

REPORT FOR:
MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS

MONTH: **DECEMBER** YEAR: **2020**

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 3, 2021

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 no flooding occurred for the month within this hydrologic service area.
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The primary storm track remained north of California for much of the month. Although cold frontal passages were rather frequent, the precipitation each of them brought to the HSA was not adequate enough to eliminate the drought over central California. Even in the areas that fared better with precipitation such as the foothills and higher elevations of the Sierra, precipitation totals for the month ended up well below normal. The west side and south end of the San Joaquin Valley, in addition to the Kern County desert, were areas that got severely short changed on cold frontal precipitation during the first four weeks of the month. The storm track finally dipped far enough south during the night of the 27th into the 28th to bring significantly wet weather into Kern County. Nonetheless, December 2020 ended up much drier than normal throughout the HSA. The increase in precipitation deficit for the month pushed the Golden State deeper into its drought as well. The most profound deficit shows up in the Sierra which ran a good 10 to 20 inches below normal for the year. Maps that depict the percentage of normal precipitation for the month and calendar year as well as the drought status are included at the end of this summary. Now for the specific hydrologic details:

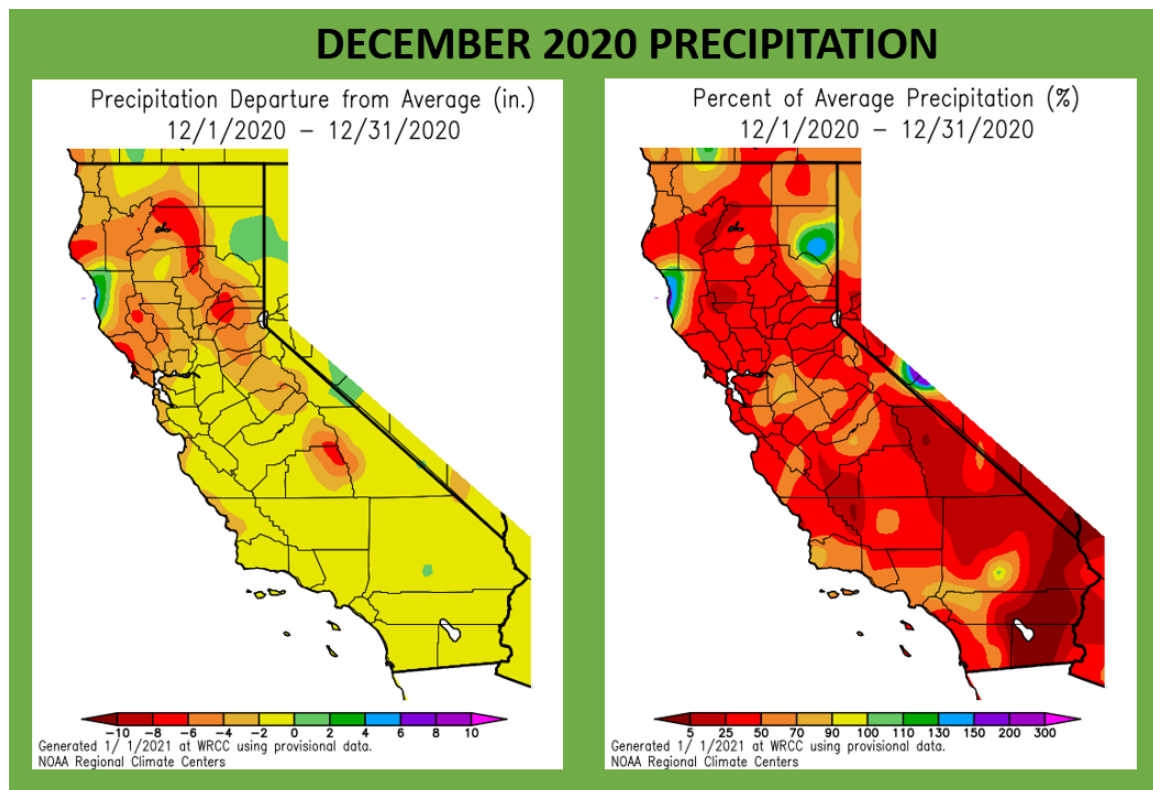
The first in a series of cold fronts passed through the central California interior during the overnight hours of December 11th and was quickly followed by another cold frontal passage during the afternoon of December 13th. 72-hour precipitation totals ending December 14th ranged from less than a tenth of an inch on the west side and the Kern County portion of the San Joaquin Valley to nearly three quarters of an inch along the east side of the San Joaquin Valley from Fresno county north. One to two inch precipitation totals were common to the foothills and higher elevations of the Sierra during this period. Up to three quarters of an inch fell in the Kern county mountains. Up to nine inches of snow fell in the Sierra above 6500 feet. Another cold front breezed southward through the HSA on the 17th. This front did not bring measurable precipitation to the San Joaquin Valley south of Kings county and Tulare county. Up to two tenths of an inch of rain fell over the rest of the San Joaquin Valley in addition to the Kern county mountains. The highest precipitation totals from the cold frontal passage on the 17th occurred in the foothills and higher elevations of the Sierra. In these areas, a quarter of an inch to as much as an inch of precipitation fell by the morning of December 18th. A cold, upper level storm system tracked down the California coast during Christmas weekend. By the time this storm exited into the Great Basin on the 28th, it produced a foot or more of snow over the higher elevations of the Sierra. The storm produced a light accumulation of snow as low as 3500 feet by the morning of the 28th and slowed travel over the Kern county mountain passes including Interstate 5 over the Grapevine. Otherwise, precipitation totals of one to two inches were common in the mountains. Up to three quarters of an inch fell in

the Sierra foothills. Rain amounts in the San Joaquin Valley varied from only a few hundredths to four tenths of an inch from this Christmas weekend storm. Up to a third of an inch of rain fell in the Kern county desert. One more cold front moved southward through the HSA on the morning of the 31st with some showers. It was cold enough for precipitation to fall as snow at pass level in the Kern county mountains which again slowed travel over the Grapevine and through Tehachapi pass where local accumulations of up to three inches were observed.

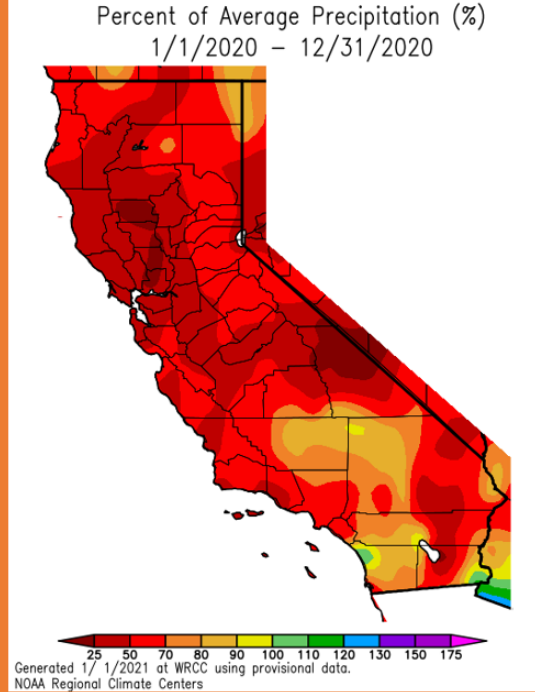
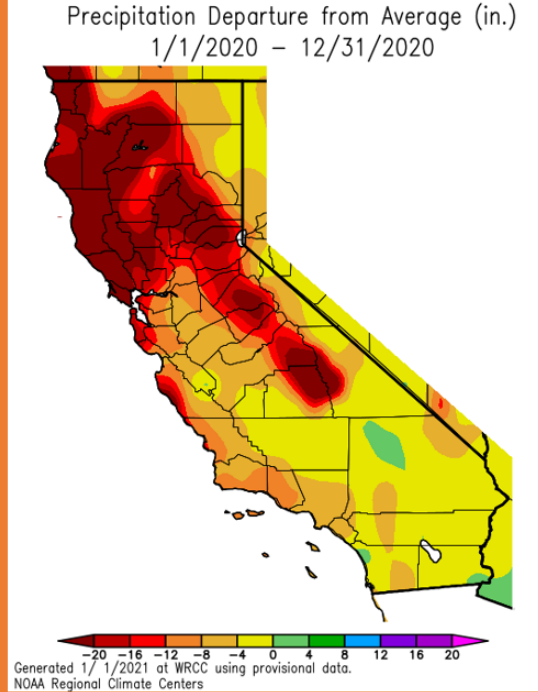
Temperature-wise, December 2020 ended up slightly warmer than normal over much of the central California interior. Tule fog was a frequent occurrence in the San Joaquin Valley. Practically every morning between December 13th and Christmas Day dawned with areas of dense fog in the San Joaquin Valley. An all day stratus blanketed much of the San Joaquin Valley after morning fog lifted on the 21st, 22nd and 23rd. High temperatures were only in the mid to upper 40s in areas of the San Joaquin Valley where the stratus never cleared.

Water levels changed very little in most of the reservoirs during the month with an average water capacity of about 22 percent as of January 1st. Meanwhile, the snowpack over the southern Sierra averaged about 35 percent of normal by the end of the month.

NO HYDROLOGIC PRODUCTS WERE ISSUED THIS MONTH.



CALIFORNIA PRECIPITATION 2020

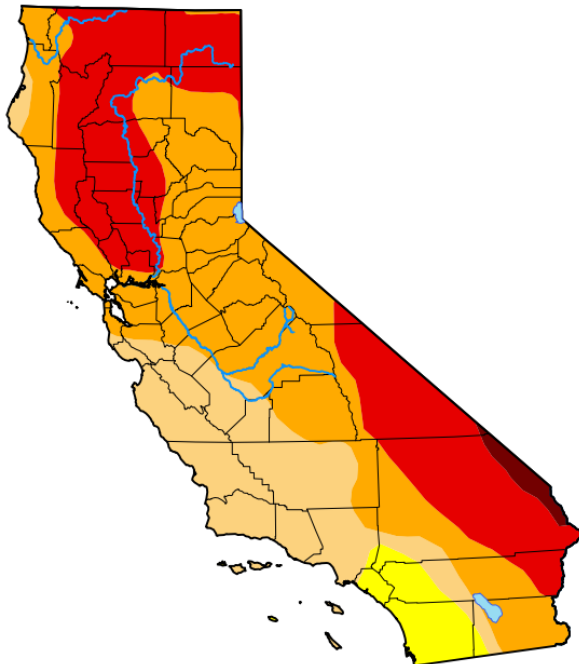


U.S. Drought Monitor California

December 29, 2020

(Released Thursday, Dec. 31, 2020)

Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	95.17	74.34	33.75	1.19
Last Week 12-22-2020	0.00	100.00	95.17	74.34	33.75	1.19
3 Months Ago 09-29-2020	15.35	84.65	67.65	35.62	12.74	0.00
Start of Calendar Year 12-31-2019	96.43	3.57	0.00	0.00	0.00	0.00
Start of Water Year 09-29-2020	15.35	84.65	67.65	35.62	12.74	0.00
One Year Ago 12-31-2019	96.43	3.57	0.00	0.00	0.00	0.00

Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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