping the first part of the month dry. The ridge broke down the second half of November with several storm systems crossing the region bringing cooler temperatures and spotty precipitation. A strong low pressure system tapping into abundant subtropical moisture moved through Arizona on the November 30<sup>th</sup> and December 1<sup>st</sup>, bringing widespread heavy precipitation. Rainloggers (<http://www.rainlog.org>) in the Kingman area reported daily rainfall totals of over 2 inches from this storm event. The Nixon Flats RAWS site on the Arizona Strip recorded 1.53 inches of precipitation on November 30<sup>th</sup> and 0.7 inches on December 1<sup>st</sup>. Cool and unsettled weather continued through December bringing above-average precipitation amounts to the region.

The stormy late-fall weather was welcome and helped to improve short-term drought conditions across northwest Arizona. Expectations of drier-than-average conditions for the remainder of the winter season still loom. The February-March-April seasonal outlooks from the NOAA Climate Prediction Center continue to forecast below-average precipitation and above-average temperatures through early spring. A moderate La Niña event is underway in the equatorial Pacific Ocean and is expected to impact weather across the southwest U.S. through the winter season. La Niña events (pattern of below-average sea surface temperatures persisting off in the eastern Pacific) typically disrupt the winter jet stream pattern across Arizona, pushing winter storms north of the state. This typically suppresses winter storm activity over the Southwest bringing below-average precipitation. This pattern hasn't persisted this season, but may become more prevalent as the winter progresses.

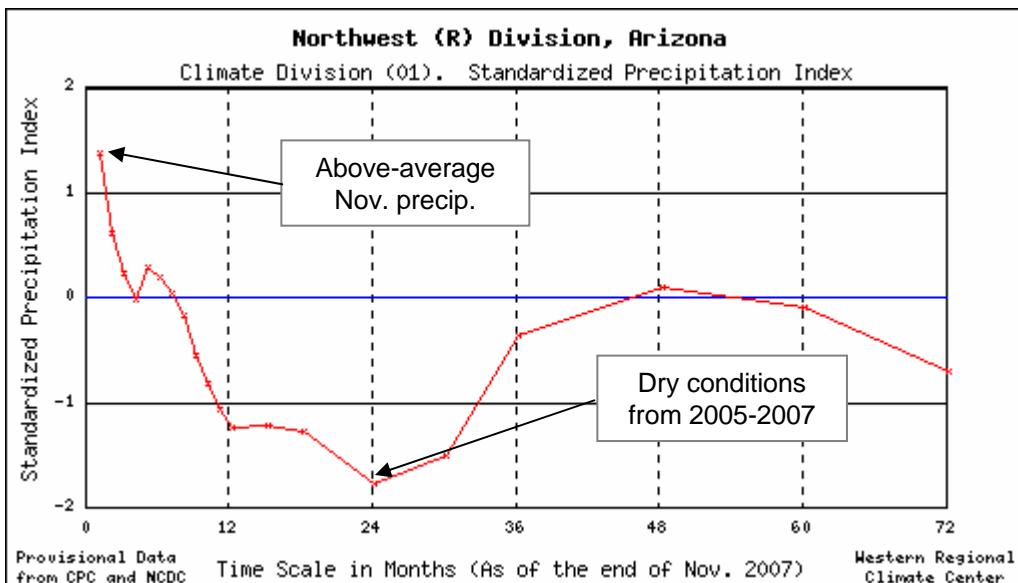
(More information on forecasts can be found at <http://www.cpc.noaa.gov>).

**Northwest Arizona Palmer Drought Severity Index and Precip. Anomaly: Jan. 2001 - Nov. 2007**



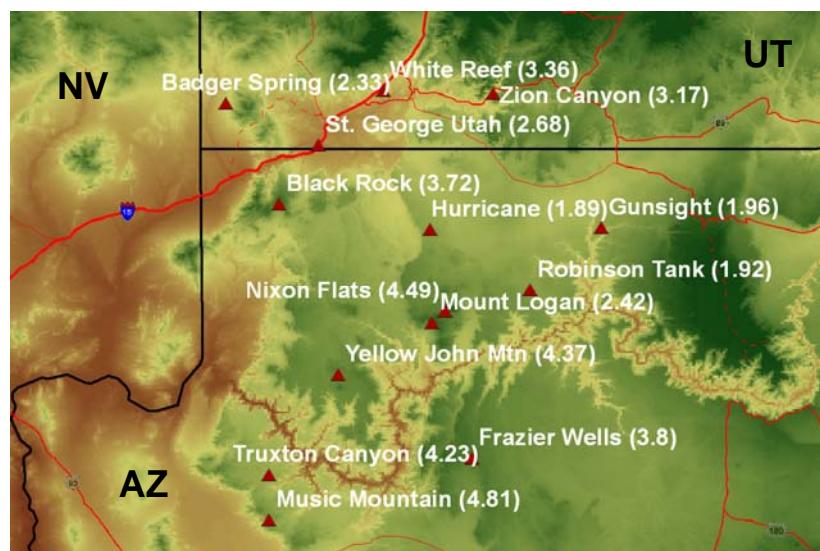
Above-average precipitation in November gave another boost to PDSI values indicating an improvement in short-term drought conditions. PDSI values are still well below zero because of below-average precipitation in the winters of 2005-06 and 2006-07. Longer-term drought conditions persist across northwest Arizona.

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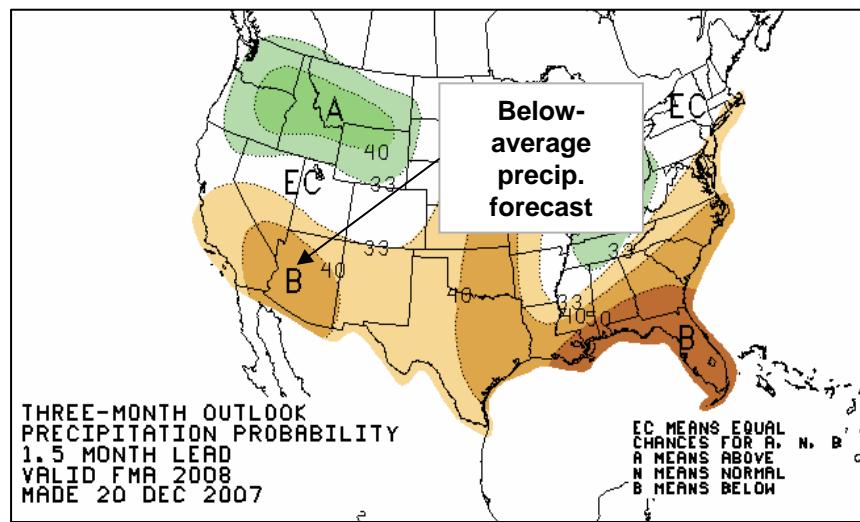
The SPI represents precipitation levels over different time-scales in standard deviation units. The time scales represent discrete comparison periods (for example, 12-month time-scale represents total precip over last 12 months compared to historical record of same period). The SPI value near -2 at 24 months represents below-average total precipitation for the past two-years. The rapid upswing at lag 1 indicates above-average precipitation fell in November.

Observations from Remote Automated Weather Sites (RAWS) across northwest Arizona and southwest Utah for the October-December 2007 period indicate that precipitation amounts were generally between 2 and 4 inches. Robinson Tank again received the least rainfall with only 1.92 inches recorded over the past 3-months. Music Mountain observed the most precipitation with an Oct-Dec total of 4.81. The highest precipitation amounts were generally found at the southernmost stations in Arizona while lowest observations were on the Arizona strip. Caution must be used in interpreting these data. RAWS stations do not accurately measure snowfall and may underestimate total precipitation (More info at <http://raws.dri.edu>).



Total Rainfall from July 1 – Sept. 23 from RAWS sites. Rainfall in inches in parentheses at each location. Data from <http://raws.dri.edu>

The February-March-April seasonal precipitation forecast from the Climate Prediction Center continues to indicate an increased chance of below-average precipitation. A moderate strength La Niña event is currently underway in the Pacific Ocean which may disrupt the winter storm track across Arizona in upcoming months. This would bring an increased chance of drier-than-average conditions for the Feb-April period. Stay tuned to forecasts through the winter at <http://www.cpc.noaa.gov>.



[http://www.cpc.noaa.gov/products/predictions/long\\_range/lead02/off02\\_prcp.gif](http://www.cpc.noaa.gov/products/predictions/long_range/lead02/off02_prcp.gif)