

SAN JOAQUIN VALLEY - HANFORD, CA

REPORT FOR:

MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS

MONTH: **DECEMBER** YEAR: **2018**

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: January 1, 2019

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.

Four separate storm systems brought wet weather into much of the central California interior during the month. Fortunately, none of these storms produced significant hydrologic impacts, and while beneficial, the amount of water carried into the HSA during the month still fell short of what would normally fall in an average December. The maps below this summary reflect this precipitation deficit fairly well throughout central California, not only for the month but also for the water year which began October 1st. Only portions of Kern county ended up with above normal precipitation this month, thanks to a storm that tracked eastward through the southern part of the state from December 5th into the midday hours of December 6th. This storm produced a wintry mess of snow and black ice over the Kern county mountain passes during the morning of the 6th. Although snow accumulations were generally less than an inch, it was enough to snarl traffic and create a few fender bender accidents over Tejon Pass hence forcing CHP to close Interstate 5 through the Grapevine for a short time. Kern county ended up with the lion's share of precipitation from this storm with totals of a half inch to an inch in the valley and desert regions and as much as 1.5 inches in the mountains. Less than a quarter of an inch of precipitation fell elsewhere over the HSA from this system.

A storm at the beginning of the month also threatened to bring ice and snow down to pass level in Kern county. Luckily, accumulating snow remained above 4500 feet but in locations such as Frazier Park and Pine Mountain Club, there were a number of automobile spinouts on the morning of December 2nd as wet roads turned icy underneath a light coating of snow. In the mountains to the north, 3 to as much as 10 inches of snow accumulated in the Sierra. Up to a quarter of an inch of rain fell in the lower elevations of the HSA from this early month storm while the orographically favored west slopes of the Sierra received up to an inch of precipitation. Another system that breezed through the HSA from the 16th into the 17th ended up being the wettest storm of the month, particularly from Fresno county north where a third of an inch to as much as 1.3 inches of rain fell. Up to a half foot of snow fell in the Sierra above 7,000 feet from this system. Farther south, precipitation totals were relatively light; generally less than a quarter of an inch. The Kern county desert remained dry with gusty downslope winds. The final storm of the month moved through during Christmas Eve with generous precipitation over the mountains. Scattered showers lingered into Christmas Day in the wake of this system. All in all, this holiday storm produced rain totals ranging from a tenth of an inch or less in the southern San Joaquin Valley and the Kern county desert to nearly an inch in the Sierra north of Kings Canyon. Residents in the Sierra above 5,000 feet awoke to a fresh blanket of snow Christmas morning. Snow amounts ranged from a dusting to two inches at 5,000 feet to as much as six inches in the Sierra above 6,000 feet.

December would not be complete without dense fog in the San Joaquin Valley. After all, the valley is like a giant bathtub during the Winter months after a wetting rain. Although fog greeted valley residents on several mornings, the most noteworthy episodes of Tule fog occurred on nights following each of the storms referenced above. Dense fog was fairly widespread in the San Joaquin Valley on the mornings of the 7th and 8th as well as the late night and morning hours from the 20th through the 23rd. Drizzle precipitated out of this fog during the mornings of the 21st and 22nd. Dense fog also spread into the Sierra foothills and the

north facing slopes of the Tehachapi mountains at times during the month, particularly on the morning of the 9th and again during the morning hours from the 22nd through the 24th.

Temperature-wise, December averaged a few degrees above normal. Even in the normally colder rural areas of the San Joaquin Valley, minimum temperatures remained well above freezing most nights. A Canadian air mass, ushered in by northerly winds aloft, invaded the HSA during the last weekend of the month and brought the season's first sub-freezing temperatures to much of the San Joaquin Valley. Thermometer readings fell into the upper 20s in the coldest locations of the valley during the final few mornings of the month and made it the valley's coldest spell of weather since the 3rd week of February.

Reservoirs throughout the central California interior saw a slight increase in water levels by the end of the month. As of January 1st, the water capacity of the dams averaged 35 percent of normal. The snowpack over the southern Sierra, which at one point peaked at about 89 percent of normal during mid December, dropped slightly during the latter half of the month and ended up at about 75 percent of normal by the start of the new year.

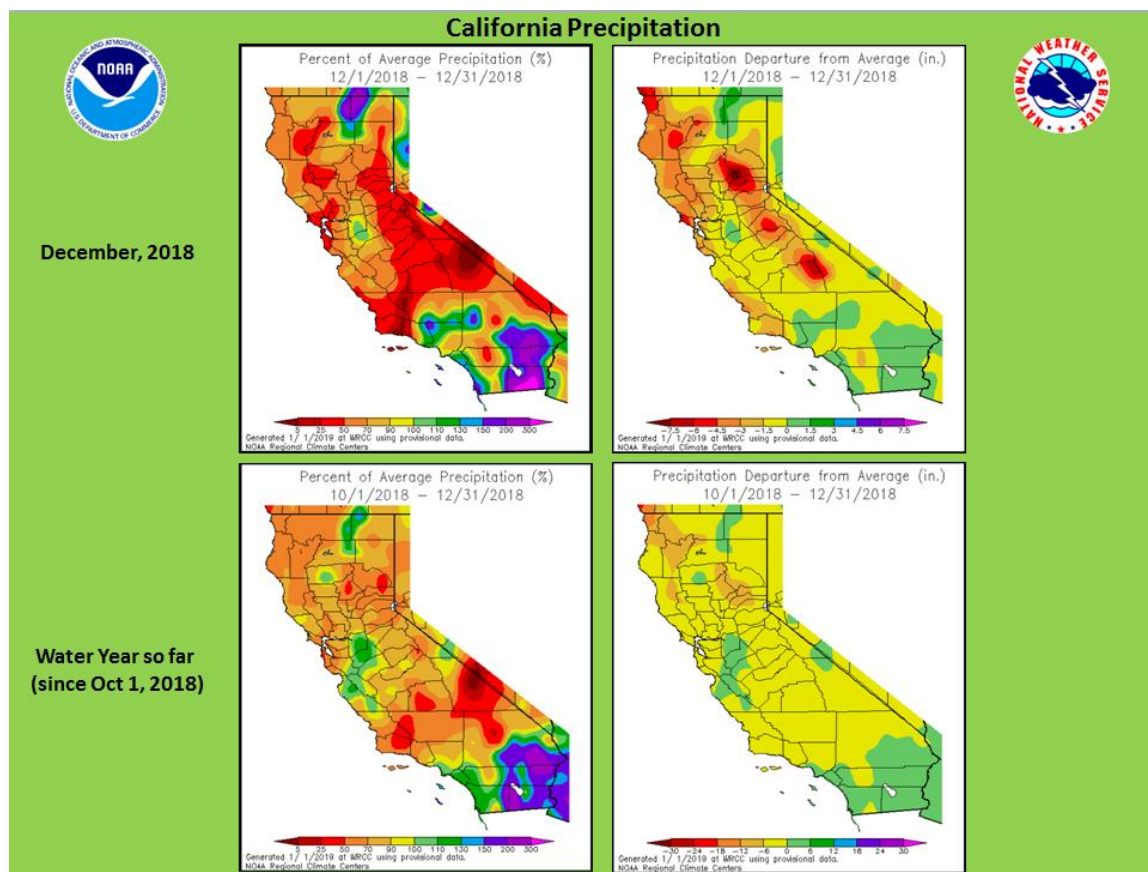
HYDROLOGIC PRODUCTS ISSUED THIS MONTH

Flood Advisories

Urban/Small Stream Flood Advisory (Mariposa county, Merced county, Madera county, Fresno county and Kings county)

0649Z

17-DEC



CC:

W/OH12x1
W/WR2
CNRFC
WFO HNX
WFO STO