

California Monthly Climate Summary July 2007

Weather Highlights

July broke the 2007 pattern of above mean temperatures and below mean precipitation. According to the Western Region Climate Center's [California Climate Tracker](#), July 2007 was 0.6°F higher than the long-term average temperature of 74°F and right at average for precipitation with an average of 0.13 inches.

July started out with above normal temperatures due to a strong high pressure system that backed into the state from the 4-corners region. Strong warming was seen from the 3rd through the 5th. Yosemite Valley reached 100°F on the 3rd and 110°F on the 5th. The heat also led to convective activity over the mountains. The thunderstorms ignited a few fires in the Sierra Nevada. Week 2 brought more seasonably warm temperatures until the middle of the week. Moisture entrained from the south moved north through the state leading to cloudiness and some rain, an unusual sight in July. The monsoonal moisture also created more thunderstorms over the mountain with the Yosemite high country recording hail one half to three quarters of an inch in diameter. The third week of July saw an unusually strong low pressure system approach the west coast. As it passed through northern California several places received more than an inch of rain setting several new daily rainfall records. The rain was limited to the north half of the state. In the San Joaquin Valley the onshore flow cooled temperatures to below normal for the last half of the week. More monsoonal moisture moved through the state in week 4 leading to more thunderstorms in the mountains and some light rain in the Central Valley. The month ended with the atmosphere drying out and temperatures climbing back above normal.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 72 temperature records tied or broken and 17 precipitation records tied or broken for the month. Eight of the precipitation records were for recording precipitation for the first time at that site on that day in July. In Sacramento, July 12th was the first time measurable precipitation was recorded in the month of July since 1995. In downtown San Francisco where records have been kept since 1849, 2007 was the first time precipitation was recorded for July 18 when 0.02 inches fell. Other records were All in all, there were 21 days in July with a record set somewhere in California. It should be noted that this data is preliminary and may not include all records set. For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, over half recorded a maximum temperature above 100°F. Statewide extremes from the CDEC network of temperature gages are shown below. Also shown are the extremes from the CIMIS network. A table of regional average minimum, mean, and maximum temperatures from the CDEC and CIMIS networks is also shown.

Precipitation in July ranged from well above normal in the north to no rain in the south. The largest amount of precipitation recorded in the CDEC precipitation gages for July 2007 was at the Klamath River at Orleans site where 1.49 inches of rain fell. This is ten times the average July rainfall for this location. Sixty seven stations in the state reported zero precipitation for the month. The 8-Station Index for northern California precipitation recorded 0.5 inches. This is 250% of the long-term average for July. A table of October through July 8-Station Index totals can be found at the end of the

summary. With no further rain for the rest of the water year, this year's 8-station precipitation total ranks as the 26th driest year in the last 87 years. Note that last year was the 5th wettest year. In the southern part of the state, several sites set new records for driest July through June periods. Downtown Los Angeles, the Los Angeles airport, the Long Beach airport, UCLA, Burbank, Palmdale, Lancaster, Camarillo, and the Paso Robles airport all set new low marks for precipitation. A new record was also set for fewest days with at least 0.5 inches of rain. This past year recorded only one day which broke the old record of 2 days set back in 2001-2002. Statewide, the average precipitation for July was 180% 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.

The Drought Monitor maps which can be found on the National Drought Mitigation Center's (NDMC) website <http://drought.unl.edu/dm/> have not changed for California during the month of July. These maps are largely a reflection of precipitation and soil moisture deficit estimates. The northwest part of the state is depicted as abnormally dry (D0). Moderate drought conditions (D1) are shown for the Sacramento and lower San Joaquin Valleys. The Central Coast, Sierra Nevada and North Lahontan regions are depicted as severe drought (D2). The southern parts of the state are depicted by the NDMC as being in extreme drought (D3). Maps are updated weekly.

July is the final month of the April through July snowmelt season. Water supply information for California can be found at http://cdec.water.ca.gov/water_supply.html. This year's below average snowpack led to spring runoff ranging from 80% of average on the McCloud to 21% of average on the Tule. On the east side of the Sierra, the East Fork of the Walker River recorded only 19% of its historical April through July runoff. A table of observed April-July runoff for 2007 is included at the bottom of this summary. A historical listing of water year categories for both basins can be found at <http://cdec.water.ca.gov/cgi-progs/iodir/WSIHIST>.

ENSO Conditions and Long-Range Outlooks

The El Niño/Southern Oscillation (ENSO) is being classified as a neutral pattern with trending towards a La Niña episode. Equatorial sea surface temperature anomalies for the eastern tropical Pacific are running between -0.5° C and -2.0° C. Dynamical models forecast a continuing downward trend towards La Nina conditions in the next couple of months while statistical models are forecasting conditions to remain in a neutral pattern, or transition to a La Nina pattern more slowly than the dynamical models. More information on the topic 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. Current climate indicators including ENSO conditions indicate a warmer than average August through October period for most of California. Precipitation forecasts show below normal totals for the next three months for the northern two-thirds of the state and equal chance of above, near, or below normal precipitation for the rest of the state. Long-range outlook plots of precipitation and temperature 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

July was harvest month for many crops. Processing tomato harvest began with good quality reported. Sunflower harvest started in Monterey and Sutter Counties. The 4th cutting of alfalfa finished up and the 5th cutting began. The first cutting of Sudan grass was made in Tulare County. Wild rice harvest started in Sutter County. Fall sugar beets, garlic and broccoli seed fields were harvested in Fresno County. Wheat, barley, and oats were harvested in Kern County. Sweet potato harvest started in Merced County. Strawberries and blueberries were picked in Stanislaus County. Table grapes, melons, safflower, peaches, plums, nectarines, apricots, Bartlett pears, pluots, prunes, sweet corn, zucchini, greens, kale, mint, okra, parsley, radishes, spinach, Swiss chard, turnips, beans, bell peppers, beets, carrots, onions, cucumbers, squash, eggplant, lettuce were also harvested in July in California. Harvesting was not the only activity going on however. Freezer lima beans and market tomatoes were planted in Merced County. The second planting of corn finished up. Irrigation, weed control, and pest control activities also took place. Cotton was flowering and setting as were black beans. Pomegranite fruit was forming and olives were fruiting and showing a good set. Almond and pistachio trees are heavy with nuts with some branches breaking under the extra weight and other branches needing extra support. Non-irrigated and high elevation pasture conditions are poor while irrigated pastures are in moderate to good condition. Fire danger remains high in the foothill and mountain areas. Early fall calving will start soon. Cows are receiving supplemental feed and nutrients. Milk production declined due to the high temperatures. Sheep and goats are feeding on dryland wheat fields. 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 – 125° F (Mojave River Sink, South Lahontan)

Low Temperature - 23° F (Casa Vieja Meadows, Tulare Basin)

High Precipitation – 1.49 inches (Klamath River at Orleans, North Coast)

Low Precipitation – 0 inches (67 stations)

Statewide Extremes (CIMIS)

High Temperature – 107.2° F (Salton Sea East, Imperial County)

Low Temperature - 44° F (Alturas, Modoc County)

High Precipitation – 1.93 inches (Castroville, Monterey County)

Low Precipitation – 0 inches (84 stations)

Statewide Precipitation Statistics

Hydrologic Region	Region Weight	Basins Reporting			Stations Reporting			Percent of Historic Average	
		Basins	July	Oct-July	Stations	July	Oct-July	July	Oct-July
NORTH COAST	0.27	5	4	4	19	8	8	422%	89%
SAN FRANCISCO BAY	0.03	2	2	2	6	5	5	41.7%	74%
CENTRAL COAST	0.06	3	3	3	11	7	5	0%	51%
SOUTH COAST	0.06	3	3	3	15	11	10	27.7%	27%
SACRAMENTO RIVER	0.26	5	5	5	43	30	29	209%	67%
SAN JOAQUIN RIVER	0.12	6	6	6	25	23	20	23.7%	64%
TULARE LAKE	0.07	5	5	5	28	24	25	13.3%	54%
NORTH LAHONTAN	0.04	3	3	3	14	8	7	16.1%	59%
SOUTH LAHONTAN	0.06	3	3	3	15	8	8	3.3%	38%
COLORADO RIVER	0.03	1	1	1	6	3	3	0%	11%
STATEWIDE WEIGHTED AVERAGE	1.00	36	35	35	182	127	120	176%	65%

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	33	46.2	68.0	94.2
SF Bay	21	52.2	67.5	90.3
Central Coast	33	52.0	66.0	84.1
South Coast	65	56.2	74.3	95.9
Sacramento	85	50.0	73.1	99.3
San Joaquin	73	50.9	71.9	94.2
Tulare Lake	18	46.2	67.2	91.1
North Lahontan	25	42.9	64.6	86.9
South Lahontan	22	51.6	73.6	94.9
Colorado River Desert	22	73.8	90.5	107.0
Statewide Weighted Average	397	49.9	70.8	94.8

Northern California 8-Station Index October through June Values

Month	Precipitation (inches)	% of Average
October	0.5	17
November	5.7	90
December	8.5	101
January	1.4	16
February	13.6	170
March	1.6	23
April	3.1	79
May	1.2	55
June	0.4	40
July	0.5	250

2007 April-July Runoff in Thousand Acre-Feet

Basin	Observed Flow	% Avg
Trinity	286	44%
Sac/Delta	112	38%
McCloud	314	80%
Pit	685	64%
Shasta	1078	59%
Bend	1311	53%
Feather	739	41%
Yuba	453	45%
American	516	42%
Cosumnes	45	36%
Mokelumne	208	45%
Stanislaus	292	42%
Tuolumne	503	41%
Merced	212	34%
San Joaquin	431	34%
Kings	436	36%
Kaweah	99	35%
Tule	13	21%
Kern	125	27%
Truckee	113	43%
W. Carson	20	37%
E. Carson	73	39%
W. Walker	64	42%
E. Walker	12	19%