



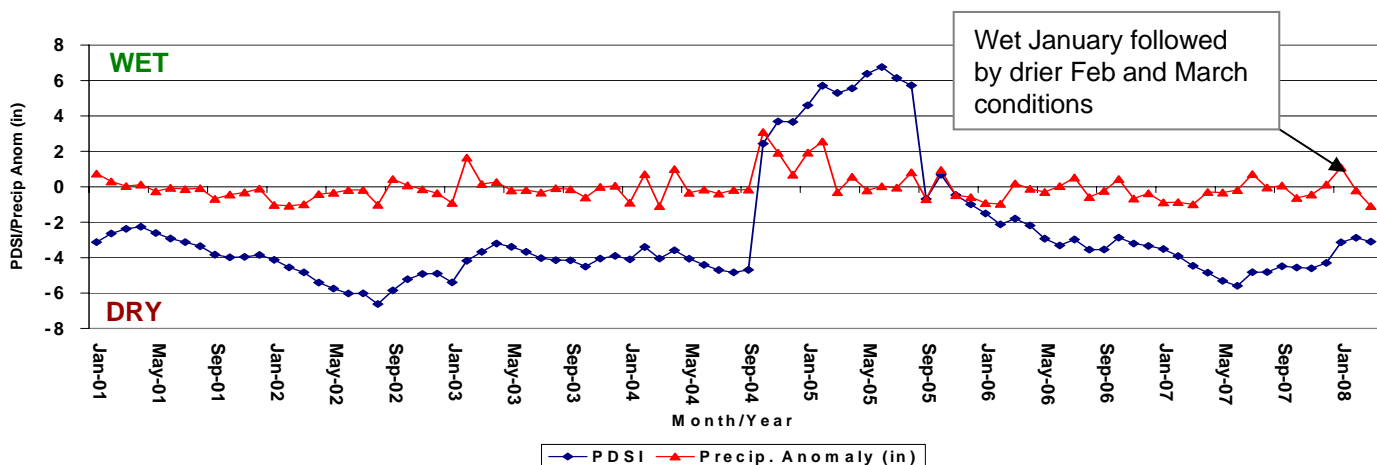
# Northwest Arizona Climate Summary Spring 2008



**April 14, 2008** – January of 2008 brought several wet and cold storms that produced widespread precipitation across northern Arizona. The first storm of the New Year crossed the region between January 4<sup>th</sup> and 9<sup>th</sup> dumping over an inch of precipitation, much of it in the form of snow at higher elevations. A series of storm systems pulling in cold air and moisture dug deep into Arizona between January 25<sup>th</sup> and January 30<sup>th</sup> producing rounds of widespread rain and snow. Rainloggers (<http://www.rainlog.org>) in the Kingman area reported total precipitation amounts exceeding 1.5 to 2” with these storm systems. The unsettled weather pattern that dominated January continued into February, but precipitation amounts with passing storms were generally less than observed during the previous month. Two storm systems of note, one early in February and then later in the month, brought much of February’s precipitation. Rainlogger observations in the area were generally less than an inch for each storm. Observations from Remote Automated Weather Stations (RAWS; <http://raws.dri.edu>) along the Arizona strip generally support this transition to drier conditions from January to February. Many RAWS observed 2 to 4” of precipitation in January, falling off to 1 to 2” in February. This trend continued into March with a transition towards even drier and warmer conditions. Below-average precipitation was observed across almost all of northern Arizona/southern Utah in March. RAWS total March precipitation observations were consistently below 0.5” across the region.

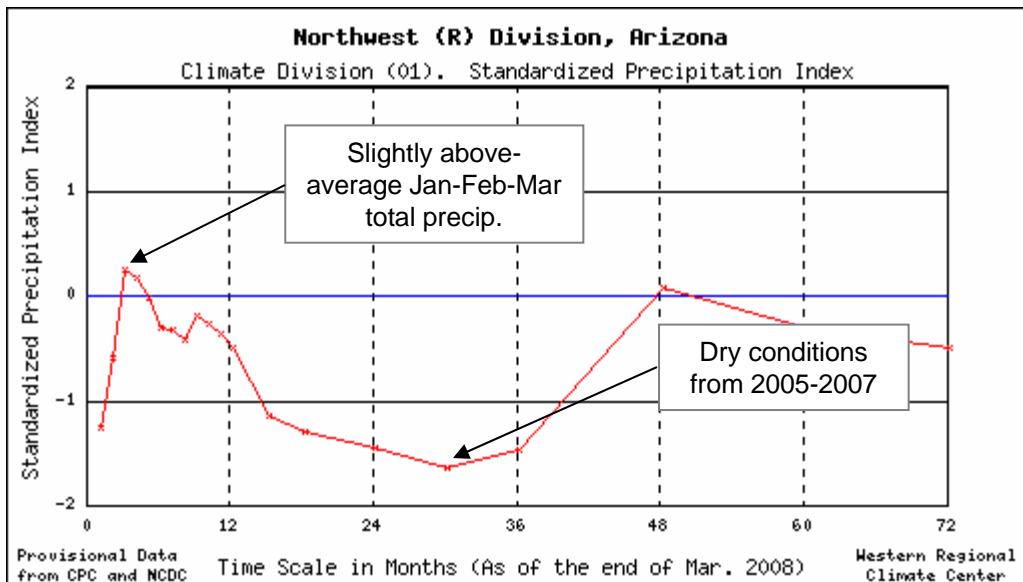
Winter precipitation forecasts issued last fall projected that unusually dry conditions would plague the southwest U.S. this winter, because a moderate La Nina event was underway in the Pacific Ocean and was expected to grow stronger. The La Nina event did indeed grow stronger and persist through this past winter, but brought unusually wet weather rather than the expected dry weather pattern that typically accompanies these events. La Nina events typically push the winter storm track to the north leaving the Northwest U.S. with above-average precipitation and the opposite for the Southwest. Instead, with this La Nina event, an unusually cool and wet weather pattern persisted across Arizona this past winter. It is unclear why this happened, but is currently the subject of active research to inform future climate forecasts. There are no high confidence precipitation forecasts for the spring, because of a lack of strong forecast signals (e.g. El Nino or La Nina) during this normally dry season. Temperature forecasts, on the other hand, indicate an increased chance of above-average temperatures. (More information on forecasts can be found at <http://www.cpc.noaa.gov>).

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



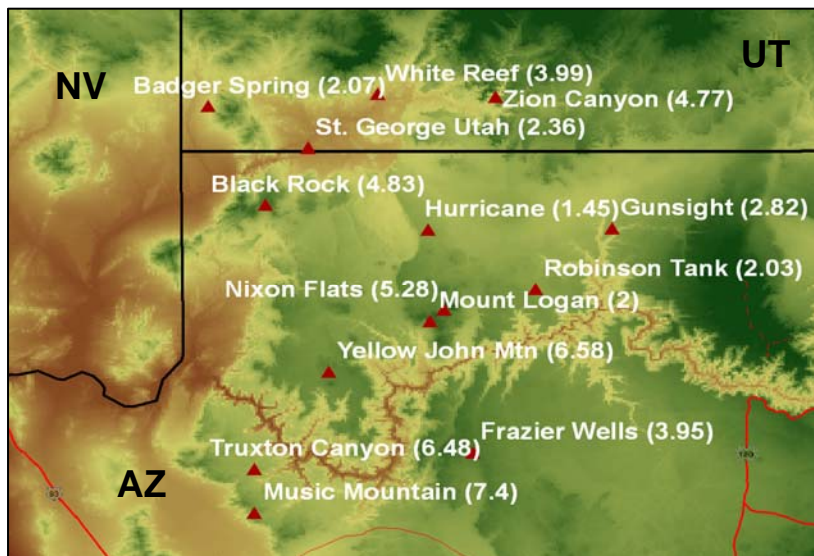
Above-average precipitation continued in January, but fell to average to below-average levels in February and March. March was especially dry with most locations observing precipitation amount 1 to 2 inches below-average. Drought Index (PDSI) values rebounded slightly with the wet January conditions, but fell slightly with dry conditions creeping back in March.

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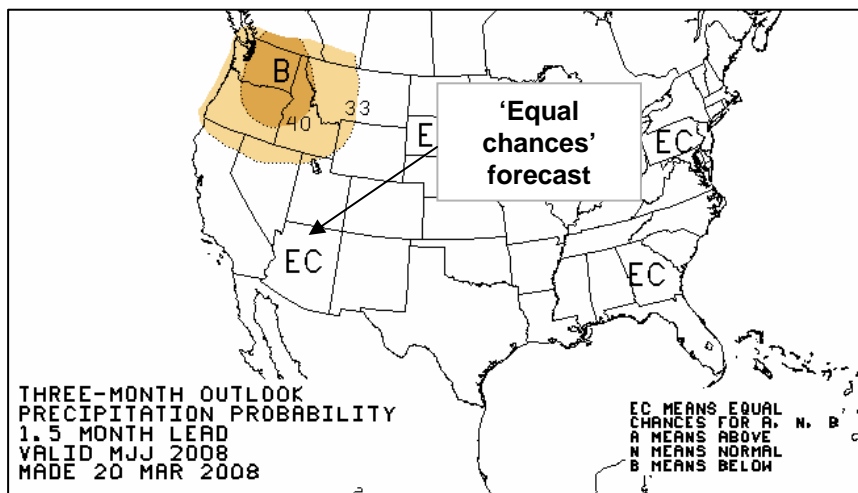
The SPI represents precipitation levels over different time-scales in standard deviation units. The time scales represent individual comparison periods (for example, 12-month time-scale represents total precip over last 12 months compared to historical record of same period). The SPI value near -2 at 30 months represents below-average total precipitation for the past two-years. The positive value (SPI=0.25) at 3-months indicates slightly above-average total precip. between January and March.

Observations from Remote Automated Weather Sites (RAWS) across northwest Arizona and southwest Utah for the January-March 2008 period indicate that precipitation amounts were generally between 2 and 5 inches. The driest locations included Hurricane (1.45") and Mt. Logan (2") in Arizona and Badger Spring (2.07") in Utah. Higher elevation areas north of Kingman received the most precipitation with Truxton Canyon observing 6.48" and Music Mountain over 7". 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 precipitation from Jan 1st-Mar 31st from RAWS sites. Precipitation listed in inches in parentheses at each location. Data from <http://raws.dri.edu>

The May-June-July seasonal precipitation forecast from the Climate Prediction Center indicates an 'equal-chances' precipitation forecast for the desert Southwest. This means that there is an equal chance of above, below or average total precipitation falling during the forecast period. An 'EC' forecast is made when there is no strong forecast signal evident to use. This is very common during the normally dry spring season across the Southwest where sea surface temperature patterns like El Nino have little impact on regional weather. See more forecast information at <http://www.cpc.noaa.gov>.



[http://www.cpc.noaa.gov/products/predictions/long\\_range/lead02/off02\\_prpc.gif](http://www.cpc.noaa.gov/products/predictions/long_range/lead02/off02_prpc.gif)