The Southwest is in the throes of one of the strongest La Niña events in the last 60 years. Based on past La Niña events, the probability for dry winter conditions in many regions in the Southwest is likely, particularly southern portions of Arizona and New Mexico, while the chances for above-average precipitation is close to zero. However, there will be variability that will cause some months and areas to be wetter than average. Although several early winter storms have clipped northern Arizona, delivering several inches of rain and snow, precipitation since the water year began on October 1 has been less than 50 percent in most other areas (Top Figure).

Scant rain and snow during La Niña events often causes the expansion of drought conditions in the Southwest, and forecasters expect drought to expand in the region this winter and spring. Abnormally dry conditions or worse cover about 40 percent of Arizona and New Mexico, with the more severe conditions located in the Colorado Plateau region of Arizona, according to the most recent U.S. Drought Monitor (Bottom Figure). Because forecasts call for the greatest chances of dry conditions in the southern portions of the region, short-term drought conditions will likely develop in these areas.

La Niña events also set the stage for longer-term drought impacts; the current 11-year drought was kicked-off by the strong La Niña event in 1998–99. They also cause delayed impacts. Fire risk, for example, is elevated in the spring after dry winters, and streamflows deliver less water to reservoirs in the spring when snowpacks are lower.
The La Niña event—one of the strongest in the last 60 years—is currently moderate to strong; the strength of the La Niña event usually correlates to the strength of the impacts.

Average winter precipitation in the Southwest during all past La Niña events has been either near average or drier than average, although precipitation variability does occur in space and time (Supplemental Figures 4–6).

Historically, La Niña events deliver fewer days of precipitation and less rain and snow when precipitation does fall (Supplemental Figures 7–9).

Models suggest that the highest probabilities for dry conditions in the Southwest correspond to the February–April period.

This La Niña also likely will bring warmer-than-average temperatures to the Southwest.

Impacts from a dry winter are often delayed until the spring when fire risk is elevated, streamflows are lower, and range conditions are less healthy, among other effects.

See supplemental graphics: www.climas.arizona.edu/drought-tracker/dec2010/suppl-figs