

AUGUST 2023 WEATHER SUMMARY FOR THE CENTRAL CALIFORNIA INTERIOR

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The month was overall warmer than average, except for cooler than average areas towards the southeast (Fig 1) with much above average precipitation (Fig 2), or amounts anywhere from 200 to 400 percent of average or higher. This was mainly due to the impact of a tropical storm, Hilary, that arrived in our forecast area on the 20th. Cooler than average temperatures prevailed for the first few days of August due to a low pressure system along the Central California coast. As high pressure returned, temperatures rose back to well above average until the middle of the month. Afternoon showers and thunderstorms developed mainly over the mountains and desert during the middle part of the month. The main and most impactful precipitation event this month was due to the remnants of Hurricane Hilary, which was as strong as Category 4 over the Pacific Ocean off the coast of southern and central Baja California. Hilary arrived in Southern California as a tropical storm and even passed directly over eastern Kern County on the evening of the 20th. This storm brought widespread heavy precipitation and reports of storm damage, as well as flooding during the 19th through the 21st. Rainfall during the 20th exceeded four inches in a 24 hour period over much of Kern County, including in the mountains and desert. Bakersfield received over an inch of rain, while some locations such as Fresno and Los Banos reported funnel clouds and damaging wind gusts that knocked down trees. Other locations to the north set record daily precipitation amounts, and Hanford set a record high precipitation total for the month of August at 0.48 inch.

**Table 1 – August 2023 Summary Statistics–
NWS Hanford, CA ASOS Sites**

Location	Monthly Average Temp (deg F)	Departure from Average (deg F)	Temperature Rank	Total Monthly Precipitation (inches)	Departure from Normal (inches)	Precipitation Rank
Bakersfield	84.5	+1.1	27 th warmest	1.08	+1.08	2 nd highest
Fresno	83.8	+1.6	13 th warmest	0.19	+0.19	3 rd highest
Hanford	82.0	+2.1	7 th warmest	0.48	+0.48	Highest
Madera	80.2	+1.2	16 th warmest	0.05	+0.05	8 th highest
Merced	79.7	+1.8	19 th warmest	0.07	+0.07	11 th highest

Table 2 – Number of Days with High Temperatures of 100 Degrees and Above for NWS Hanford, CA ASOS Sites

Location	Number of 100 deg days	August Average	Season to date Total Number of 100 deg days (since May 1st)	Season to date Average (since May 1st)	Total Seasonal Average (May 1 – Oct 31)
Bakersfield	11	11	33	32	36
Fresno	11	12	36	34	38
Hanford	12	9	39	27	30
Madera	11	8	34	25	28
Merced	5	10	19	20	23

1st – 4th: Mainly dry with below average to seasonably warm temperatures.

5th – 9th: Mainly dry but with seasonably warm or slightly above average temperatures.

10th-14th: Near to above average temperatures with showers and thunderstorms over the mountains and desert each day. Strong storms developed on the 12th and 13th and prompted numerous Significant Weather Advisories, as well as a few Flood Advisories and one Severe Thunderstorm Warning (southwest of Tehachapi) in the mountain and desert areas. Some light precipitation and isolated thunderstorms also occurred in the San Joaquin Valley on occasion.

15th-18th: Much above average temperatures with showers and thunderstorms confined to the higher elevations of the Sierra Nevada, except for brief intrusions of light showers and isolated thunderstorms into the San Joaquin Valley. High temperatures reached or exceeded 105 degrees at times at the warmest lower elevation locations, including in the Central Valley, lower Sierra Nevada foothills, and the Kern County desert.

19th-21st: Scattered to widespread showers and thunderstorms across much of Central California. On the 19th, strong thunderstorms developed, including in the San Joaquin Valley, that produced gusty winds. Some downed trees were reported in southeastern portions of Fresno and Clovis because of downburst winds. Record high precipitation amounts reached at locations throughout the San Joaquin Valley, including Bakersfield, Fresno, Hanford, Madera, and Merced. The 24-hour rainfall on the 20th was 3-4 inches in various locations throughout eastern Kern County, including in both the mountain and desert areas. This was due to Tropical Storm Hilary, and its low pressure center moved directly over eastern Kern County on the evening of the 20th. This was the first time, or since the National Hurricane Center began record keeping of storm tracks in 1949, that a tropical cyclone remained in Tropical Storm status while passing over Kern County. Widespread flooding forced road closures along Highway 58 at Cache Creek, Highway

14 from Mojave to Highway 178 near Inyokern, and Highway 395 in eastern Kern County. Over one inch of rain fell in Bakersfield, and numerous locations outside of the mountains and desert in Kern County received similar or even higher amounts. Reports of road closures due to flooding to the east of Bakersfield were also received, including towards Edison, Arvin, and Lamont. Gusty easterly winds were also reported in the Kern County mountains and desert, with gusts as strong as 45 to 55 mph. In addition, record low maximum temperatures occurred on the 20th, including in Bakersfield and Hanford. Scattered showers and thunderstorms redeveloped on the afternoon and evening of the 21st in the Sierra Nevada as well as in the San Joaquin Valley and adjacent coastal ranges. Funnel clouds were also reported towards Fresno and Los Banos that day.

22nd-31st: Seasonably warm, while above average, temperatures with dry conditions occurred. Occasionally, daily maximum temperatures reached at or just above 100 degrees in the San Joaquin Valley. Some days had observed highs above 105 degrees in the Kern County desert, including in the Indian Wells Valley. Otherwise, triple digit heat prevailed in the desert for much of this period.

Table 3 – Seasonal Precipitation for ASOS locations (ending on August 31st)

Location	Since Jan 1st (inches)	Departure From Average (inches)	Since Jul 1st (inches)	Departure From Average (inches)	Since Oct 1st (inches)	Departure From Normal (inches)
Bakersfield	8.99	+4.57	1.08	+1.08	11.34	+5.03
Fresno	12.77	+5.05	0.19	+0.19	18.02	+7.08
Hanford	11.41	+5.76	0.48	+0.46	15.06	+6.97
Madera	8.78	+1.20	0.05	+0.04	11.67	+0.91
Merced	14.72	+6.54	0.09	+0.09	20.93	+9.18

Table 4 – Warmest High Temperatures and Coolest Low Temperatures of the Month for ASOS locations

Location	High	Date(s)	Low	Date(s)
Bakersfield	109	17 th	65	4 th
Fresno	108	15 th	63	3 rd & 4 th
Hanford	108	17 th	57	3 rd
Madera	107	15 th	56	4 th & 28 th
Merced	104	15 th	57	3 rd , 28 th , 29 th & 30 th

Daily Records Set During August 2023

Bakersfield –

10th: Record high precipitation of trace reached, which tied the daily record high precipitation set for the date in 1958.

17th: Record high maximum temperature of 109 degrees reached, which tied the record high maximum temperature last set for the date in 2015.

20th: Record low maximum temperature of 74 degrees reached, which broke the old record of 77 degrees last set for the date in 1959. Record high daily precipitation of 1.08 inches reached; no precipitation had previously been recorded on this date since records began in 1893.

Fresno –

20th: Record high precipitation of 0.12 inch set, which broke the old record of trace last set for the date in 1939.

21st: Record daily maximum precipitation of 0.03 inch set, which broke the old record of a trace set for the date in 1949.

22nd: Record daily maximum precipitation of 0.01 inch set, which broke the old record of 0.06 inch set for the date in 1976. Record low maximum temperature of 78 degrees set, which broke the old record of 79 degrees set for the date in 1959.

Hanford –

10th: Record high precipitation of trace reached, which tied the daily record high precipitation set for the date in 1924.

16th: Record high precipitation of trace reached, which tied the daily record high precipitation set for the date in 1941.

19th: Record high precipitation of 0.19 inch set, which broke the old record of trace set for the date in 1922.

20th: Record high precipitation of 0.28 inch set, which broke the old record of trace set for the date in 1939.

21st: Record daily maximum precipitation of trace tied, which last occurred on the date in 1949.

Madera –

15th: Record high maximum temperature of 107 degrees reached, which tied the record last set for the date in 1967.

21st: Record daily maximum precipitation of trace set. No precipitation had previously fallen on this date since records began in 1928.

Merced –

20th: The low temperature was 71 degrees, which broke the old record low maximum temperature of 70 degrees set for the date in 1986.

21st: Record daily maximum precipitation of 0.01 inch set, which broke the old record of a trace set for the date in 2003.

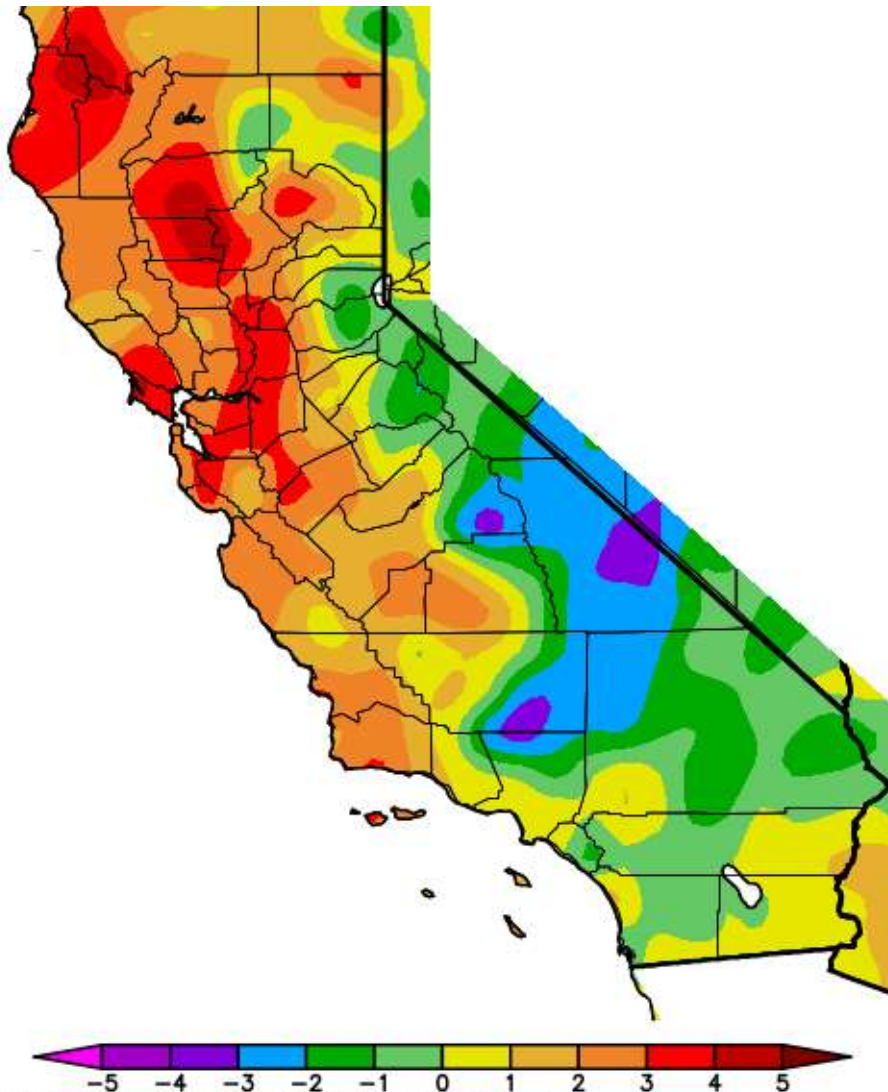
Monthly Records set for August 2023:

Hanford: Monthly record high precipitation of 0.48 inch set, which broke the old record of 0.34 inch last set in 1964.

Fig 1 – Departure from Average Temperature for this month

Ave. Temperature dep from Ave (deg F)

August 2023



Generated 9/ 4/2023 at WRCC using provisional data.
NOAA Regional Climate Centers

Fig 2 – Departure from Average Precipitation for this month

(Images generated by PRISM Climate Group at Oregon State University.)

