

California Monthly Climate Summary
April 2012

Weather Highlights

April 2012 was a slightly warm and wet month for California. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 54.2°F which is 1.5°F higher than the long-term average of 52.7°F. With a statewide average of 2.67 inches, precipitation in April was 163% of average. Water year 2012 has been near normal for temperature but below normal for precipitation.

April started with high pressure sitting over the west coast. During the first week a low pressure system moving out of the Gulf of Alaska spread showers across northern California while southern California experienced offshore flow and warm, very dry conditions. The second week again started with dry and mild conditions with a storm system moving over the northern part of the State during the week. This system, however, pushed into southern California as well with precipitation falling over most of the State in the middle of the month. Significant snow also fell in the Sierra Nevada from this system. The third week again started dry and mild. A smaller system pushed shower activity across the northern part of the State in the middle of the week. At the end of the week, the following high pressure system pushed temperatures well above normal with some places recording high temperatures 20 degrees Fahrenheit above average. The month ended with one more system crossing the State cooling temperatures significantly while bringing rain and snow to the State.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 89 temperature records tied or broken and 32 precipitation records set or tied for the month. Of the 89 temperature records set, 19 were for new high maximum temperatures and 26 were for new low minimum temperatures. Records were set over 16 days of the month. On April 23rd Elsinore set a new high minimum temperature record with a reading of 57°F. The old record of 56°F was set back in 1915. Also on April 23rd, Furnace Creek in Death Valley tied a high minimum temperature record with a reading of 79°F which was last set in 1930. At the other end of the spectrum Eureka tied a low minimum temperature record on April 6th with a reading of 32°F. The old record was set back in 1929.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 212 stations recorded a minimum temperature below freezing in March while 8 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 April ranged from dry in the south to wet in the north. For the CDEC precipitation gages for April 2012, the largest amount of precipitation recorded was at

Gasquet Ranger Station in the North Coast region with 12.15 inches. This is 188% of the average precipitation for this station for April. At the other end of the spectrum, Bishop in the South Lahontan region recorded 0.02 inches for the month. For the CIMIS network, Camino in El Dorado County topped the precipitation charts with 6.1 inches for the month and 5 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 5.8 inches in April. On average, 3.9 inches of precipitation is recorded for the 8-Station index for the month. Statewide, the average precipitation for the month was 156% 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

April 2011 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 April 13, 2012 is shown at the end of the document. As of the end of April, California has 866 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 at the end of April is Sonoma with 93 volunteers. For the month of April, 10,115 reports were recorded for California. The largest daily rain total for CoCoRaHS- CA in April was in Nevada County where 3.48 inches was recorded on 04/13/2012. There were 41 snowfall reports recorded with the largest being 22 inches in Nevada County. The largest total depth of snow reported in April was 91 inches in Placer County. Thirty-five hail reports were submitted in April from 18 counties. The largest stone size reported was 1/2" sized in Shasta County. For more information on CoCoRaHS, please visit <http://www.cocorahs.org>.

Snowpack and Water Supply Conditions

The automated snow sensor network in California showed a statewide average of 9 inches of snow water equivalent for the first of May. This is 39% of average for the date and 30% of the April 1st average. April 1 is considered to be the peak of the snowpack building period and beginning of the melt period. 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 March 27, 2012 and April 24, 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 April 24th depiction, 22.87% of California is depicted in the D2 or severe drought category, 37.36% of California is depicted in the D1 or moderate drought category. An additional 23.93% of the state is depicted as D0 or abnormally dry. Maps are updated weekly.

The U.S. Seasonal Drought Outlook for May through July 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 April, the Eight Station Index is in the 39th percentile for the 12-month period and the Five Station Index is in the 19th percentile for the 12-month period. For the reservoirs, only San Luis and Casitas are in the D1 category. All other reservoirs in the report are in drought free conditions.

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, but the Niño 3.4 region was still negative with a reading of -0.2°C in at the end of April. The February through April 3-month running mean of the Ocean Niño Index (ONI) is -0.5. This is the seventh consecutive 3-month period with a value below the threshold of -0.5 for conditions to be classified as a La Niña event. 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 either ENSO neutral or El Niño conditions during the summer 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 (May through July) from NOAA indicates equal chances of above or below normal temperatures for the coastal areas of the State with the inland areas having a higher probability of above normal conditions. For precipitation, equal chances of above or below normal precipitation stand throughout 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

April 2012 saw significant improvement in conditions in part of the State due to the abundant precipitation and some crop damage due to hail. Warm, dry weather accelerated the maturation of the wheat crop. Some crops were cut for hay and silage in anticipation of a double crop. Rice fields continued to be prepared for planting. Hail damage was reported in fruit and nut trees. Some excess fruit drop may also have resulted from earlier freezes. Vegetable crops were planted while others were harvested. Rangeland continued to improve from the additional precipitation. 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 – 107°F (Rice Valley, Colorado River Desert)

Low Temperature – -19°F (Casa Vieja Meadows, Tulare Basin)

High Precipitation – 12.15 inches (Gasquet Ranger Station, North Coast)

Low Precipitation – 0.02 inches (Bishop, South Lahontan)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 88.2°F (Seeley, Imperial County)

Low Average Minimum Temperature – 26.8°F (Big Bear Lake, San Bernardino County)

High Precipitation – 6.1 inches (Camino, El Dorado County)*

Low Precipitation – 0 inches (5 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	Apr	Oct-Apr	Stations	Apr	Oct-Apr	Apr	Oct-Apr
North Coast	0.27	5	5	5	17	13	13	140%	90%
SF Bay	0.03	2	2	2	6	6	5	154%	80%
Central Coast	0.06	3	3	3	11	8	8	185%	74%
South Coast	0.06	3	3	3	14	12	11	157%	65%
Sacramento River	0.26	5	5	5	42	36	36	169%	81%
San Joaquin River	0.12	6	6	6	24	19	18	153%	66%
Tulare Lake	0.07	5	5	5	28	27	26	201%	77%
North Lahontan	0.04	3	3	3	13	12	12	121%	62%
South Lahontan	0.06	3	3	3	15	11	11	129%	52%
Colorado River	0.03	1	1	1	6	4	4	138%	45%
Statewide Weighted Average	1	36	36	36	176	148	144	156%	76.4%

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	21	25.1	47.1	81.2
SF Bay	10	33.1	53.0	82.9
Central Coast	11	30.8	54.4	88.1
South Coast	47	34.3	58.0	90.3
Sacramento	79	22.8	48.6	82.0
San Joaquin	46	18.9	46.4	79.3
Tulare Lake	19	13.8	42.9	75.4
North Lahontan	25	9.9	39.2	67.7
South Lahontan	14	16.1	45.9	76.6
Colorado River Desert	8	40.5	69.9	101.1
Statewide Weighted Average	280	23.4	48.7	81.6

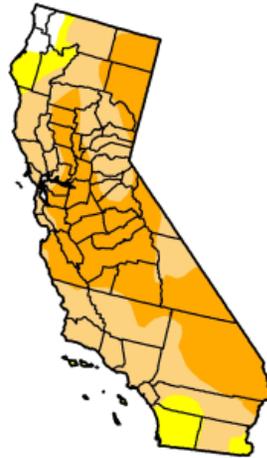
U.S. Drought Monitor

California

March 27, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2.22	97.78	89.61	46.25	0.00	0.00
Last Week (03/20/2012 map)	2.22	97.78	89.61	40.14	0.00	0.00
3 Months Ago (12/27/2011 map)	33.91	66.09	5.41	0.00	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 (03/22/2011 map)	96.87	3.13	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.



Released Thursday, March 29, 2012
Eric Luebbehusen, USDA

<http://droughtmonitor.unl.edu>

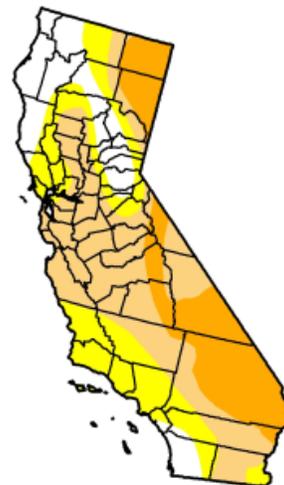
U.S. Drought Monitor

California

April 24, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	15.84	84.16	60.23	22.87	0.00	0.00
Last Week (04/17/2012 map)	15.84	84.16	60.23	26.35	0.00	0.00
3 Months Ago (01/24/2012 map)	19.12	80.88	41.23	0.00	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 (04/19/2011 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.



Released Thursday, April 26, 2012

Anthony Artusa, Climate Prediction Center/NCEP/NWS/NOAA

<http://droughtmonitor.unl.edu>

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

California 4/13/2012

