March 26, 2007 – The El Niño of 2006-07 failed to bring much anticipated above-average precipitation to northwest Arizona this past winter. Winter precipitation amounts were actually much below-average in the end with most locations recording only 15% to 20% of average rainfall. Official National Weather Service observations from Kingman reported that only 0.48 inches of precipitation fell in December, January and February. This is over 3 inches below the long-term Dec-Jan-Feb average total of 3.56 inches for Kingman. Additional reports by volunteer observers at http://www.rainlog.org also indicate that total precipitation during the same period was close to 0.5 inches. No locations in Mohave County appear to have escaped the dry winter conditions. Short-term drought conditions have intensified across the area with most parts of northwest Arizona designated as severe to extreme drought status according to the latest U.S. Drought Monitor (http://www.drought.unl.edu/dm/monitor.html). Temperatures were also generally above-average over the past 90-days. Most locations in Mohave County recorded temperatures that were 1 to 2 degrees F above the long-term average.

Forecasts for the upcoming spring season (May-June-July) from the Climate Prediction Center indicate that the southwest U.S. will see an increased chance of below-average precipitation and above-average temperatures. The forecast for increased chances of below-average precipitation is based on computer models that suggest that the recent dry circulation pattern that plagued northern Arizona this past winter will continue through the spring. The winter 06-07 jet stream pattern was split with a northerly storm track through the Pacific Northwest and another through northern Mexico. This pattern was weakly connected to the recent El Niño event, but the southern jet stream was displaced too far south for Arizona to benefit. The position of the jet stream consistently steered most storms away from Arizona leaving the region with below-average winter precipitation. Spring storm events are rare for northern Arizona, but this circulation pattern is expected to persist further reducing the chance of precipitation. Temperature forecasts indicate that temperatures will again be above-average for the spring period, consistent with long term trends. (More information on forecasts can be found at http://www.cpc.noaa.gov).

Precipitation amounts were below-average during this past winter season for most of northwestern Arizona. PDSI values continue to decline indicating deepening short-term drought conditions initiated by the dry winter of 2005-06.
Rainfall observations from east-central Mohave County were generally less than an inch for the 90-day period from Dec 15th to Mar 15th. These amounts are substantially below the average Dec-March amounts expected for this area. Northwest Arizona generally receives between 2.5 and 3.5 inches of precipitation in valley locations during the winter months. The Peach Spring ALERT gauge recorded just over 2 inches, but is still below average for the period. Precipitation amounts for this past winter were below-average at all locations across Mohave County with most stations receiving less than 25% of average. (More data at http://weather.co.mohave.az.us/perl/DWReports.pl)

The SPI represents precipitation levels over different time-scales in standard deviation units. The time scales represent discrete comparison periods (12-month time-scale represents total precip over last 12 months compared to historical record of same period). Negative values from 0 to 24 months indicate that below-average precipitation has persisted at all time-scales for the past two years. These negative values indicate the presence of short-term drought conditions as well as a deepening longer-term drought.

The May-June-July seasonal precipitation forecast from the Climate Prediction Center depicts an increased chance of below-average precipitation for much of northern Arizona. This forecast is based on continuing the short-term trend in dry conditions experienced this past winter through the spring. A split jet-stream brought storminess to the Pacific Northwest and to northern Mexico this past winter, steering storms far from northwest Arizona. It is expected that this unfavorable jet stream pattern will continue through the spring limiting further the prospect for any rare storm systems.