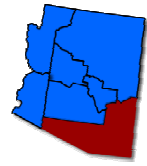


Southeast Arizona Climate Summary

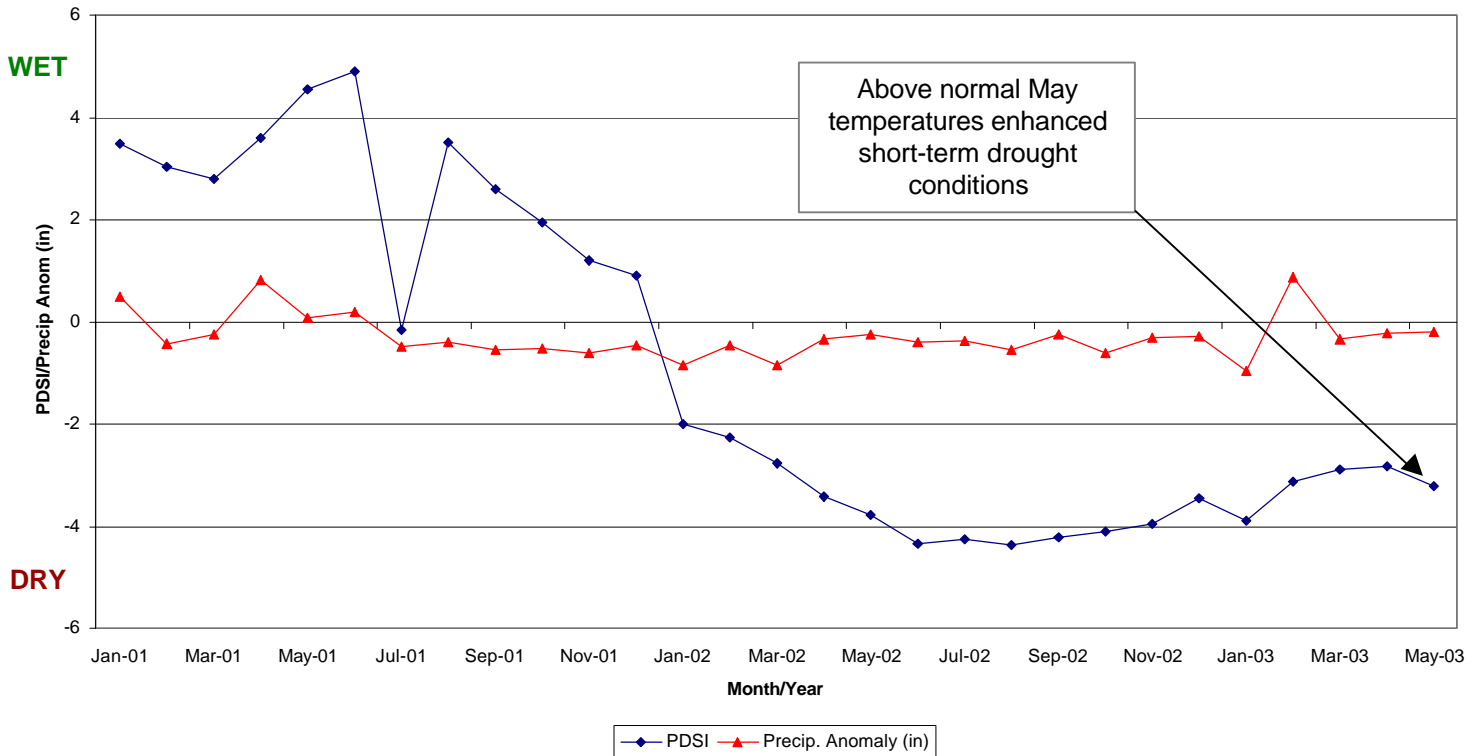
Spring-Summer 2003



June 25, 2003 – Slightly below normal precipitation and near normal temperatures characterized the early spring climate across southeast Arizona. Spring conditions are typically dry, but near to slightly below normal temperatures in April may have tempered drought conditions by slowing the loss of soil moisture brought by several late winter storms. Temperatures rebounded in May, with most locations experiencing monthly averages 3-5 F above normal. This caused PDSI values to once again decline, indicating continued drought conditions.

La Nina conditions struggle to develop in the equatorial Pacific which may enhance the monsoon across southern Arizona for the 2003 season. Since the development has been slow and the current pattern is weak, confidence in this forecast is very low. Monsoon precipitation may help alleviate short term precipitation deficits, but cannot be relied on to end long-term drought conditions. Thunderstorm precipitation is highly variable, both spatially and temporally, and evaporates quickly. The developing La Nina needs to be monitored closely this summer to plan for winter 03-04 precipitation amounts. If strong La Nina conditions develop there is strong likelihood of below normal precipitation for the upcoming winter months. (More information at http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/)

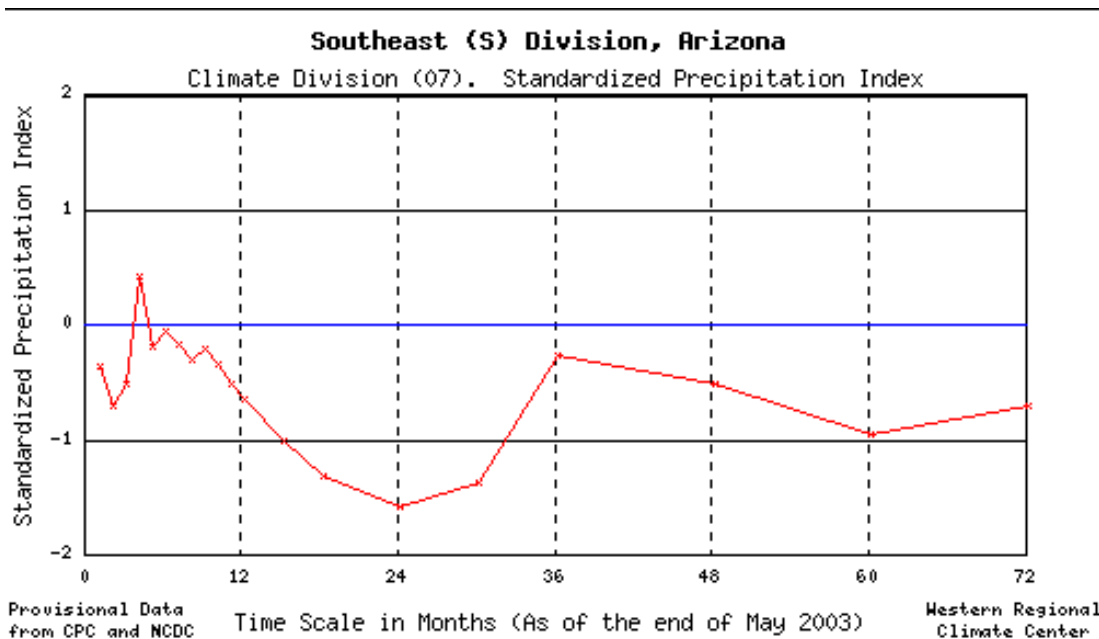
Southeast Arizona Palmer Drought Severity Index and Precip. Anomaly: 2001-2003



Slightly below normal spring precipitation has not helped to ease ongoing drought conditions. PDSI values have actually started to decrease again after a brief rebound associated with above normal precipitation from several late winter storms.



Southeast Arizona Climate Summary – Spring/Summer 2003



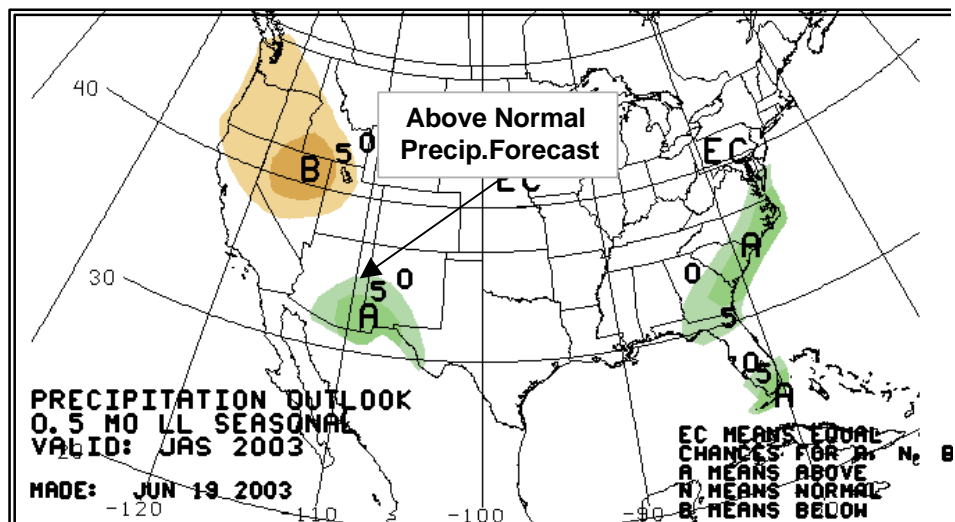
SPI values show that short-term precipitation amounts are about 0.5 standard deviations below normal. Several late season winter storms have improved short-term precipitation deficits reflected in SPI values close to zero in the 6-8 month time scale. 1-2 year precipitation amounts are still way below normal at greater than one standard deviation.

April temperatures were at or slightly below normal at most locations across southeast AZ. Even though temperatures were close to normal, precipitation was below normal. Precipitation amounts are climatologically low for April, but most locations received no precipitation at all. May transitioned into above normal temperatures and continued below normal precipitation amounts at these locations.

| Location | Apr. 2003 Avg. Temp (F) | Apr. Long-term Avg. Temp (F) | Apr. 2003 Total Precip(in.) | Apr. Long-term Avg. Precip (in) |
|-----------------|-------------------------|------------------------------|-----------------------------|---------------------------------|
| Willcox | 59.0 | 57.3 | 0.00" | 0.25" |
| Safford | 62.0 | 62 | 0.08" | 0.23" |
| Chiricahua N.M. | 54.5 | 56.1 | 0.00" | 0.48" |
| Douglas | 60.7 | 60.5 | 0.00" | 0.28" |
| Tucson | 65.7 | 66.1 | 0.04" | 0.32" |

(data from <http://www.wrh.noaa.gov/tucson> and <http://wrcc.dri.edu>)

Above normal precipitation is forecasted for the southeast Arizona monsoon season by the Climate Prediction Center (see link below graphic). This forecast is based on developing La Nina conditions in the equatorial Pacific which can enhance the southwest monsoon. At this time, La Nina conditions are very weak and may not continue to develop through the monsoon season. Confidence in this seasonal forecast is low, given the uncertainty associated with the development of the current La Nina.



From: http://www.cpc.ncep.noaa.gov/products/predictions/long_range/