Strong winter storms at the end of December delivered widespread and heavy rain and snow to Arizona and New Mexico and helped end nearly two months of zero precipitation, particularly in southern regions. The storms are a good reminder that even during La Niña events when probabilities increase for drier-than-average weather, storms will drench portions of the Southwest. However, even with the recent rain and snow only northwest Arizona has experienced above-average precipitation since the water year began on October 1 (Top Figure). Southeast Arizona and southern New Mexico have been the driest, with deficits measuring between two and four inches below average. The La Niña precipitation pattern, which historically has the strongest signal in the southern tier of both states, is holding up in spite of recent weather. The wet conditions, however, will likely improve short-term drought conditions depicted in the most recent U.S. Drought Monitor (Figure 2). As of December 28, about 69 percent of Arizona was classified as “abnormally dry” or worse—an expansion of about 19 percent from one month ago—and about 32 percent as “moderate drought”. Conditions in New Mexico are drier; about 94 percent of the state is abnormally dry or worse and about 40 percent is classified with moderate drought, an increase of about 34 and 21 percent from one month ago, respectively.

The La Niña event remained moderate to strong during the last month and there is a greater than 80 percent chance that the event will persist into spring. Since all previous La Niña events have delivered dry winter conditions to the Southwest as a whole, and the strongest La Niña signal is in the January—April period, drought conditions are expected to expand (Supplemental Figure 1).
The La Niña event is currently classified as moderate to strong; it has maintained its strength over the past month and is one of the strongest events in the last 60 years.

Total winter precipitation in the Southwest during all past La Niña events has been near to or drier than average; the strongest La Niña precipitation signal in the Southwest occurs from January to April (Supplemental Figures 5–7).

Widespread precipitation in late December punctuated a very dry two-month period during which many regions received no rain or snow (Supplemental Figures 8–12).

Areas in southern Arizona and New Mexico are drier than average despite recent storms.

Recent storms demonstrate that during La Niña events, precipitation can vary both in time and space, with greater variability in northern regions.

Early winter snowpack in Colorado and Utah, from which a large portion of Colorado River and Rio Grande runoff originates, is above average.

Precipitation forecasts call for dry conditions in the Southwest for the rest of the winter.