

California Monthly Climate Summary
June 2012

Weather Highlights

June 2012 was another warm and dry month for California. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 67.0°F which is 0.3°F higher than the long-term average of 66.7°F. With a statewide average of 0.26 inches, precipitation in June was 72% of average. Water year 2012 has seen 6 months of below normal precipitation and 6 months of above normal temperature. Plots of the last 12 months of mean temperature and precipitation relative to the historical distribution are shown at the end of the report.

June started with high pressure sitting over the west coast leading to above normal temperatures with the exception of the South Coast which was under the influence of onshore flow. The latter part of the first week of June saw a winter-like storm impact Northern California with rain as far south as Modesto and snow above 6000 feet. New daily precipitation records were set in some locations and temperatures were 10 to 20 degrees below normal. By the end of the week temperatures had warmed up and seasonal conditions prevailed. In the second week strong high pressure moved over the State resulting in windy, dry conditions. The third week saw triple digit temperatures in the Central Valley. This inland heat led to foggy and cool conditions along the coast. Some thunderstorms reported over mountain regions in the State. The latter part of the month saw a sustained trough pattern develop out of the Gulf of Alaska bringing much cooler temperatures and rainfall to the North Coast.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 34 temperature records tied or broken and 6 precipitation records set or tied for the month. Of the 34 temperature records set, 15 were for new high maximum temperatures and 8 were for new high minimum temperatures. Records were set over 18 days of the month. Fresno continues its 135 year record of no daily precipitation recorded for June 21st. Santa Maria set or tied two new daily precipitation records with a trace of precipitation falling on June 21st and June 30 (tie with 1974). Eureka set a new daily precipitation record on June 5th with a reading of 0.75 inches which broke the 1954 record of 0.43 inches. Crescent City smashed their daily precipitation record on June 22nd with 1.36 inches of rain. The old record of 0.40 inches was set back in 1937. On the temperature side, Needles reached a maximum temperature of 115°F on June 1st. This topped the 1910 record of 114°F. Thermal also hit 115°F which beat the 1957 record of 111°F. Blythe only hit 114°F on the first, but that was enough to top the daily record of 111°F set in 1977. South Lake Tahoe also set a new high maximum temperature record on the first with a reading of 81°F. The old record was 79°F set back in 1992.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 105 stations recorded a minimum temperature below freezing in March while 56 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 was mixed for the different regions in the State. For the CDEC precipitation gages for June 2012, the largest amount of precipitation recorded was at Gasquet Ranger Station in the North Coast region with 4.03 inches. This is 486% of the average precipitation for this station for June. At the other end of the spectrum, 33 stations reported zero precipitation for the month. For the CIMIS network, Sisquoc in Santa Barbara County topped the precipitation charts with 1.8 inches for the month and 61 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 0.1 inches in June with one day of precipitation. On average, 1 inch of precipitation is recorded for the 8-Station index for the month. Statewide, the average precipitation for the month was 113.5% of the long-term average based on the California Data Exchange Center (CDEC) gages. Precipitation percentages by region from the CDEC gages are shown in a table at the end of this document.

CoCoRaHS Update

June 2012 continues California's fourth 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 5, 2012 is shown at the end of the document. Currently, California has 877 volunteers signed up spanning 53 of California's 58 counties. The counties without volunteers are Alpine, Colusa, Glenn, Modoc, and Tuolumne. The county with the most volunteers is Sonoma with 93 volunteers. For the month of June, 8,629 reports were recorded for California. The largest daily rain total for CoCoRaHS-CA for the month was in Humboldt County where 2.37 inches was recorded on 06/5/2012. There were 3 snowfall reports recorded with the largest being 4 inches in Placer County. The largest total depth of snow reported was 8 inches in Placer County on 06/01/2012. Two hail reports were submitted in June from Shasta County. The largest stone size reported was 3/8". For more information on CoCoRaHS, please visit <http://www.cocorahs.org>.

Snowpack and Water Supply Conditions

The automated snow sensor network in California became snow free in June. The Water Supply Index for WY 2011 was wet for the Sacramento Basin and wet for the San Joaquin Basin. Water year 2010 resulted in a below normal category for the Sacramento Basin and above normal category for the San Joaquin Basin for the Water Supply Index (WSI). The median forecast for the WSI for WY2012 predicts the Sacramento Basin will fall into the below normal category and the San Joaquin will fall into the dry category. Water supply information for California 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 29, 2012 and June 26, 2012 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 26th depiction, 22.8% of California is depicted in the D2 or severe drought category, 36.8% of California is depicted in the D1 or moderate drought category. An additional 24.6% of the state is depicted as D0 or abnormally dry. Maps are updated weekly.

The U.S. Seasonal Drought Outlook for June through August from NOAA depicts California in persisting drought throughout most of 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.

The California Nevada River Forecast Center developed some drought monitoring tools for California that are now available on CDEC and are automatically updated. These tools look at the frequency associated with precipitation deficits for the Northern Sierra Eight Station Index and the San Joaquin Five Station Index. Another tool looks at the frequency of end-of-month storage for select reservoirs in California. The frequencies of the observations are related to the Drought Monitor's drought categories D0 through D4. The links can be found on the State Climatologist web page and are repeated here:

<http://cdec.water.ca.gov/cdecapp/drought/getres.action> (California Reservoirs – Drought Status)

<http://cdec.water.ca.gov/cdecapp/drought/get8SI.action> (Sacramento River Drought Status)

<http://cdec.water.ca.gov/cdecapp/drought/get5SI.action> (San Joaquin River Status)

For June, the Eight Station Index is in the 37th percentile for the 12-month period and the Five Station Index is in the 16th percentile for the 12-month period. The 16th percentile is associated with a D1 designation. For the reservoirs, San Luis, Casitas, and Isabella are in the D1 category. All other reservoirs in the report are in drought free conditions. For more information on drought conditions in California, visit <http://www.water.ca.gov/waterconditions/>.

ENSO Conditions and Long-Range Outlooks

The El Niño/Southern Oscillation (ENSO) has transitioned to neutral conditions. Equatorial sea surface temperature anomalies for the tropical Pacific have moved towards positive values with the Niño 3.4 region posting a reading of 0.5°C anomaly at the beginning of July. The April through June 3-month running mean of the Ocean Niño Index (ONI) is -0.1. Five consecutive ONI values need to be below the threshold of -0.5 for conditions to be classified as a La Niña event (five consecutive values above the 0.5 threshold need to be observed for classification as an El Niño event). Most forecast models have the tropical sea surface temperatures moving to El Niño

conditions during the second half of 2012. 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 of above normal temperatures for all areas of the State except the coastal and far north areas of the State. For precipitation, equal chances of above or below normal precipitation stand throughout the State with the exception of the northern edge of the state which is forecast to have an increased probability of below normal precipitation. 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 2012 saw further development of crops throughout the State. Approximately two-thirds of the wheat crop was harvested in June. Alfalfa continued to be cut and baled. Cotton development was slowed by the cooler temperatures. Nearly all the rice fields planted emerged in June. Stone fruits continued to progress while harvests of peaches, nectarines, plums, plumcots, and apricots were harvested in the San Joaquin Valley. Kiwis were flowering and figs were setting fruit. The olive crop was progressing well. Nut crops were developing with almond nuts hardening. Vegetable crops were progressing well while others were harvested. Rangeland conditions progressed through their summer deterioration. Supplemental feeding increased. 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 – 116°F (Rice Valley, Colorado River Desert)

Low Temperature – 15°F (Charlotte Lake, Tulare Basin)

High Precipitation – 4.03 inches (Gasquet Ranger Station, North Coast)

Low Precipitation – 0.0 inches (33 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 105.1⁰F (Salton Sea East, Imperial County)

Low Average Minimum Temperature – 36.4⁰F (Alturas, Modoc County)

High Precipitation – 1.80 inches (Sisquoc, Santa Barbara County)*

Low Precipitation – 0 inches (61 stations)

*Sometimes irrigation water from sprinklers gets counted as precipitation if the gage is not covered.

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	5	5	17	14	12	195.0%	91%
SF Bay	0.03	2	2	2	6	4	4	104.1%	82%
Central Coast	0.06	3	3	3	11	4	4	47.6%	70%
South Coast	0.06	3	3	3	14	10	9	0.0%	63%
Sacramento River	0.26	5	5	5	42	25	25	101.6%	80%
San Joaquin River	0.12	6	6	6	24	16	12	178.5%	68%
Tulare Lake	0.07	5	5	5	28	24	23	65.1%	78%
North Lahontan	0.04	3	3	3	13	8	8	52.5%	56%
South Lahontan	0.06	3	2	2	15	11	10	6.9%	53%
Colorado River	0.03	1	1	1	6	3	2	0.0%	42%
Statewide Weighted Average	1	36	35	35	176	119	109	113.5%	76.1%

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	22	34.1	56.8	88.1
SF Bay	9	41.7	62.9	96.1
Central Coast	10	38.9	66.6	95.8
South Coast	40	47.2	67.6	91.2
Sacramento	74	34.8	62.8	92.8
San Joaquin	45	32.6	61.2	89.6
Tulare Lake	17	33.8	61.4	86.7
North Lahontan	24	24.7	53.6	78.1
South Lahontan	15	31.5	61.8	85.7
Colorado River Desert	7	63.1	88.4	110.3
Statewide Weighted Average	263	35.7	61.7	90.4

U.S. Drought Monitor

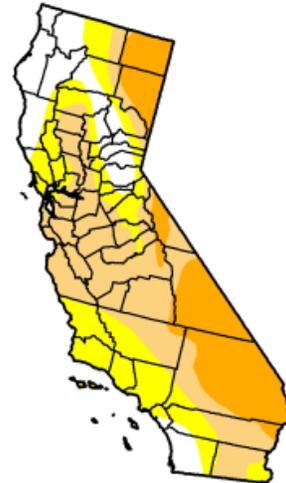
California

May 29, 2012
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	15.89	84.11	58.89	22.60	0.00	0.00
Last Week (05/22/2012 map)	15.89	84.11	58.89	22.60	0.00	0.00
3 Months Ago (02/28/2012 map)	4.39	95.61	72.09	16.02	0.00	0.00
Start of Calendar Year (12/27/2011 map)	33.91	66.09	5.41	0.00	0.00	0.00
Start of Water Year (09/27/2011 map)	89.14	10.86	0.00	0.00	0.00	0.00
One Year Ago (05/24/2011 map)	99.99	0.01	0.00	0.00	0.00	0.00

Intensity:

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



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

<http://droughtmonitor.unl.edu>



Released Thursday, May 31, 2012
Brad Rippey, U.S. Department of Agriculture

U.S. Drought Monitor

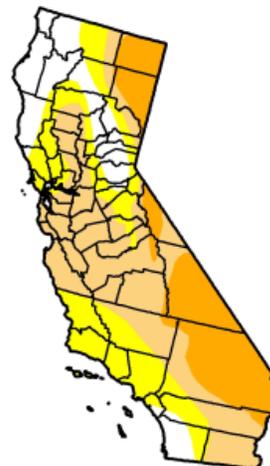
California

June 26, 2012
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	15.89	84.11	59.51	22.76	0.00	0.00
Last Week (06/19/2012 map)	15.89	84.11	59.51	22.60	0.00	0.00
3 Months Ago (03/27/2012 map)	2.22	97.78	89.61	46.25	0.00	0.00
Start of Calendar Year (12/27/2011 map)	33.91	66.09	5.41	0.00	0.00	0.00
Start of Water Year (09/27/2011 map)	89.14	10.86	0.00	0.00	0.00	0.00
One Year Ago (06/21/2011 map)	99.99	0.01	0.00	0.00	0.00	0.00

Intensity:

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



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

<http://droughtmonitor.unl.edu>



Released Thursday, June 28, 2012
Richard Heim, National Climatic Data Center, NOAA

Daily Precipitation (inches x.xx), for the 24 hour period ending ~7:00 am

California 6/5/2012



California Statewide Last 12 Months

