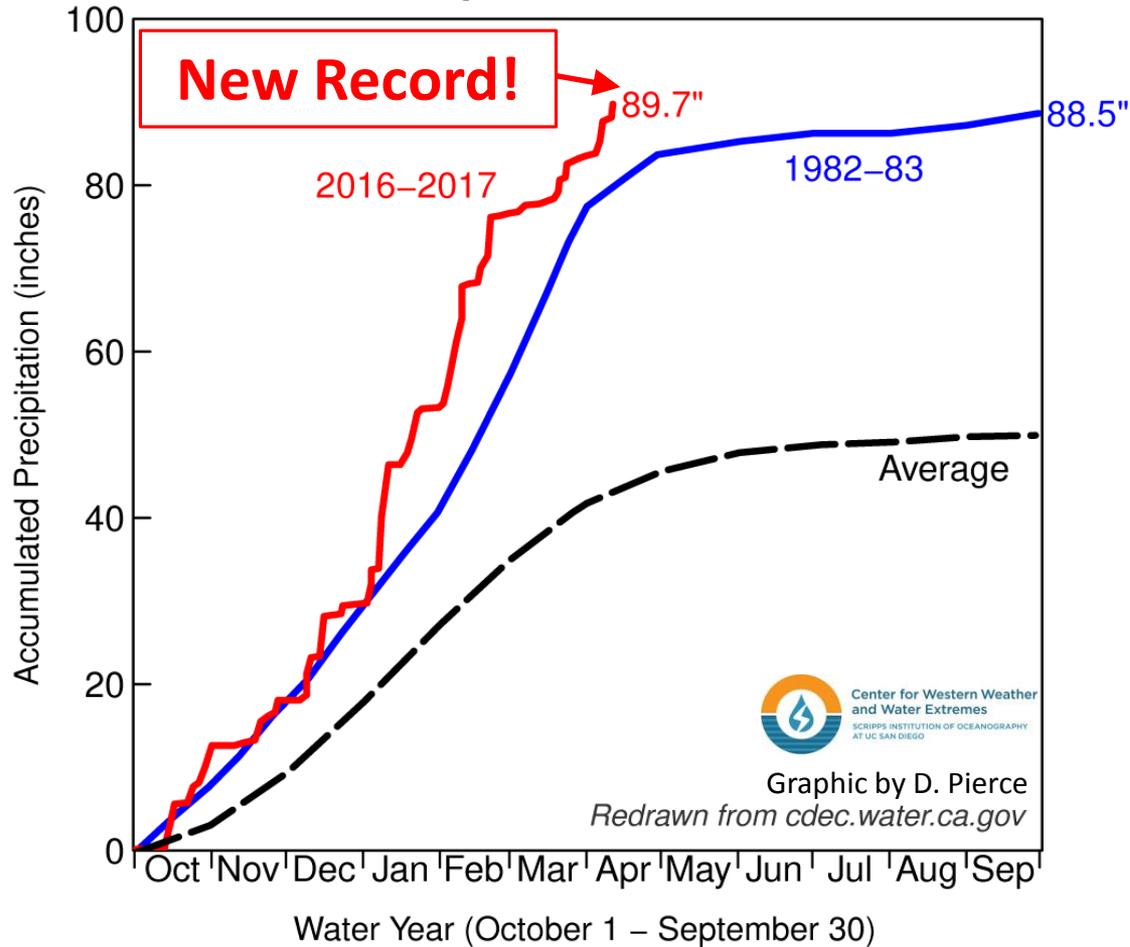


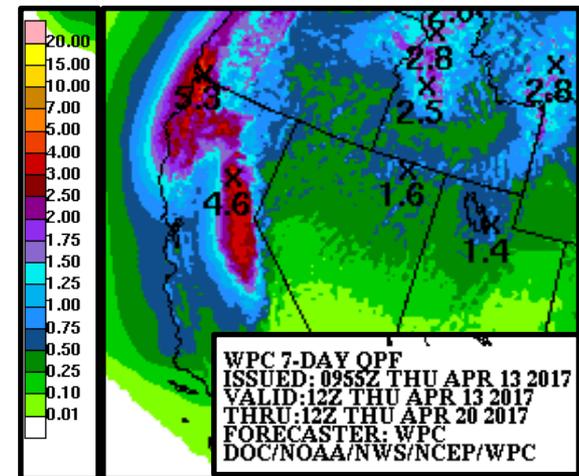
# The Record Breaking Water Year 2017

## Accumulated Precip in the Northern Sierra Nevada



The Northern Sierra 8-Station Index is currently at 89.7 inches, 1.2 inches higher than the wettest year on record (1983) of accumulated water year precipitation (1 Oct. 2016 to 13 April 2017)

The record is likely to increase with 1.5–5 inches of precipitation forecast for the high elevations of Northern California over the next week



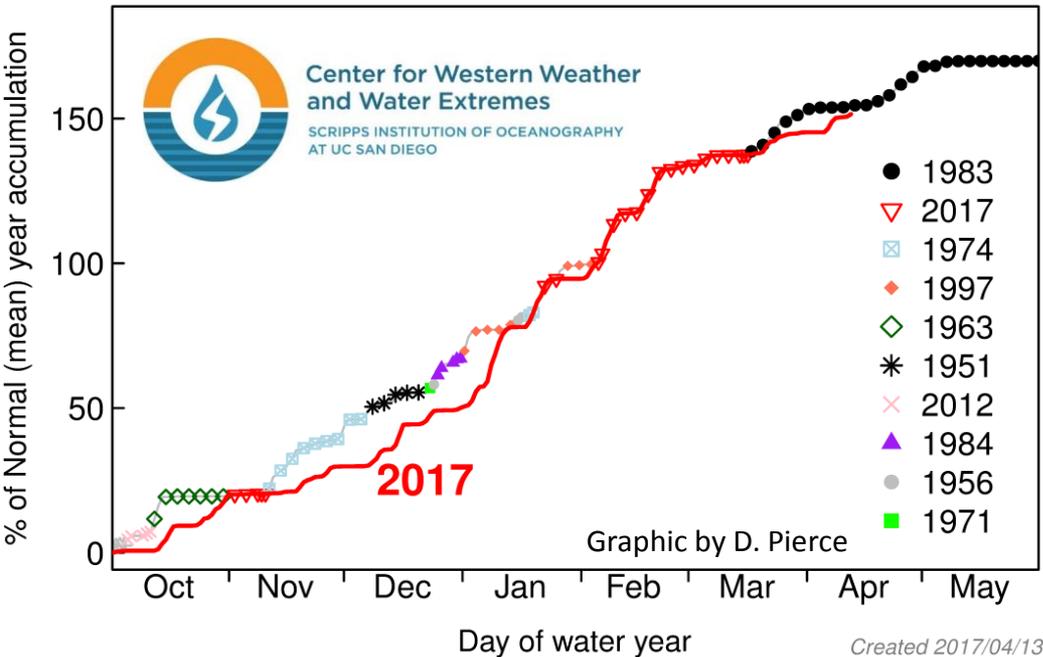
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AT UC SAN DIEGO

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# The Record Breaking Water Year 2017

Water year of each day's record high  
all\_CA accumulated precipitation



Across the entire state, precipitation accumulation is near record levels as well. During the period when ARs were hitting the state in Jan and Feb, all-state accumulated precipitation surpassed the previous record of 1982-83

Currently the all-state accumulation is close to the 1982-83 record but not surpassing that level despite the record accumulations in the Northern Sierra Nevada

Southern California has had modestly above average precipitation accumulation so far this winter, but far from record-breaking levels, bringing the total state-wide index down



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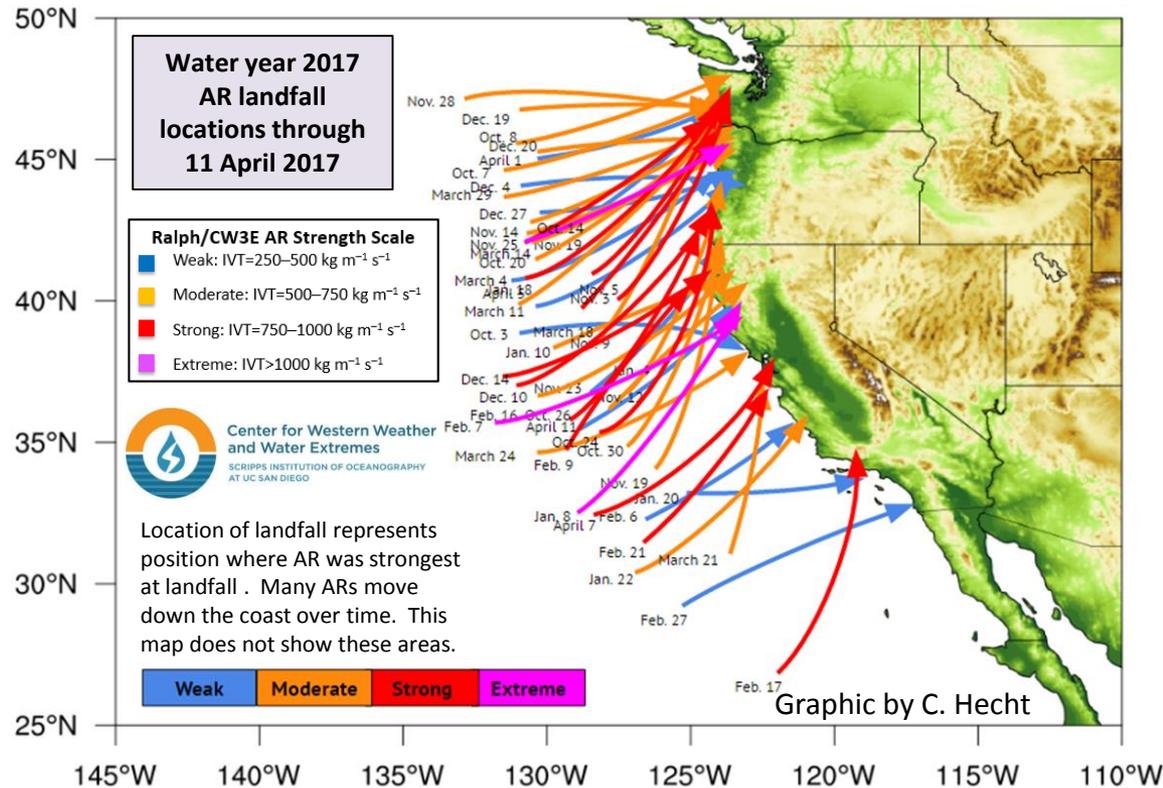
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A major contributor to the anomalous precipitation over California has been the numerous landfalls of atmospheric rivers over the U.S. West Coast

49 Atmospheric Rivers have made landfall over the West Coast thus far during the 2017 water year (1 Oct. – 11 April 2017), which is much greater than normal

Of the 49 total atmospheric rivers that made landfall this year, 1/3 have been “strong” or “extreme”

AR Strength	AR Count*
Weak	12
Moderate	21
Strong	13
Extreme	3



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Experimental

# The Record Breaking Water Year 2017

SWE Percent of April 1 Normal

Northern Sierra

Central Sierra

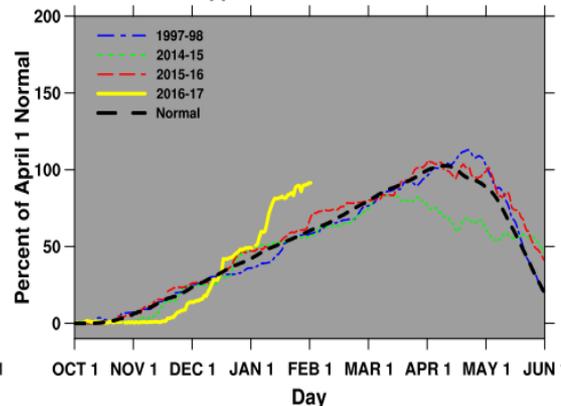
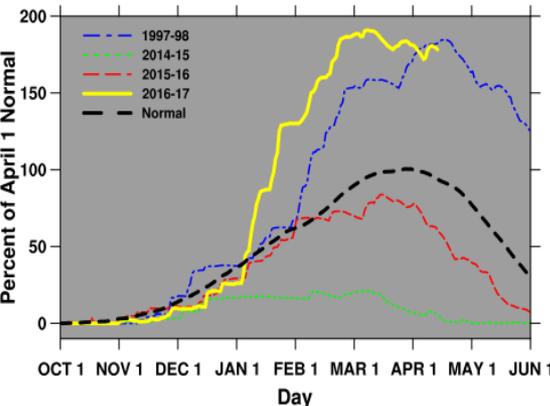
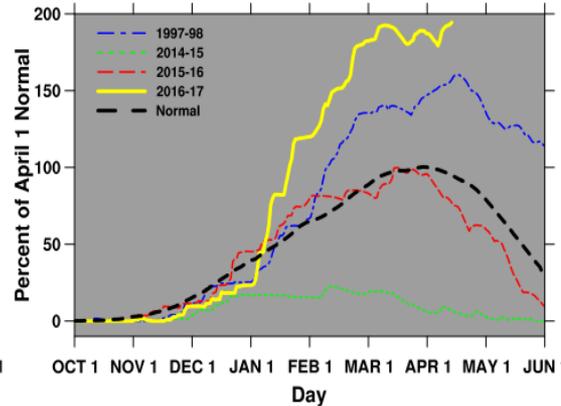
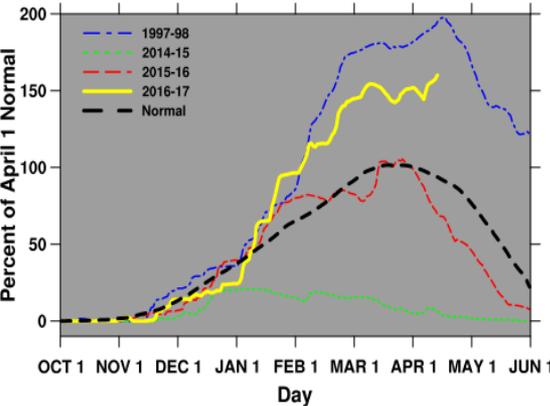
Southern Sierra

Upper Colorado R. Basin

Snowpack, as measured by snow water equivalent (SWE, the amount of water in the snow) has also reached high levels, especially in the Central and Southern Sierra Nevada (yellow line in the figure below).

However despite the record levels of precipitation in the Northern Sierra Nevada, SWE there is appreciably behind the levels seen during the El Nino winters of 1982-83 or 1997-98.

At the California state scale, the Department of Water Resources estimates that April 1 SWE in 1983 was 227% of normal, while this year was 163%.



Updated: Thu Apr 13 08:11:38 PDT 2017



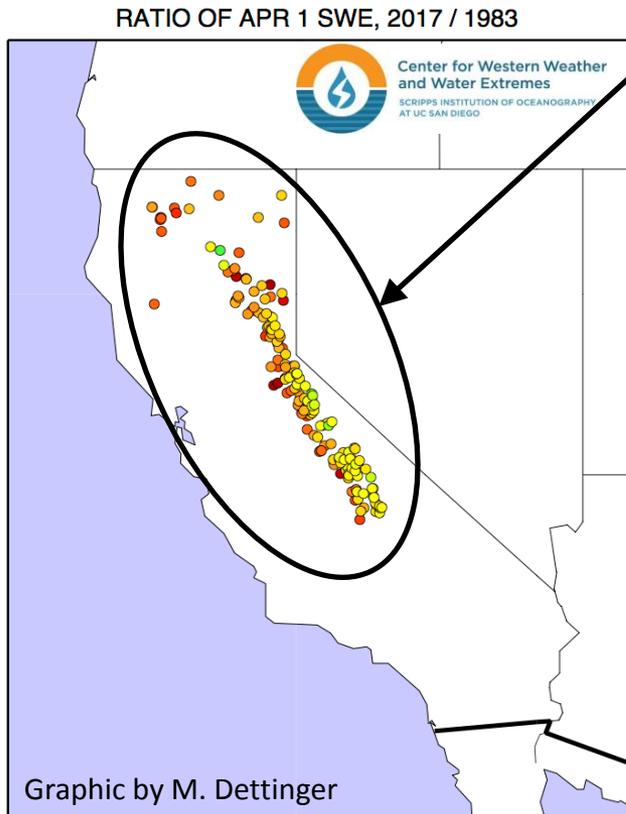
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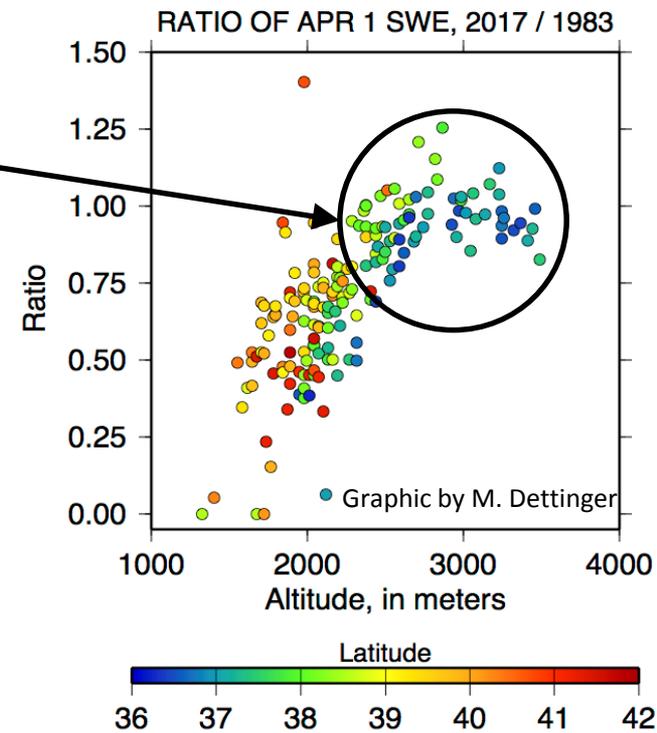
# The Record Breaking Water Year 2017

While precipitation totals for water year 2017 will most likely surpass 1983 at the Northern Sierra 8-Station Index, snowpack at many CA DWR snowcourses in the Sierras and Trinity Alps is lower when compared to 1983



At highest elevations ( $\sim >2500$  m), 2017 snow water equivalent (SWE) is comparable to 1983 SWE, but at lower altitudes the SWE has suffered a lot this year relative to 1983

Snowpack is important because it retains precipitation from intense winter storms, allowing the water to be released both gradually and later in the year, when it is more needed



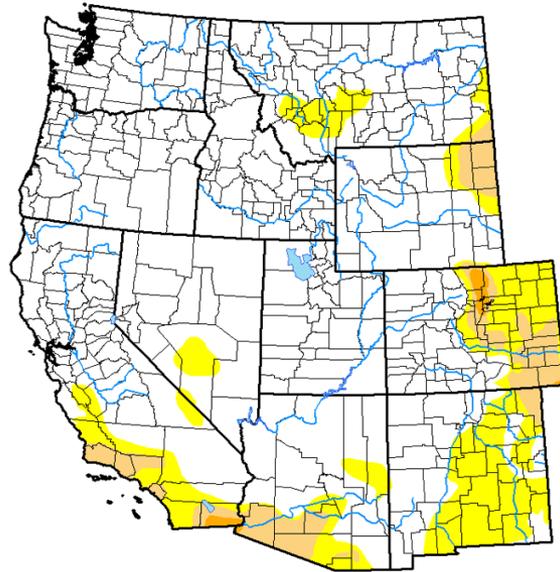
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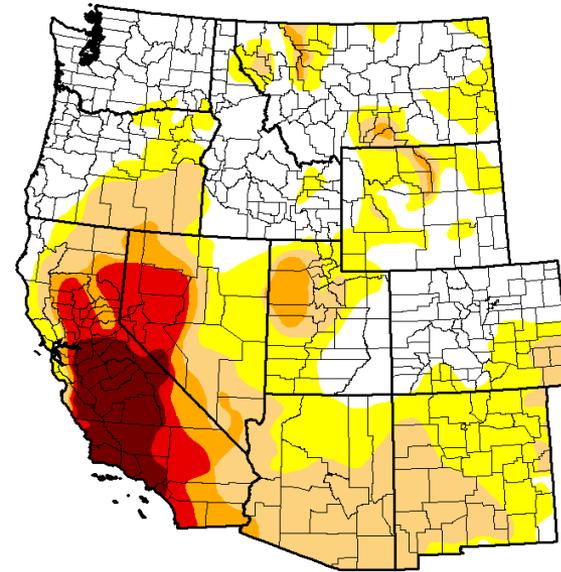
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# The Record Breaking Water Year 2017

April 4, 2017



April 5, 2016



Intensity:

 D0 (Abnormally Dry)

 D2 (Severe Drought)

 D4 (Exceptional Drought)

 D1 (Moderate Drought)

 D3 (Extreme Drought)

droughtmonitor.unl.edu

**The high levels of precipitation during the current water year have led to a significant reduction in the region's drought**

**One year ago much of California was in exceptional drought (brown areas). As of early April 2017, this has mostly ameliorated, with only residual pockets of moderate drought in the southern coastal region between Santa Barbara and Orange counties, and in Imperial county**



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