NWS FORM E-5 U.S. DEPARTMENT OF COMMERCE HYDROLOGIC SERVICE AREA:
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE **SAN JOAQUIN VALLEY - HANFORD, CA**

REPORT FOR:

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

MONTH: **NOVEMBER** YEAR: **2017**

TO: Hydrometeorological Information Center, W/OH12x1
National Weather Service/Office of Hydrology
1325 East-West Highway #7116
Silver Spring, MD 20910

SIGNATURE:

Kevin Durfee
(In Charge of Hydrologic Service Area)

DATE: December 1, 2017

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (WSOM E-41).

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¦ X ¦ An **X** inside this box indicates that no flooding occurred for the month
+---+ within this hydrologic service area.

November, 2017 was a rather abysmal month, hydrologically, across the HSA. Precipitation averaged slightly below normal in Merced County and Mariposa County and well below normal elsewhere. Statewide percentage of normal precipitation was distinctly split and averaged wetter than normal across much of northern California yet was exceptionally dry across the southern third of the state. (A map depicting the statewide percentage of normal precipitation for the month has been provided below.) Storm systems that trekked inland through the Pacific Northwest invariably ran out of moisture generally south of the 37th parallel. During the first two weeks of November, moisture-laden cold fronts that barreled inland from the Pacific either stalled north of the HSA or washed out upon arrival into the central California interior. The only area of the HSA that received respectable precipitation from these storm systems was in the southern Sierra north of Kings Canyon National Park where strong southwest to west winds aloft generated the healthiest orographically induced rain and high elevation snow.

There were two storms of hydrologic importance over the central California interior this month, both of which originated in the Gulf of Alaska and tracked well north of the HSA. The first one brought its precipitation into the district from the evening of the 15th through the 17th. The second system brought wet weather into the HSA from the evening of the 26th into the 27th. Cold fronts associated with these storms actually survived their journeys through Kern County, thanks to a southward dip in the jet stream. Nonetheless, moisture accompanying these cold fronts was almost completely wrung out by the time they swept through the Mojave Desert. The first storm produced precipitation amounts of 3 inches or more in the foothills and higher elevations of the Sierra from Fresno County northward. Farther south, precipitation diminished significantly over the mountainous terrain and ranged from little more than a quarter of an inch in the Tehachapi Mountains to nearly two inches in Sequoia-Kings Canyon National Park. In the San Joaquin Valley, rain totals from the first storm varied from just a hundredth of an inch at the south end to nearly three quarters of an inch in Merced County. Although the Kern county desert was largely rain shadowed by gusty downslope winds, a few locations did receive up to a couple hundredths of an inch of rain. Otherwise, this storm was essentially the first winter-like storm of the season and blanketed the Sierra with up to two feet of snow above 8,000 feet.

The second storm was a bit colder and moved through the HSA much quicker than its predecessor with consequently lower precipitation totals. Nonetheless, the foothills and higher elevations of the Sierra were doused with three quarters of inch of to nearly 1.5 inches of rain during the overnight hours of the 26th. Snow levels fell abruptly behind this storm and brought a dusting of snow to elevations as low as 4,000 feet in the Sierra. Otherwise, this storm left up to a foot of new snow in the Sierra above 8,000 feet by the time it exited into the Great Basin during the midday hours of the 27th. Rainfall was relatively scanty in the San Joaquin Valley from this storm and ranged from just trace amounts in the Kern County portion of the valley to nearly a quarter of an inch in Merced County. The storm left the Mojave Desert high and dry yet brought up to a third of an inch of rain to the Kern County mountain areas.

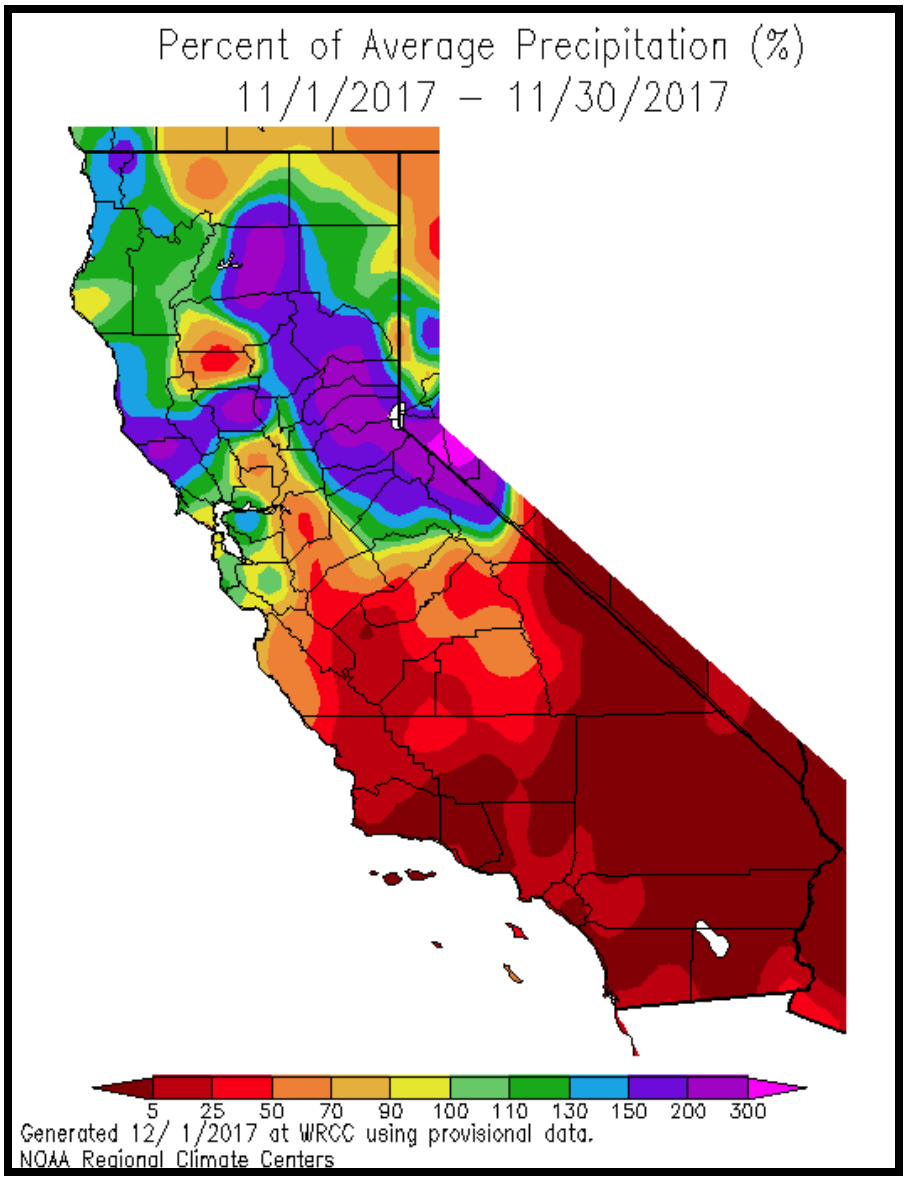
Temperature-wise, November 2017 ended up much warmer than normal throughout the central California interior. Bakersfield reached its 6th warmest November on record, and Fresno reached its 10th warmest. An upper level ridge of high pressure parked over Baja California for much of the month delivered several balmy afternoons. Thermometer readings soared into the lower 80s over the southern San Joaquin Valley, lower foothills and the Kern County desert during the afternoon of the 26th and established new records for the warmest ever maximum temperature for so late in the year in places like Hanford and Fresno. The season's first occurrence of Tule fog in the San Joaquin Valley happened close to daybreak on Veteran's Day, November 11th. The fog lifted into a deck of low stratus over the eastern third of the valley that morning and took until early afternoon to completely dissipate.

Despite a dismal start to the wet season across the HSA, most reservoirs across central California were still holding a respectable amount of water in them, especially compared to recent drought stricken years. By the end of November, the water capacity of the reservoirs averaged about 41 percent of normal. That's nearly 20 percent higher than the last day of November 2016.

HYDROLOGIC PRODUCTS ISSUED THIS MONTH

Flash Flood Watch….foothills and higher elevations of the Sierra (Fresno County northward)	2135Z	15-NOV
Flash Flood Watch….extended by 12 hours for the foothills and higher elevations of the Sierra (Fresno County northward)	0545Z	17-NOV

The map on the following page shows how much rain fell (in inches) throughout the Golden State during November 2017.



CC:

W/OH12x1
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