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: **DECEMBER** YEAR: **2019**

TO: Hydrometeorological Information Center, W/OH12x1
National Weather Service/Office of Hydrology
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Silver Spring, MD 20910

SIGNATURE: Kevin Durfee
(In Charge of Hydrologic Service Area)

DATE: January 2, 2020

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).

| **X** | An **X** inside this box indicates no flooding occurred for the month within this hydrologic service area.

Several storms brought beneficial precipitation into the HSA during the month. The majority of storms originated in the Gulf of Alaska and tracked southward parallel to the West coast before turning inland south of Point Conception and traversing eastward through southern California. As a result, precipitation for the month averaged well above normal over the western half of the HSA and in the Kern County mountains and desert. Precipitation totals for the month ranged from 1 to 3 inches in the San Joaquin Valley and 3 to 8 inches in the foothills and higher elevations of the Sierra. In the Kern County mountains and desert, December totals of 2 to 4 inches were common with local amounts of up to 5 inches. The maps provided below this summary depict how much precipitation fell (in inches) over the Golden State during the month and how this precipitation compared to normal.

December, 2019 averaged wetter than normal over much of the HSA, especially over Kern County and along the west side of the San Joaquin Valley and adjacent coastal ranges. Aside from the ponding of water in the normally poor drainage areas, there were no incidents of significant flooding from the month's parade of storms. Considering their cold origins, the storms produced healthy snow accumulations in the mountains, particularly across the southern half of the state, including Kern County. Up to two feet of snow fell in the Tehachapi mountains from a storm that moved through southern California Christmas night into the 26th. Heavy snow brought traffic to a standstill along I-5 over Tejon Pass and along a stretch of highway 58 through Tehachapi Pass during the evening hours of December 25th. Both routes remained snow clogged and closed into the morning hours of the 27th and forced holiday motorists to take alternate routes in and out of southern California. Sadly, a truck driver that was stranded on snow-covered I-5 for several hours was found dead in his big rig on the morning of the 26th. Roads in the Kern County desert even became snow covered by the midday hours of the 26th. Several inches of snow fell over the higher ridges of the Mojave desert by the evening hours of the 26th. It was the second occurrence of accumulating snow in the Kern County desert since Thanksgiving. One more storm grazed the southernmost part of Kern County during the morning hours of December 30th with light precipitation. The storm brought a dusting of snow to the Tehachapi mountains. Fortunately, snow fell just above the mountain passes and did not cause any major travel disruptions for I-5 motorists through the Grapevine and along Highway 58 through Tehachapi Pass.

The month had its share of tranquil weather, too. During these cloud-free periods with light winds and chilly overnight temperatures, Tule fog became commonplace in the San Joaquin Valley. Fog was particularly widespread and persistent in the valley from the 9th through the 11th while an upper level ridge of high pressure anchored itself over the state. Air quality was extremely poor in the San Joaquin Valley during this period and was believed to have been caused by a combination of agricultural burns and the residential use of fireplaces. Dense fog also slowed motorists in areas of the San Joaquin valley during the morning hours of December 3rd, 15th and the 24th, and each morning after Christmas north of Kern County through the 31st.

December, 2019 averaged much warmer than normal. In fact, December, 2019 ended up as the 4th warmest December on record in Fresno and the 8th warmest on record in Bakersfield. Climate records in both locations date back to the late nineteenth century. Below freezing temperatures were rare in the San Joaquin Valley and bottomed out just below 32 degrees in the coldest locations from the 16th through the 20th and on the 28th.

The frequency of wet storms during the month deepened the Sierra snowpack and also put more water into the reservoirs. By January 1st, the snowpack over the southern Sierra was 109 percent of normal and the water capacity in the reservoirs averaged about 39 percent of normal, which was a 5 percent increase since the beginning of the month.

HYDROLOGIC PRODUCTS ISSUED THIS MONTH

FLOOD WATCHES

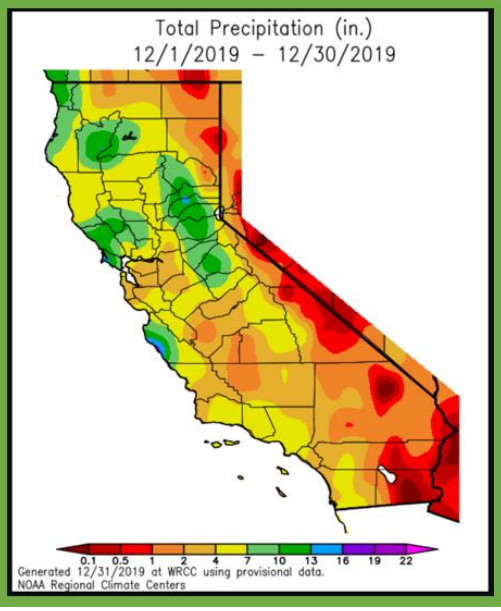
Flood Watch…the foothills and higher elevations of the Sierra	0458Z	01-DEC

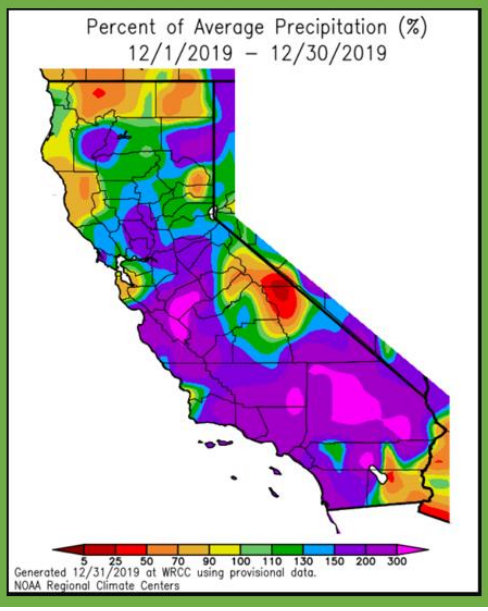
FLOOD ADVISORIES

Small Stream Flood Advisory…Madera Co portion of San Joaquin Valley	1940Z	08-DEC
Urban/Small Stream Flood Advisory…Fresno Co portion of San Joaquin Valley	2035Z	08-DEC
Urban/Small Stream Flood Advisory…San Joaquin Valley (Fresno Co/Tulare Co)	2136Z	08-DEC
Small Stream Flood Advisory…Fresno County foothills	2236Z	08-DEC
Urban/Small Stream Flood Advisory…San Joaquin Valley (Kern County)	0003Z	09-DEC
Small Stream Flood Advisory...San Joaquin Valley/foothills of Tulare County	0014Z	09-DEC

Precipitation in California for December, 2019

The majority of storms that brought precipitation into the Golden State during December, 2019 originated in the Gulf of Alaska and tracked southward parallel to the West coast before turning inland over southern California. This is the reason December precipitation averaged well above normal over the western half of central California and much of southern California.





CC:

W/OH12X1
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WFO HNX
WFO STO