

California Monthly Climate Summary
June 2014

Weather Highlights

June 2014 was a warm and dry month for California. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 69.3°F which is 2.6°F higher than the long-term average of 66.7°F. With a statewide average of 0.03 inches, precipitation in June was 7% of average.

June started with warm, dry weather across the State. Weak instability enabled thunderstorms to form over the crest of the Sierra. The second week saw the heat arrive with temperatures soaring to 15-20 degrees above normal. Temperatures remained above normal for the third week of the month. Strong onshore flow developed during the third week enabling some precipitation to fall in places along the coast. Dry, warm conditions continued through the month until an upper level disturbance brought scattered showers and cooler temperatures across the northern half of the state. The heat returned following the passage of the front to close out the month.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 41 temperature records tied or broken and 2 precipitation records set for the month. Of the 41 temperature records set, 19 were for new high maximum temperatures and 21 were for new high minimum temperatures. Records were set over 12 days of the month.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 53 stations recorded a minimum temperature below freezing in March while 79 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 June ranged was below average almost everywhere in the State. For the CDEC precipitation gages for June 2014, the largest amount of precipitation recorded was at Gasquet Ranger Station in the North Coast region with 1.08 inches. This is 130% of the average precipitation for this station for June. At the other end of the spectrum, 51 stations recorded no precipitation for the month. For the CIMIS network, Moraga in Contra Costa County topped the precipitation charts with 3.46 inches for the month and 90 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 0.05 inches in June. On average, 1.0 inches of precipitation is recorded for the 8-Station index for the

month. The San Joaquin 5-Station Index recorded no precipitation for June. On average, 0.6 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 June 26, 2014 is shown at the end of the document. As of the end of June, California has 1145 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 103 and 101 volunteers respectively. For the month of June, 10,006 reports were recorded for California. The largest daily rain total for CoCoRaHS- CA in June was in Del Norte County where 1.94 inches was recorded on 6/26/2014. There were zero reports of snowfall recorded during the month. The largest total depth of snow reported in June was 1 inch in Placer County. No hail reports were submitted for the month. 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 May 27, 2014 and June 24, 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 June 24th depiction, 32.98% of California is depicted in the D4 or exceptional drought category, 43.71% of California is depicted in the D3 or extreme drought category, and 23.31% of California is depicted in D2 or severe drought category. Maps are updated weekly.

The U.S. Seasonal Drought Outlook for July through September 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-June 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 trending positively with values of 0.3°C in the Niño 3.4 at the end of June. The April through June 3-month running mean of the Ocean Niño Index (ONI) is 0.2. 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 (July through September) from NOAA indicates a higher probability for above normal temperatures for the State. For precipitation, equal chances of above or below mean conditions are forecast across the State. Outlook plots and discussions can be found 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

June 2014 saw harvests and crop development across the state. Cotton developed well during the month while wheat, alfalfa and potatoes were harvested. Early varieties of apricots, cherries, nectarines, peaches and plums were harvested. Blueberry harvest slowed while figs and Valencia orange harvests remained active. Nuts continued to develop. Cantaloupe, honeydew, and beans were planted. Corn, squash, pepper, cucumber and eggplant were harvested. Herd reduction continues due to lack of forage. 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 – 112°F (Friant Dam, Tulare)

Low Temperature – 0°F (Big Meadows, Tulare)

High Precipitation – 1.08 inches (Gasquet Ranger Station, North Coast)

Low Precipitation – 0 inches (51 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 106 °F (Cadiz Valley, San Bernardino County)

Low Average Minimum Temperature – 36°F (Petaluma East, Sonoma County)

High Precipitation – 3.46 inches (Moraga, Contra Costa County)*

Low Precipitation – 0 inches (90 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	20	38.0	63.0	95.1
SF Bay	8	45.6	66.6	96.9
Central Coast	10	43.0	67.7	96.9
South Coast	39	49.1	69.7	92.9
Sacramento	73	42.0	67.8	97.0
San Joaquin	46	42.0	65.0	92.7
Tulare Lake	17	35.8	58.5	83.7
North Lahontan	23	31.3	56.0	81.0
South Lahontan	14	38.0	63.2	88.5
Colorado River Desert	7	65.9	88.9	107.9
Statewide Weighted Average	257	41.1	65.5	93.9

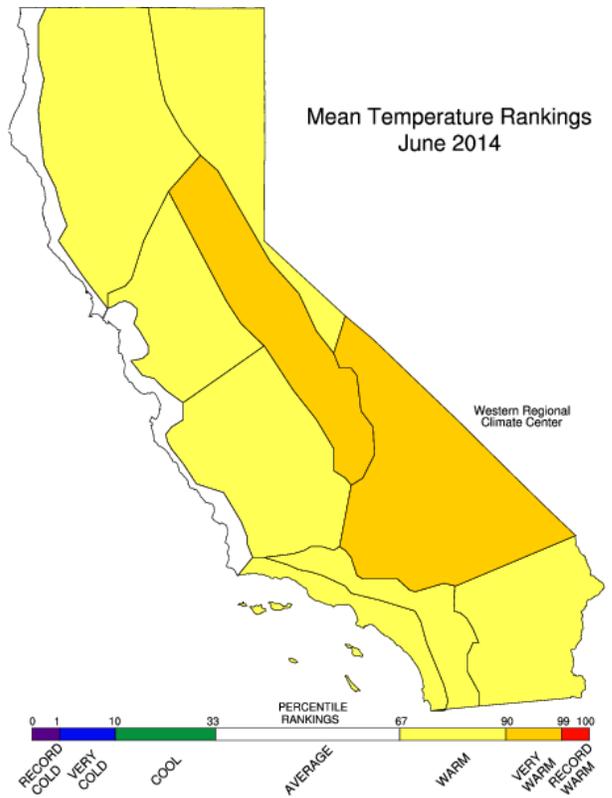
Statewide Precipitation Statistics

Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	Jun	Oct-Jun	Stations	Jun	Oct-Jun	Jun	Oct-Jun
North Coast	0.27	5	4	4	17	10	11	48%	46%
SF Bay	0.03	2	2	2	6	4	1	58%	57%
Central Coast	0.06	3	3	3	11	3	4	48%	48%
South Coast	0.06	3	3	3	14	11	9	40%	38%
Sacramento River	0.26	5	5	5	41	24	27	57%	55%
San Joaquin River	0.12	6	5	5	24	15	15	52%	51%
Tulare Lake	0.07	5	5	5	28	18	27	50%	48%
North Lahontan	0.04	3	3	3	13	5	9	68%	62%
South Lahontan	0.06	3	3	3	15	9	12	53%	45%
Colorado River	0.03	1	1	1	6	1	3	23%	18%
Statewide Weighted Average	1	36	34	34	175	100	92	51%	49%

End-of-June Reservoir Storage by Hydrologic Region
Storage in Thousand Acre-Feet (taf)

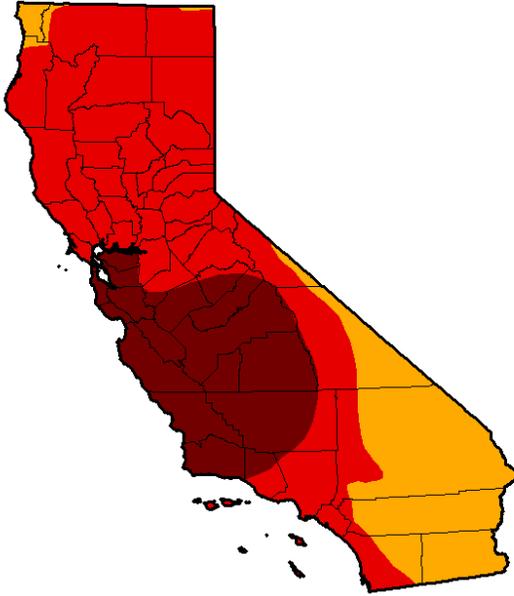
End-of-June Reservoir Storage	Number of Reservoirs	Average Storage (taf)	2014 Storage (taf)	% of Average
North Coast	6	2,500	1,355	54%
San Francisco Bay	17	494	453	92%
Central Coast	6	662	183	28%
South Coast	29	1,473	935	63%
Sacramento	43	13,059	8,274	63%
San Joaquin	34	8,300	4,948	60%
Tulare	6	1,360	623	46%
North Lahontan	5	683	227	33%
South Lahontan	8	297	251	85%
Total	154	28,832	17,251	60%

California Climate Tracker Images



United States Drought Monitor

U.S. Drought Monitor California



May 27, 2014
(Released Thursday, May. 29, 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	76.68	24.77
Last Week 5/20/2014	0.00	100.00	100.00	100.00	76.68	24.77
3 Months Ago 2/25/2014	0.00	100.00	94.56	90.82	73.83	26.21
Start of Calendar Year 12/01/2013	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 10/01/2013	2.63	97.37	95.95	84.12	11.36	0.00
One Year Ago 5/28/2013	0.00	100.00	98.16	46.25	0.00	0.00

Intensity:

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

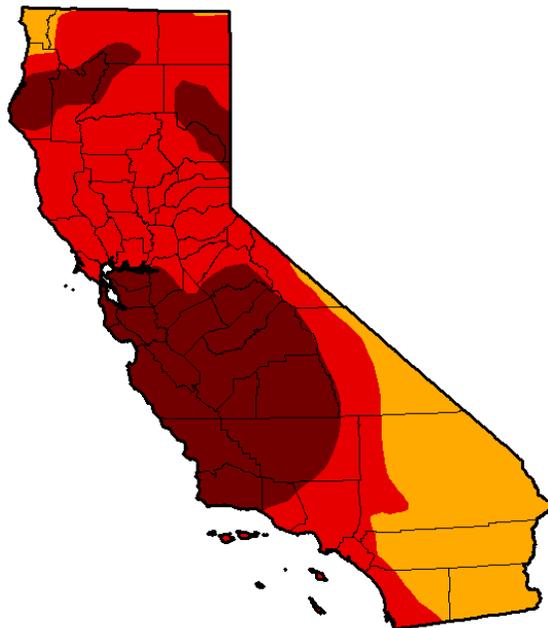
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor California



June 24, 2014
(Released Thursday, Jun. 26, 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	76.69	32.98
Last Week 6/17/2014	0.00	100.00	100.00	100.00	76.69	32.98
3 Months Ago 3/25/2014	0.00	100.00	99.80	95.21	71.78	23.42
Start of Calendar Year 12/01/2013	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 10/01/2013	2.63	97.37	95.95	84.12	11.36	0.00
One Year Ago 6/25/2013	0.00	100.00	98.21	92.61	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.

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<http://droughtmonitor.unl.edu/>