

REPORT FOR:
MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS

MONTH: **JANUARY** YEAR: **2020**

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: February 1, 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.

From a hydrologic standpoint, the first month of 2020 was abysmal and substantially drier than normal, especially over the southern Sierra. In Bakersfield, it was the 13th driest January on record with historical archives dating back to the late 1800's. January is traditionally one of the wettest months of the year in the central California interior. January, 2020 fell substantially short of that reputation over much of the HSA. The graphical maps below this summary attest to how abnormally dry January, 2020 was and how it contributed to a growing precipitation deficit for the water year which began October 1st. The Sierra 5-Station Index and the Tulare Lake 6-Station Index were ranked in the top ten driest Januarys on record. A graphical historical archive of these indices clearly shows how dry the 2019-2020 water year has been so far compared to other water years. As of February 1st, some locations in the southern Sierra were experiencing a water year deficit of as much as 14 inches! Accordingly, much of the Golden State became classified as abnormally dry (D0) on the California Drought Monitor as of January 28th. (see below)

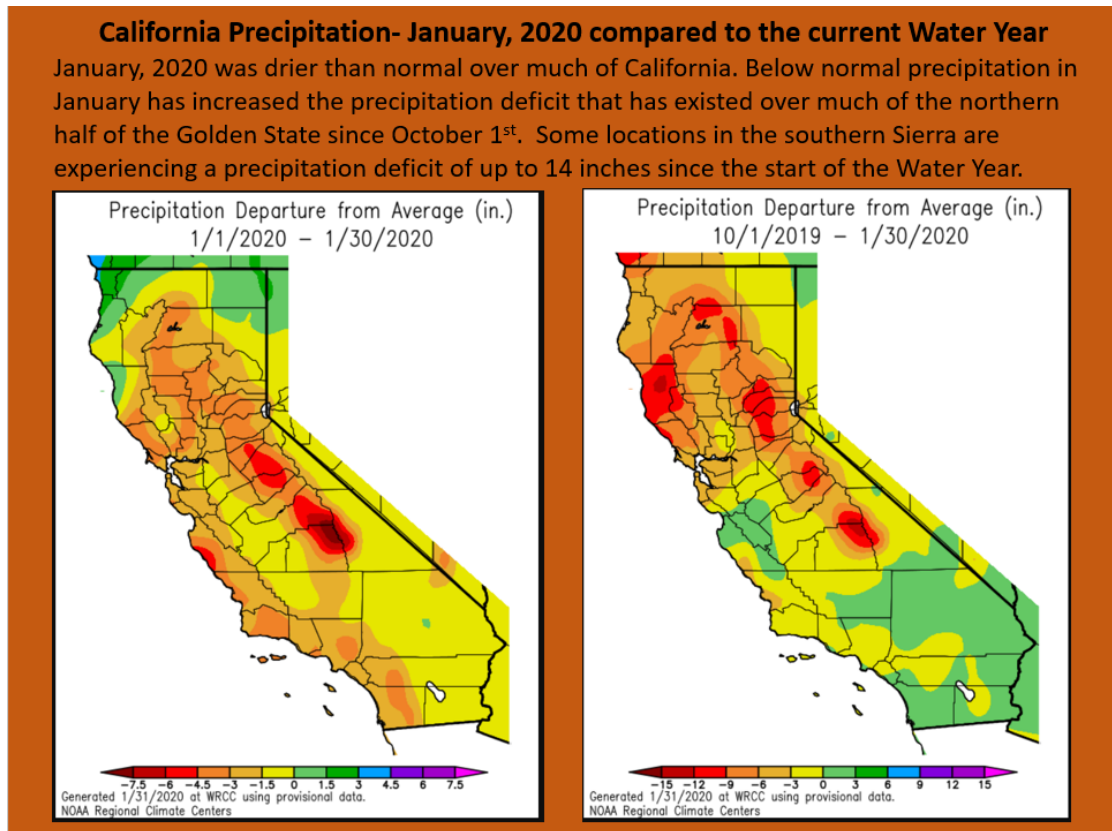
In the broader synoptic picture, storm systems frequently moved through the Pacific Northwest during the month. Only a few of these storms tracked far enough south to bring wet weather into the central California interior. The bulk of January's precipitation came from storms on the 9th and the 16th. A weaker storm moved through the HSA on the 26th. In addition, a couple of moisture starved cold fronts brushed the northernmost part of the HSA with light precipitation on the 14th and the 22nd. The storm system that passed through the region during the middle of January was, by far, the wettest, and produced the most significant impacts. For starters, the storm dumped up to fifteen inches of snow on the Sierra above 7,000 feet and brought a light accumulation of snow to elevations as low as 2500 feet on the afternoon of the 16th. This included the Kern county mountain passes where a combination of snow and ice disrupted travel during the evening hours of the 16th. Although I-5 over Tejon Pass never closed, CHP escorted traffic through the Grapevine for several hours until frozen precipitation ended. The storm brought a drenching rain to lower elevations including the San Joaquin Valley and Sierra foothills. Rain totals of up to three quarters of an inch fell in the San Joaquin Valley while up to an inch of rain fell in the mountains. Meanwhile, the storm's strong downsloping westerly winds kept the Kern county desert dry. Wind gusts were clocked as high as 90 mph near Ridgecrest and Inyokern on the evening of the 16th and overturned a tractor trailer on Highway 14.

The storm system that trekked swiftly through the central California interior on the 9th brought up to four tenths of an inch of precipitation to the HSA. Surprisingly, the largest rain totals from this system occurred in the San Joaquin Valley as opposed to the normally wetter orographic regions of the HSA such as the Sierra. It was also preceded by a morning of heavy drizzle in the San Joaquin Valley on January 8th where up to a couple hundredths of an inch of rain fell in a handful of locations. The only other noteworthy storm that also moved quickly through central California brought up to a quarter of an inch of rain to the northern San Joaquin Valley and adjacent foothills on the 26th. Up to six tenths of an inch of precipitation fell in the Sierra from this system. Precipitation amounts farther south were rather nominal (less than a tenth of an inch) in the Kern County mountains. Again, the Kern county desert remained dry with a recurrence of brisk westerly winds on the 27th.

Night and morning fog frequented the San Joaquin Valley during the month. Dense fog was most widespread in the valley during the mornings of January 5th through the 7th, the 18th and the 23rd and 24th. Fog proved deadly in the south valley on the morning of the 23rd and created a multi-vehicle accident in Tulare County between Ducor and Earlimart. The fog related accident resulted in one fatality. Two other motorists were severely injured and had to be transported to a nearby hospital. At the Hanford municipal airport, dense fog was observed on 21 mornings during the month.

Temperature-wise, January, 2020 averaged warmer than normal over much of the central California interior. The snowpack over the southern Sierra, which was 109 percent of normal at the start of January, dwindled to only 67 percent of normal by month's end. The loss of snow due to melting and sublimation ended up in the reservoirs, however. By February 1st, the percentage of normal water capacity of the reservoirs averaged 42 percent. That's an increase of about 3 percent since January 1st.

NO HYDROLOGIC PRODUCTS WERE ISSUED THIS MONTH.



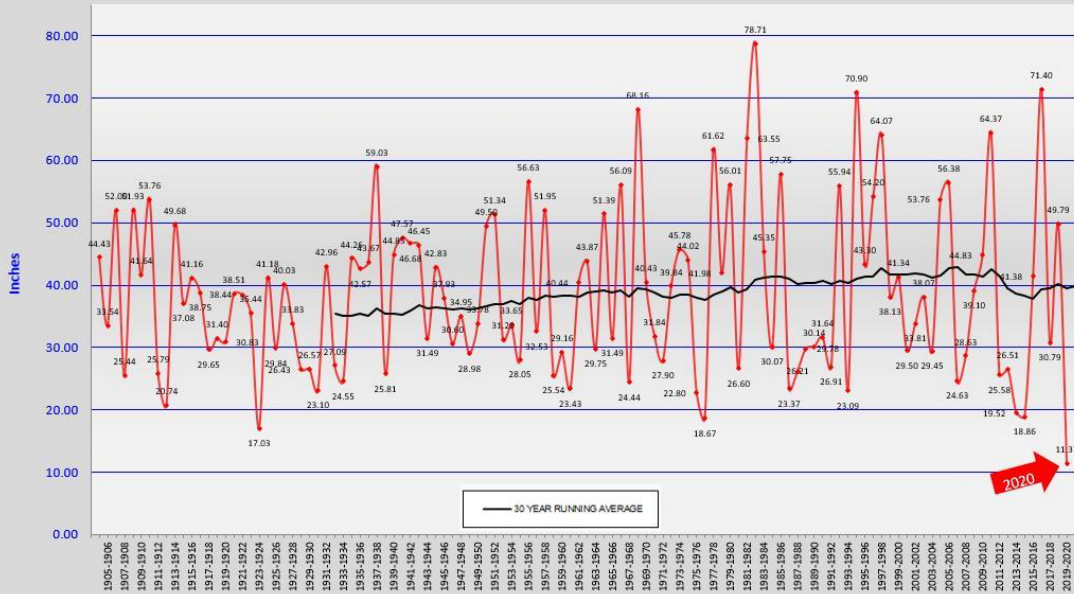
SJSSI Top Driest January's

Rank	Amt	Yr
1	0.19	1983-1984
2	0.20	2014-2015
3	0.38	1975-1976
4	0.82	1990-1991
5	0.97	1917-1918
6	1.05	2002-2003
7	1.14	1944-1945
8	1.25	2019-2020
9	1.28	2012-2013
10	1.45	1918-1919
11	1.45	1919-1920
12	1.48	1988-1989
13	1.50	2013-2014
14	1.55	1984-1985
15	1.56	2006-2007
16	1.69	1916-1917
17	1.73	1946-1947
18	1.77	1965-1966
19	1.81	1947-1948
20	1.98	1960-1961

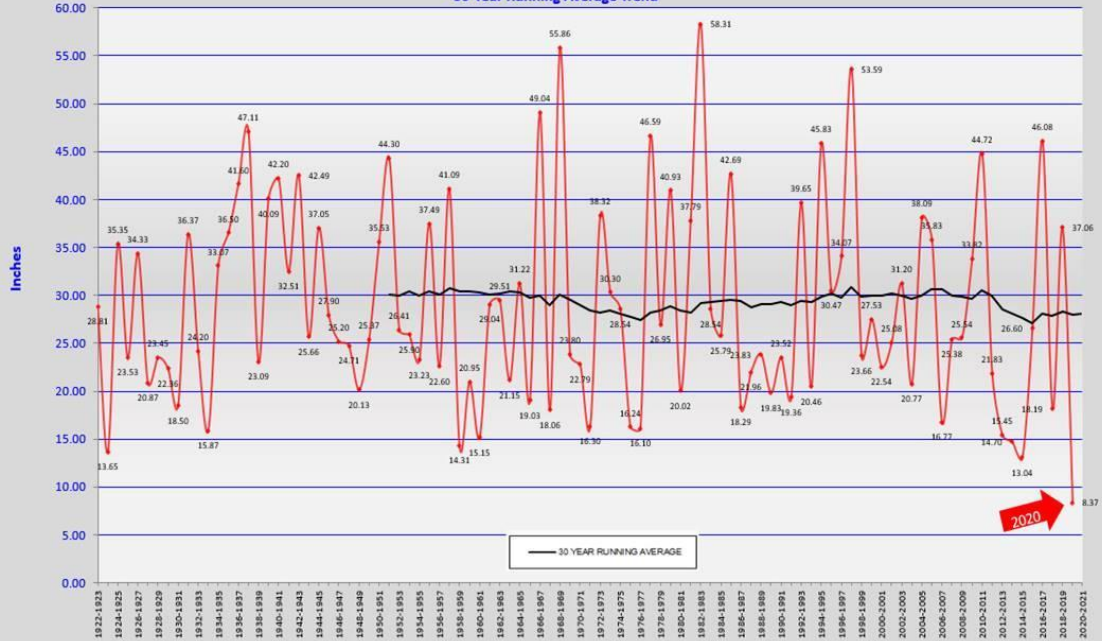
TL6SI Top Driest January's

Rank	Amt	Yr
1	0.03	1947-1948
2	0.09	1975-1976
3	0.18	1983-1984
4	0.34	2002-2003
5	0.50	2014-2015
6	0.73	2019-2020
7	0.85	1946-1947
8	1.10	2013-2014
9	1.18	1944-1945
10	1.22	2006-2007
11	1.30	1923-1924
12	1.30	1990-1991
13	1.34	1927-1928
14	1.39	1988-1989
15	1.41	1960-1961
16	1.59	1924-1925
17	1.73	1965-1966
18	1.75	1971-1972
19	1.76	1993-1994
20	1.86	1928-1929

San Joaquin 5-Station Precip Index
116 Year Climate History
1904 - 2020 with
30-Year Running Average Trend



Tulare Lake 6-Station Precip Index
98 Year Climate History
1922 - 2020 with
30-Year Running Average Trend

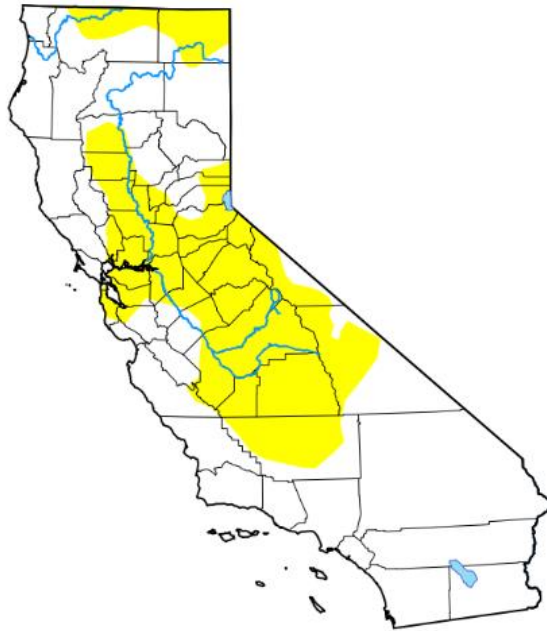


U.S. Drought Monitor California

January 28, 2020

(Released Thursday, Jan. 30, 2020)

Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	65.72	34.28	0.00	0.00	0.00	0.00
Last Week 01-21-2020	96.39	3.61	0.00	0.00	0.00	0.00
3 Months Ago 10-29-2019	82.26	17.74	2.06	0.00	0.00	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 10-01-2019	95.29	4.71	2.06	0.00	0.00	0.00
One Year Ago 01-28-2018	23.93	76.07	23.66	1.89	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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