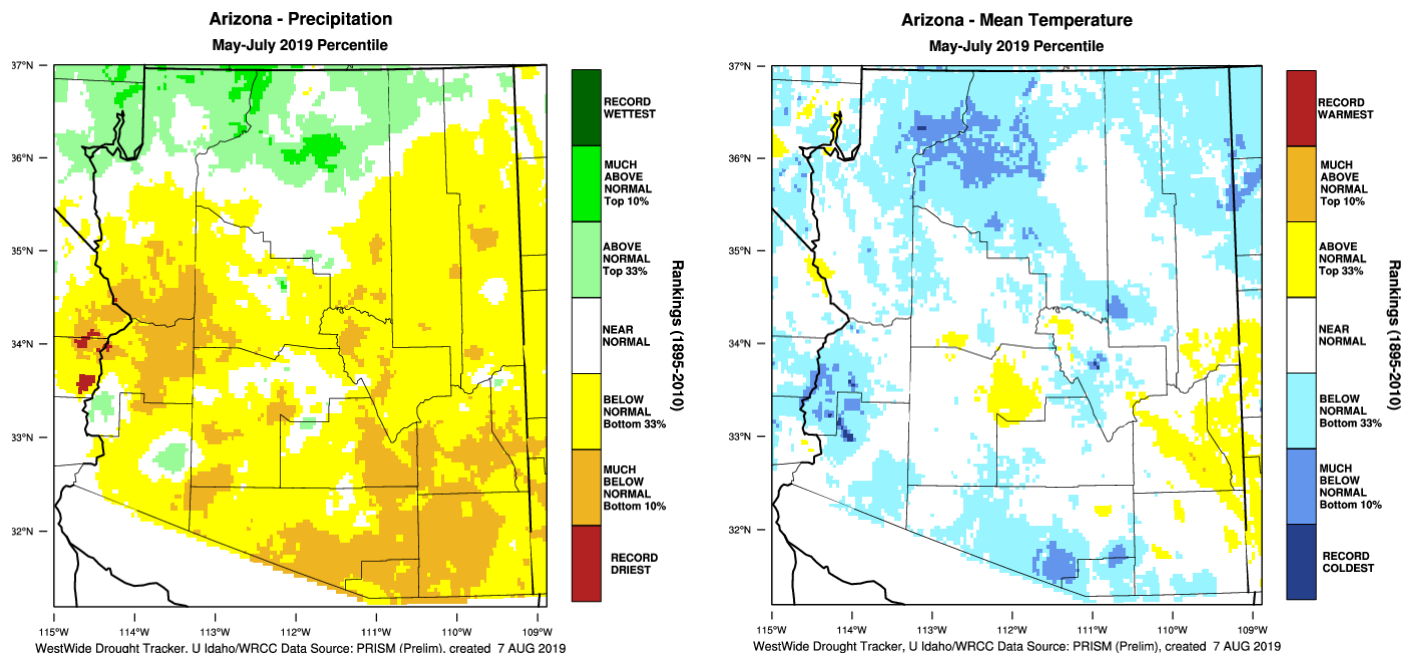




Arizona Seasonal Climate Summary: Summer 2019

August 7, 2019 - The May-July period has been a mixed bag of both cooler and wetter conditions for parts of Arizona in May and then warmer and drier than average with the late onset of the monsoon season in July. The active winter weather pattern extended right through May and even a bit into June leading to record cool and wet conditions for the northwest corner of the state. Overall for Arizona, May 2019 was the coolest May since 1953 and the 5th coolest since 1895. Summer made an effort to show up in June, but continued to battle the active jet stream that kept pushing the monsoon subtropical ridge back south. This kept temperatures somewhat moderate for June, but also kept monsoon moisture suppressed to the south. June temperatures were largely near average while precipitation was below average for most of Arizona for the month (albeit June is typically a dry month anyway). The monsoon subtropical ridge continued to have trouble progressing north in early July leading to dry conditions across the state for the first half of the month. Moisture finally settled into the southern half of Arizona the second half of July, but overall most areas still observed below-average precipitation for the month. The lack of moisture, storms and clouds also allowed temperatures to climb to above-average levels for July.

The switch from cool and wet conditions in the late spring to dry and hot conditions in July has led to a complex drought situation. Deeper soil moisture is probably still available for some plants, while the late monsoon arrival and hot conditions will create soil moisture shortages in shallower rooted plants and impact the summer growing season. Some enhanced monsoon activity may still show up later in August and through September with tropical storms.



May-July precipitation and temperature rankings from the WestWide Drought Tracker

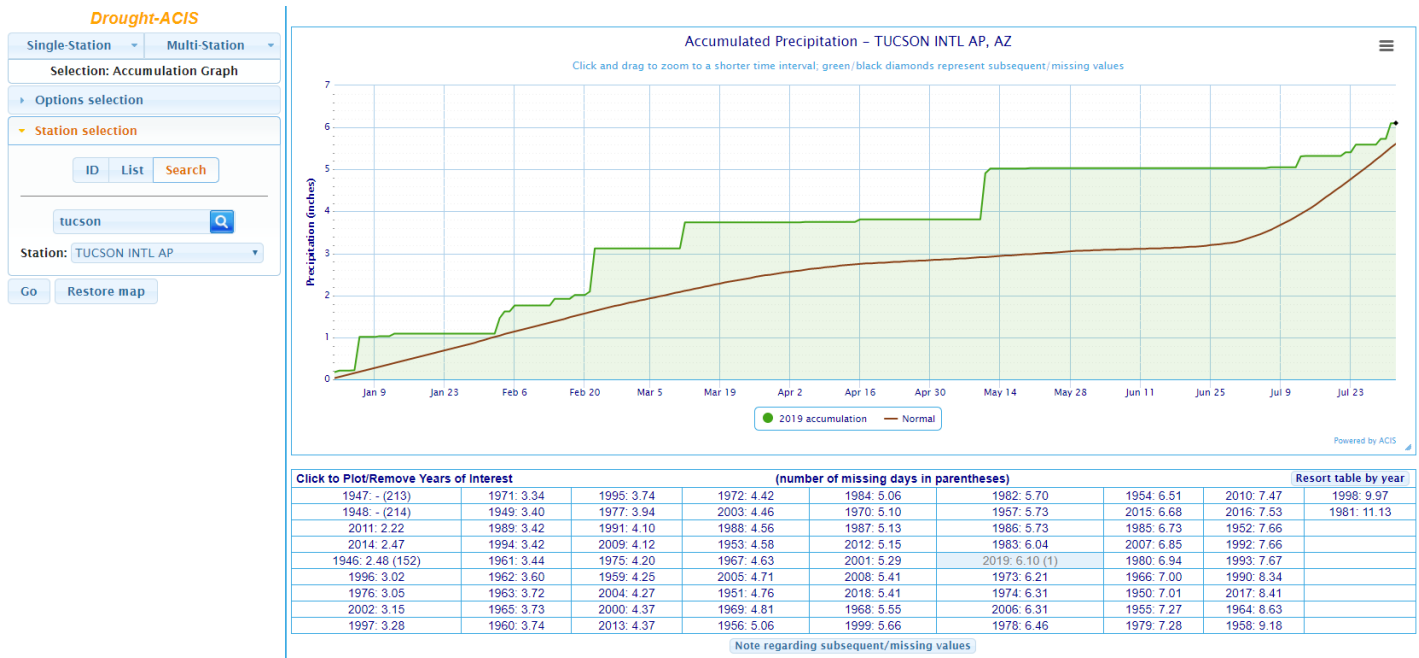
(<http://www.wrcc.dri.edu/wwdt/>)



More information available at :
<http://cals.arizona.edu/climate>
<http://www.climas.arizona.edu>

Questions /comments? Contact Mike Crimmins, crimmins@email.arizona.edu





The Drought-ACIS web tool allows you to access near-real time and historical data from any NOAA Cooperative Observer station, CoCoRAHS observers and some RAWS fire weather stations. Daily temperature and precipitation (both rain and snow) can be summarized in numerous ways to create charts and reports. The plot above shows the daily cumulative total precipitation at the Tucson International Airport from January 1st through July 31st with the green line depicting values in 2019 and the brown line the long-term average. The interactive table below the plot shows the total precipitation in each year of the historical record in order from driest (1996 at 3.06" to 1961 at 11.13"). Data from any of these years can be added to the existing chart by clicking on the year of interest.

All chart and table options are controlled through the interactive menu options on the left hand side of the page. Single station plots versus multi-station reports are first specified, then adjustments to time periods and variables and then finally selection if stations through a map interface. To explore all of the features of this web tool visit <http://drought.rcc-acis.org/> or the companion site <http://climod2.nrcc.cornell.edu/>.

The September-October-November seasonal precipitation outlook issued by the NOAA Climate Prediction Center in mid-July depicts an increased chance of above-average precipitation across all of Arizona for the upcoming fall season. This outlook continues to reflect the expectation that warmer-than-average sea surface temperatures (SSTs) which are present across the equatorial Pacific Ocean will continue to persist through the upcoming fall season. It isn't clear yet whether or not the SSTs will be warm

enough to be classified a weak El Nino event, but they may impact the fall weather patterns nonetheless. Warmer than average SSTs can enhance the east Pacific tropical storm season, bringing an increased risk of land falling storms on the Southwest U.S. Overall, this is a relatively low confidence outlook as reflected in the very small shift in probability towards above-average precipitation for the region. (More info at http://www.cpc.ncep.noaa.gov/products/predictions/long_range/)

