California Monthly Climate Summary
August 2014

Weather Highlights

August 2014 was a warm and near average precipitation month for California. According to the Western Region Climate Center's California Climate Tracker, the monthly average temperature was 72.5°F which is 0.6°F higher than the long-term average of 71.9°F. With a statewide average of 0.31 inches, precipitation in August was 108% of average.

August began with monsoon moisture across the State with upper level disturbances setting off showers in some places and thunderstorms over the mountains and southern parts of the state. The monsoon moisture persisted into the second week with some record precipitation developing in the southern part of the state. High minimum temperature records were set due to cloud cover. Onshore flow developed during the third week with continued monsoonal activity over southern California. Some flash flooding was reported with some of the thunderstorms. The month closed out with high pressure dominating the state. Inland penetration of marine air into the Central Valley did provide some cooler temperatures in some places.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 43 temperature records tied or broken and 34 precipitation records set for the month. Of the 43 temperature records set, 14 were for new low maximum temperatures and 27 were for new high minimum temperatures. Iron Mountain California in the southeast desert region set a new monthly record for precipitation with a total of 3.75 inches. Average precipitation for August is 0.42 inches and the previous record was 2.31 inches set in 2008. Records were set over 17 days of the month.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 12 stations recorded a minimum temperature below freezing in March while 88 stations reached or exceeded 100°F at least once during the month. Statewide extremes from the CDEC network of temperature gages are shown below. Also shown are the monthly average extremes from the CIMIS network. A table of regional average minimum, mean, and maximum temperatures from the CDEC stations is also shown at the end of the summary.

Precipitation in August was impacted in places by an active monsoon. For the CDEC precipitation gages for August 2014, the largest amount of precipitation recorded was at Needles in the Colorado River Desert region with 2.7 inches. This is 458% of the average precipitation for this station for August. At the other end of the spectrum, 33 stations recorded no precipitation for the month. For the CIMIS network, Moraga in Contra Costa County topped the precipitation charts with 3.92 inches for the month and 67 stations recorded no precipitation. Some CIMIS gages may show large precipitation totals if the gages are not covered during irrigation activities so care should be given to review precipitation data used from this network.

The 8-Station Index for northern California precipitation recorded 0.6 inches in August. On average, 0.3 inches of precipitation is recorded for the 8-Station index for the month. The San Joaquin 5-Station Index recorded 0.0 inches of precipitation for August. On average, 0.2 inches of precipitation is recorded for the 5-Station Index for the month.

CoCoRaHS Update

Water Year 2014 continues California's fifth year with CoCoRaHS – the Community Collaborative Rain, Hail and Snow Network. This group uses citizen volunteers to record rain, hail and snow data. The users enter the data online at the CoCoRaHS web site. The web site provides the opportunity to see spatial detail of rain and snow patterns. A map from August 4, 2014 is shown at the end of the document. As of the end of August, California has 1159 volunteers signed up spanning 54 of California's 58 counties. The counties without volunteers are Alpine, Colusa, Glenn, and Modoc. The counties with the most volunteers at the end of June are San Diego and Sonoma with 104 and 101 volunteers respectively. For the month of August, 9,916 reports were recorded for California. The largest daily rain total for CoCoRaHS- CA in August was in San Diego County where 1.90 inches was recorded on 8/4/2014. There were zero reports of snowfall recorded during the month and no total depth of snow reported in August. Three hail reports were submitted for the month; one each from San Bernardino, Riverside and El Dorado Counties. The largest stone size was from Riverside County at ½ inch. To join CoCoRaHS or find more information, please visit http://www.cocorahs.org.

Snowpack and Water Supply Conditions

April 1st is the traditional peak of the snowpack accumulation in the Sierra Nevada. At the end of May 2014, all three regions reported no snow water equivalent. The Water Supply Index (WSI) for WY2013 for the Sacramento Basin fell into the dry category and the San Joaquin fell into the critical category. The median forecast for the WSI for both the Sacramento and San Joaquin Basins this year is the critical category. More information can be found at http://cdec.water.ca.gov/water_supply.html. A historical listing of water year categories for both basins can be found at http://cdec.water.ca.gov/cgi-progs/iodir/WSIHIST.

Drought Monitor and Seasonal Outlook

The maps for California for July 29, 2014 and August 26, 2014 are shown below. The Drought Monitor maps can be found on the National Drought Mitigation Center's (NDMC) website http://drought.unl.edu/dm/. These maps are largely a reflection of precipitation and soil moisture deficit estimates. As of the August 26th depiction, 58.41% of California is depicted in the D4 or exceptional drought category, 23.51% of California is depicted in the D3 or extreme drought category, and 13.50% of California is depicted in D2 or severe drought category and 4.58% of California is depicted in D1 or moderate drought. Maps are updated weekly.

The U.S. Seasonal Drought Outlook for September through November from NOAA depicts California in persisting drought throughout the state. This forecast is based primarily on climatology and forecast models. Maps and information can be found at http://www.cpc.noaa.gov/products/expert_assessment/seasonal_drought.html. Updates are provided twice per month.

For more information on water conditions in California, visit http://www.water.ca.gov/waterconditions/. A table showing end-of-August reservoir storage by hydrologic region is shown at the end of this document.

ENSO Conditions and Long-Range Outlooks

The El Niño/Southern Oscillation (ENSO) is currently in neutral conditions. Equatorial sea surface temperature anomalies for the tropical Pacific have been positive with values of 0.4°C in the Niño 3.4 at the end of August. The June through August 3-month running mean of the Ocean Niño Index (ONI) is 0.0. Five consecutive ONI values need to be above the 0.5 threshold need to be observed for classification as an El Niño event. Most forecast models have the tropical sea surface transitioning to El Niño conditions by the latter part of summer. More information can be found at the Climate Prediction Center's web site: http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ Updates are posted weekly. The latest three month outlook (September through November) from NOAA indicates a higher probability for above normal temperatures for the State. For precipitation, a higher probability of above average conditions is forecast across the southern third of the. Outlook plots and discussions can be fount at http://www.wrcc.dri.edu/longrang/. General weather information of interest can be found at http://www.noaawatch.gov/. For anomaly information please see http://www.wrcc.dri.edu/anom/cal_anom.html.

Agricultural Data

August 2014 saw harvests pick up across the state. Cotton fields are in full bloom with 85% rated good to excellent. Alfalfa was cut, dried and baled and Sudan grass showed significant growth. Some fields that would normally be planted with a second crop were left fallow due to drought conditions. Black eyed peas were in various stages of development. Pears and grapes continued to be harvested. Olives, figs, and kiwis continued to mature normally. Walnuts were maturing about 2 weeks ahead of schedule. Shaking has started in almond orchards with harvest in full swing in others. Tomato harvest is active in many counties. Cantaloupe, honeydew, and other vegetables were harvested and sold at farmer's markets. Rangeland continued to deteriorate and supplemental feeding continued. For further crop information see http://www.nass.usda.gov/index.asp.

Other Climate Summaries

California Climate Tracker (new product of Western Region Climate Center)
Golden Gate Weather Service Climate Summary
NOAA Monthly State of the Climate Report

Statewide Extremes (CDEC)

High Temperature – 115°F (Buttercup, Colorado River Desert)
Low Temperature – 6°F (Casa Vieja Meadows, Tulare)
High Precipitation – 2.70 inches (Needles, Colorado River Desert)
Low Precipitation – 0 inches (33 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 103.8 ^{0}F (Cadiz Valley, San Bernardino County)
Low Average Minimum Temperature – 38.9^{0}F (Petaluma, Sonoma County)
High Precipitation – 3.92 inches (Moraga, Contra Costa County)*
Low Precipitation – 0 inches (67 stations)
*Sometimes irrigation water from sprinklers gets counted as precipitation if the gage is not covered.

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	27	49.3	69.5	94.4
SF Bay	8	52.1	67.8	94.0
Central Coast	13	50.0	70.4	97.8
South Coast	49	53.3	73.8	97.2
Sacramento	75	51.5	70.7	95.4
San Joaquin	42	49.6	67.8	91.3
Tulare Lake	18	44.2	63.8	86.0
North Lahontan	26	40.1	57.9	77.9
South Lahontan	17	43.8	63.9	85.9
Colorado River Desert	6	65.7	88.8	109.5
Statewide Weighted Average	281	49.7	69.3	93.3

Statewide Precipitation Statistics

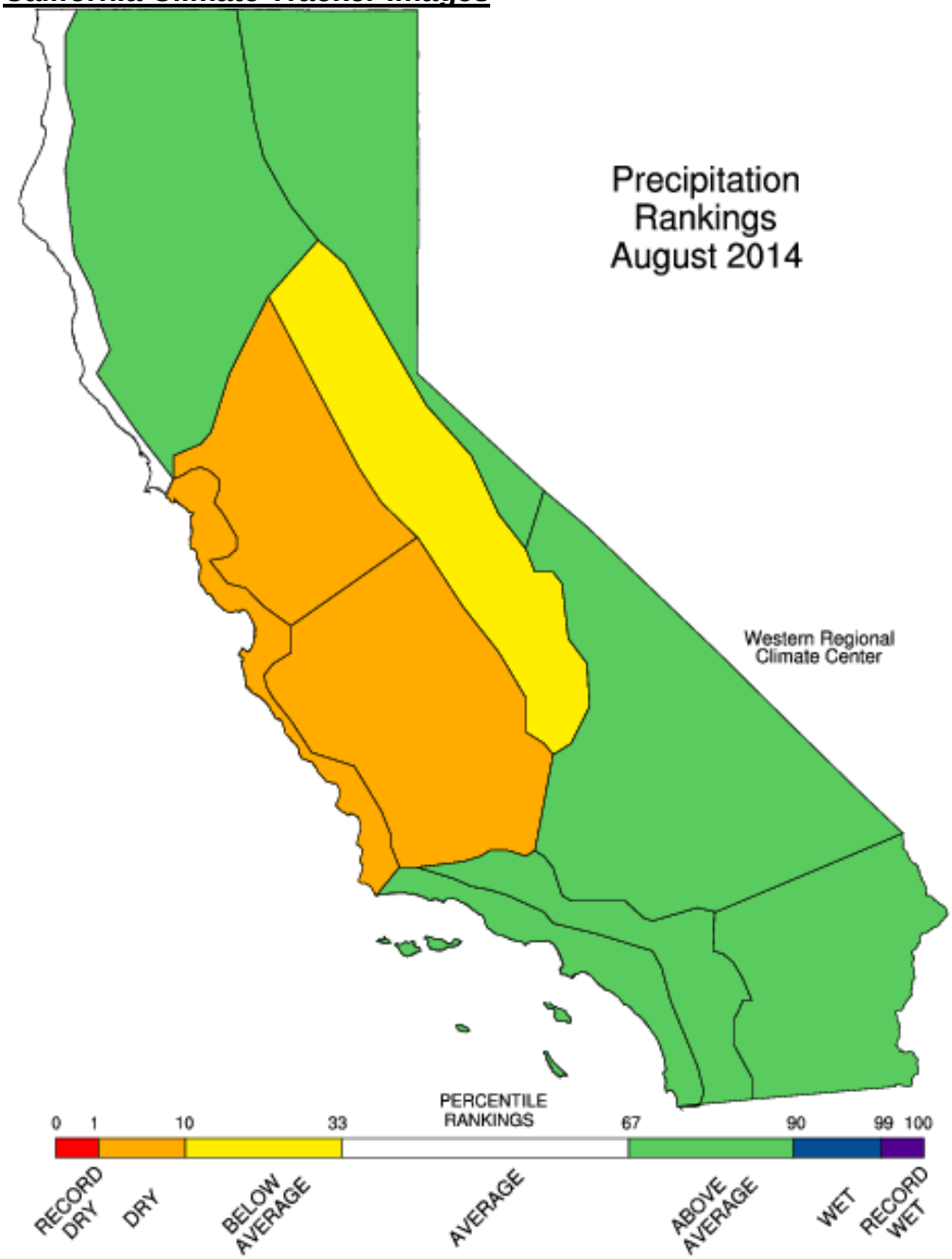
Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	Aug	Oct-Aug	Stations	Aug	Oct-Aug	Aug	Oct-Aug
North Coast	0.27	5	4	4	17	9	9	3.8%	50%
SF Bay	0.03	2	1	1	6	2	1	25%	66%
Central Coast	0.06	3	2	2	11	3	3	0%	47%
South Coast	0.06	3	2	2	14	5	5	75%	46%
Sacramento River	0.26	5	5	5	41	21	20	158%	58%
San Joaquin River	0.12	6	6	5	24	13	10	18%	51%
Tulare Lake	0.07	5	5	5	28	20	20	57%	48%
North Lahontan	0.04	3	2	32	13	4	4	322%	72%
South Lahontan	0.06	3	3	3	15	9	9	172%	59%
Colorado River	0.03	1	1	1	6	3	3	213%	96%
Statewide Weighted Average	1	36	31	30	175	89	84	83%	55%

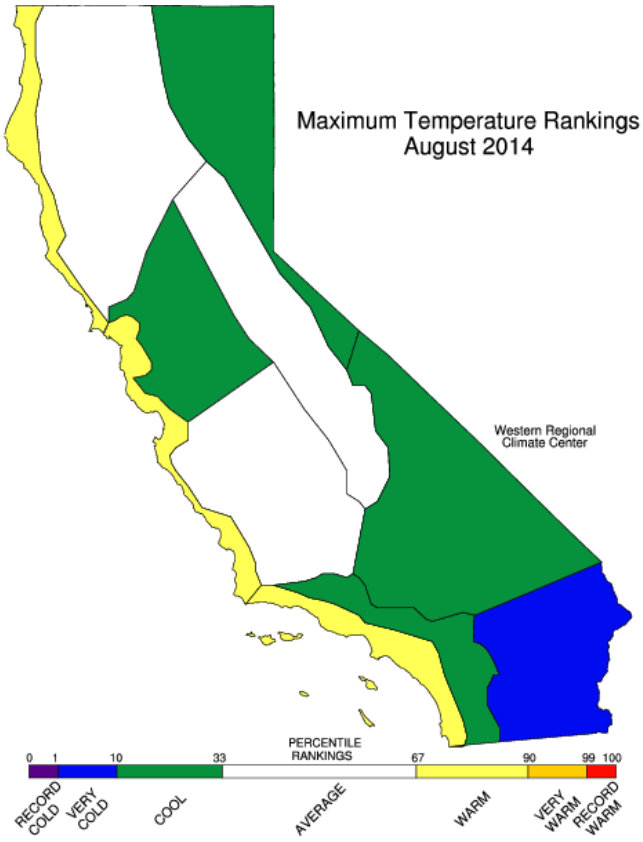
End-of-August Reservoir Storage by Hydrologic Region

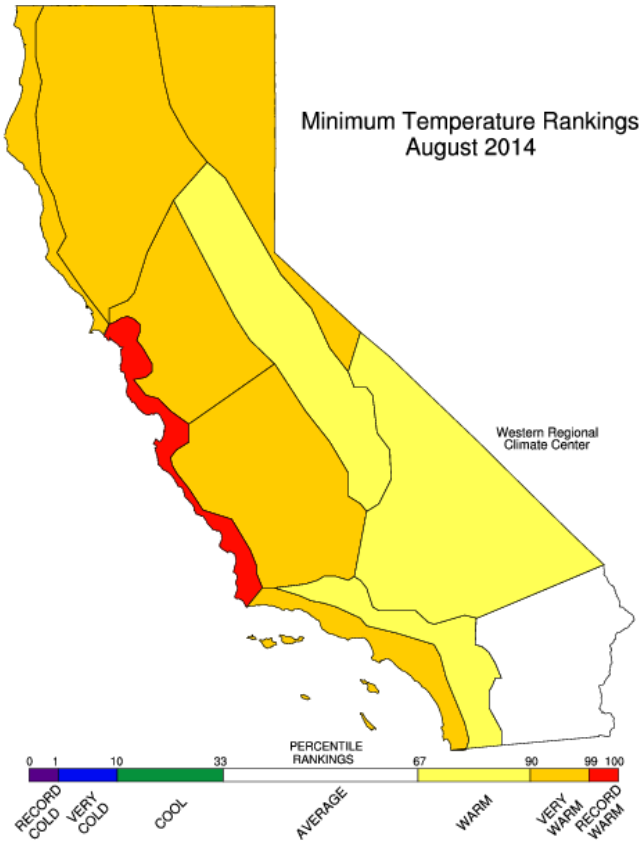
Storage in Thousand Acre-Feet (taf)

End-of-August Reservoir Storage	Number of Reservoirs	Average Storage (taf)	2014 Storage (taf)	% of Average
North Coast	6	2,151	944	44%
San Francisco Bay	17	444	418	94%
Central Coast	6	578	169	29%
South Coast	29	1,367	925	68%
Sacramento	43	10,621	6,550	62%
San Joaquin	34	6,771	3,843	57%
Tulare	6	786	292	37%
North Lahontan	5	574	136	24%
South Lahontan	8	292	223	76%
Total	154	23,587	13,505	57%

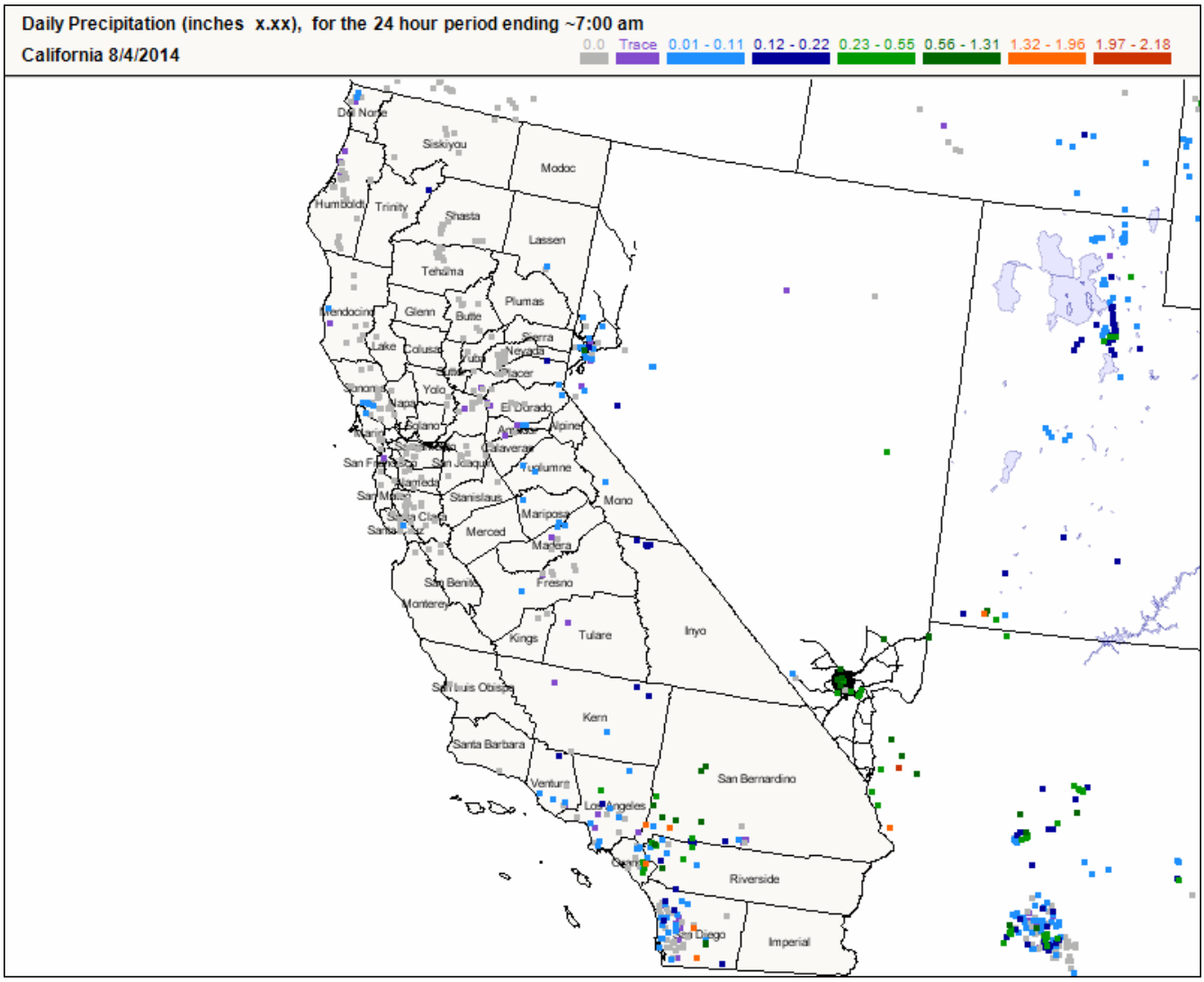
California Climate Tracker Images




Maximum Temperature Rankings
August 2014
Western Regional
Climate Center
PERCENTILE
RANKINGS
0 1 10 33 67 90 99 100
RECORD COLD
VERY COLD
COOL
AVERAGE
WARM
VERY WARM
RECORD WARM


Minimum Temperature Rankings
August 2014
Western Regional
Climate Center
PERCENTILE
RANKINGS
0 1 10 33 67 90 99 100
RECORD COLD
VERY COLD
COOL
AVERAGE
WARM
VERY WARM
RECORD WARM

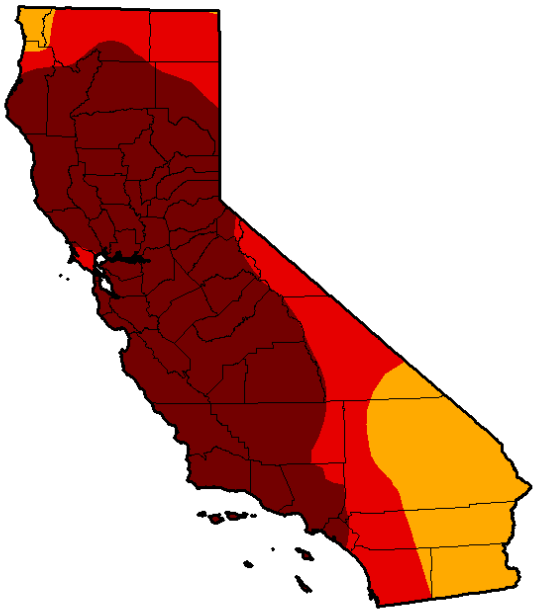
CoCoRaHS Map



United States Drought Monitor

U.S. Drought Monitor

California



July 29, 2014

(Released Thursday, Jul. 31, 2014)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	100.00	81.89	58.41
Last Week 7/22/2014	0.00	100.00	100.00	100.00	81.89	36.49
3 Months Ago 4/29/2014	0.00	100.00	100.00	96.01	76.68	24.77
Start of Calendar Year 12/31/2013	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 10/1/2013	2.63	97.37	95.95	84.12	11.36	0.00
One Year Ago 7/30/2013	0.00	100.00	98.23	93.86	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

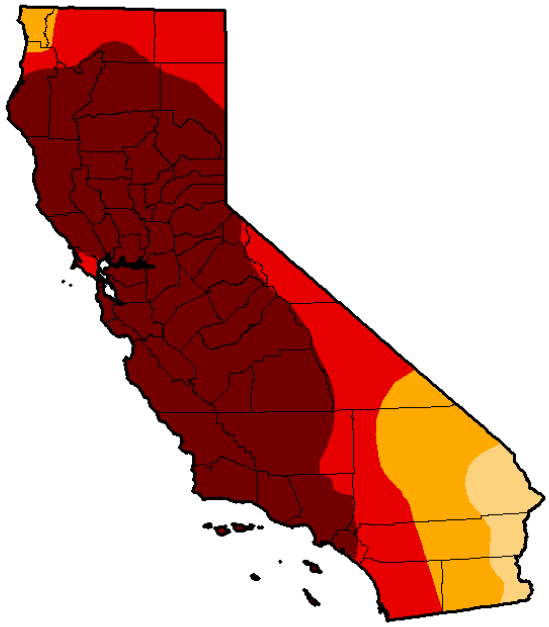
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Brad Rippey
U.S. Department of Agriculture

http://droughtmonitor.unl.edu/

U.S. Drought Monitor

California



August 26, 2014

(Released Thursday, Aug. 28, 2014)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	95.42	81.92	58.41
Last Week 8/19/2014	0.00	100.00	100.00	97.59	81.92	58.41
3 Months Ago 5/27/2014	0.00	100.00	100.00	100.00	76.68	24.77
Start of Calendar Year 12/31/2013	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 10/1/2013	2.63	97.37	95.95	84.12	11.36	0.00
One Year Ago 8/27/2013	0.00	100.00	98.23	93.86	11.36	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
David Simeral
Western Regional Climate Center

http://droughtmonitor.unl.edu/