

California Monthly Climate Summary
April 2015

Weather Highlights

April 2015 was another warm and dry month for California. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 55.1°F which is 2.4°F higher than the long-term average. With a statewide average of 1.09 inches, precipitation in April was 66% of average. Statewide plots of precipitation and temperature for the past month are included at the end of the document.

April started warm and dry with storm systems passing to the north. During the first week a low pressure system pushed into the State bringing rain to the northern half of the state with highest totals along the North Coast. The weather system also cooled temperatures across the state. During the second week an influx of moisture and instability led to rain across most of the State except for the desert southeast. Ridging in the Great Basin in the latter part of the second week ended the rainfall and led to warmer temperatures. The high pressure led to warm days and cool nights for the third week of the month with no significant precipitation. Some fog events occurred in irrigated areas of the Central Valley. A weak low pressure system pushed through at the end of the month for a small boost in precipitation totals and cooler weather.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 37 temperature records tied or broken and 6 precipitation record set for the month. Of the 37 temperature records set, 17 were for new high maximum temperatures and 16 were for new high minimum temperatures. Records were set on 15 days of the month. Five of the six daily precipitation records were set on April 7, 2015.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 189 stations recorded a minimum temperature below freezing while eight 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 was below average across the state. For the CDEC precipitation gages for April 2015, the largest amount of precipitation recorded was at Gasquet Ranger Station in the North Coast region with 5.24 inches. This is 81% of the average precipitation for this station the month. At the other end of the spectrum, seven stations recorded no precipitation for the month. For the CIMIS network, Plymouth in Amador County topped the precipitation charts with 3.18 inches for the month and 17 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 2.3 inches in April. On average, 3.9 inches of precipitation is recorded for the 8-Station index for the month. The San Joaquin 5-Station Index recorded 2.3 inches of precipitation for the month. On average, 3.6 inches of precipitation is recorded for the 5-Station Index for the month.

CoCoRaHS Update

Water Year 2015 continues California's sixth 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 8, 2015 is shown at the end of the document. As of the end of April, California has 1293 volunteers signed up spanning 56 of California's 58 counties. The counties without volunteers are Alpine and Modoc. The counties with the most volunteers are Sonoma County with 111 volunteers and San Diego County with 110. For the month of April, 13,109 reports were recorded for California. The largest daily rain total for CoCoRaHS- CA in April was in Humboldt County where 3.84 inches was recorded on 04/7/2015. There were 40 reports of snowfall recorded during the month with the largest daily snowfall recorded in Placer County with 14 inches recorded on 04/25/2015. There were 14 hail reports filed over 10 counties. To join CoCoRaHS or find more information, please visit <http://www.cocorahs.org>.

Snowpack and Water Supply Conditions

As of April 30, 2015, the regional snow pillow report shows less than 1 inch of snow water equivalent in the northern region. This is 2% of the April 1 average and 3% of average for the date. For the central region, 1 inch of snow water equivalent is being reported which is 3% of the April 1 average and 4% of average for the date. For the southern region, less than 1 inch of snow water equivalent is being reported which is 1% of the April 1 average and 1% of average for the date. This is the lowest April 1 snow water equivalent on record. The previous low was 25% set in 1977 and 2014. The Water Supply Index (WSI) for WY2014 for the Sacramento Basin and the San Joaquin Basin fell into the critical category. More information can be found at <http://cdec.water.ca.gov/watersupply.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 31, 2015 and April 28, 2015 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 28 depiction, 46.77% of California is depicted in the D4 or exceptional drought category, 19.83% of California is depicted in the D3 or extreme drought category, and 26.84% of California is depicted in D2 or severe drought category, 4.67% of California is depicted in D1 or moderate drought, 1.75% depicted in abnormally dry or D0, and 0.14% with no drought depiction. Maps are updated weekly.

The U.S. Monthly Drought Outlook for May from NOAA depicts California in persisting drought conditions. 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-April 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 El Niño conditions. Equatorial sea surface temperature anomalies for the tropical Pacific have been positive with values of 0.6°C in the Niño 3.4 at the end of April. The February through April 3-month running mean of the Ocean Niño Index (ONI) is 0.6 which is the sixth 3-month running mean value above the 0.5 threshold for an El Niño event. 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 remaining warm into the 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. 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 2015 saw the winter forage crops head out and cut. Field preparations continued for spring planting of rice, corn and cotton. Lack of rain necessitated some irrigation. Early varieties of cherries and peaches were harvested. Apricot, nectarine, plum and peach fruit set and started sizing. Pomegranate bloom continued while wine grape bloom completed. Nut trees were fertilized, irrigated and treated with pesticides and fungicides. Almonds were developing while walnuts were fruiting. Olive trees were in bloom and groves continued to be pruned and irrigated. Field crops were prepared and those that were planted were progressing well. Asparagus, blueberries and strawberries were harvested while artichokes were developing along with onions and carrots. The limited precipitation impacted rangeland conditions. Supplemental feeding continued due to the lack of quality 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 – 105°F (Buttercup & Cahuilla, Colorado Desert)
 Low Temperature – -12°F (Casa Vieja Meadow, Tulare)
 High Precipitation – 5.24inches (Gasquet Ranger Station, North Coast)
 Low Precipitation – 0 inches (7 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 86.8 °F (Meloland, Imperial County)
 Low Average Minimum Temperature – 24.3°F (Big Bear Lake, San Bernardino County)
 High Precipitation – 3.18 inches (Plymouth, Amador County)*
 Low Precipitation – 0 inches (17 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	26	27.7	49.2	80.8
SF Bay	9	38.2	55.6	82.0
Central Coast	13	35.1	56.2	86.0
South Coast	51	36.9	58.9	88.9
Sacramento	79	27.4	51.0	79.7
San Joaquin	44	25.7	48.3	75.6
Tulare Lake	19	19.6	41.8	66.9
North Lahontan	27	16.4	38.7	63.5
South Lahontan	17	19.6	44.4	71.3
Colorado River Desert	7	47.1	71.1	99.3
Statewide Weighted Average	292	27.8	50.2	79.0

Statewide Precipitation Statistics

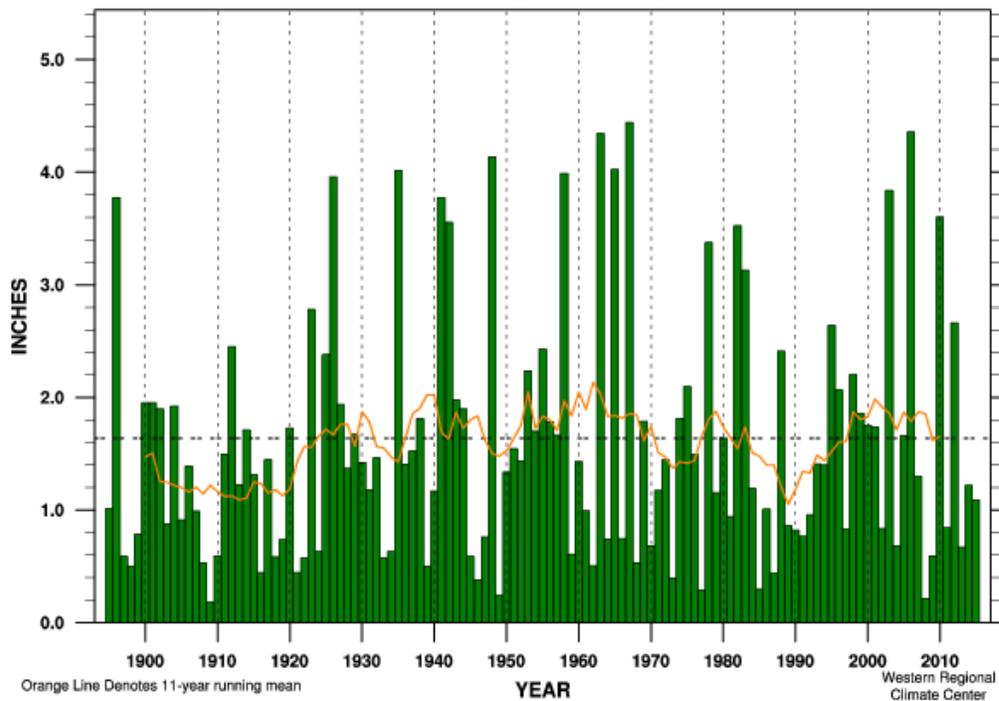
Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	Apr	Oct-Apr	Stations	Apr	Oct-Apr	Apr	Oct-Apr
North Coast	0.27	5	4	4	15	6	6	64.2%	86%
SF Bay	0.03	3	3	3	6	5	5	74.7%	85%
Central Coast	0.06	5	4	4	10	5	5	63.8%	72%
South Coast	0.06	5	5	5	14	10	9	16.7%	56%
Sacramento River	0.26	10	8	8	42	28	28	58.2%	81%
San Joaquin River	0.12	7	6	6	26	13	13	67.3%	58%
Tulare Lake	0.07	5	5	5	28	26	18	45.5%	52%
North Lahontan	0.04	6	4	4	13	8	8	69.1%	56%
South Lahontan	0.06	5	4	4	14	4	4	47.5%	76%
Colorado River	0.03	2	2	2	6	3	3	0%	62%
Statewide Weighted Average	1	53	45	45	174	108	99	56.4%	73.7%

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

End-of-Month Reservoir Storage	Number of Reservoirs	Average Storage (taf)	2015 Storage (taf)	% of Average
North Coast	6	2,459	1,533	62%
San Francisco Bay	17	529	457	86%
Central Coast	6	711	196	28%
South Coast	29	1,524	872	57%
Sacramento	43	13,043	9,664	74%
San Joaquin	34	7,773	4,543	58%
Tulare	6	1,062	419	39%
North Lahontan	5	585	62	11%
South Lahontan	8	261	225	86%
Total	154	27,950	17,975	64%

California Climate Tracker Images

California Statewide Precipitation April

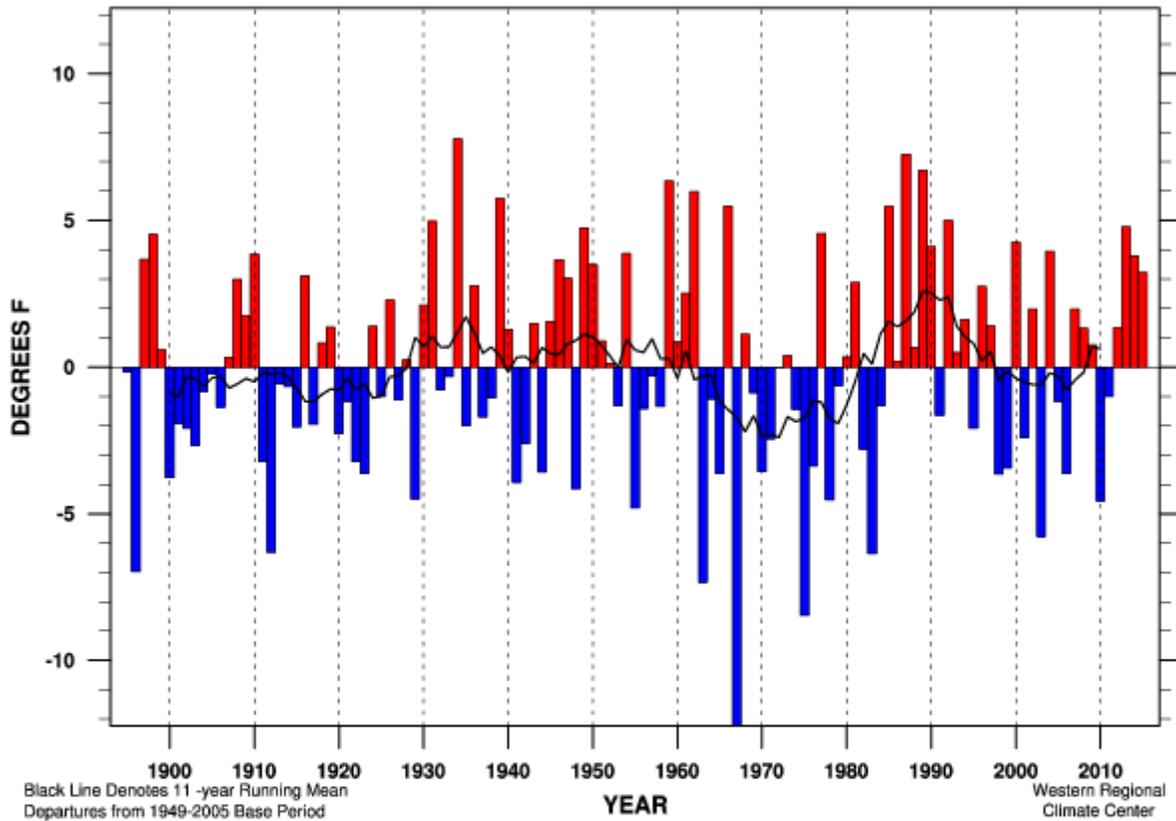


Orange Line Denotes 11-year running mean

Western Regional Climate Center

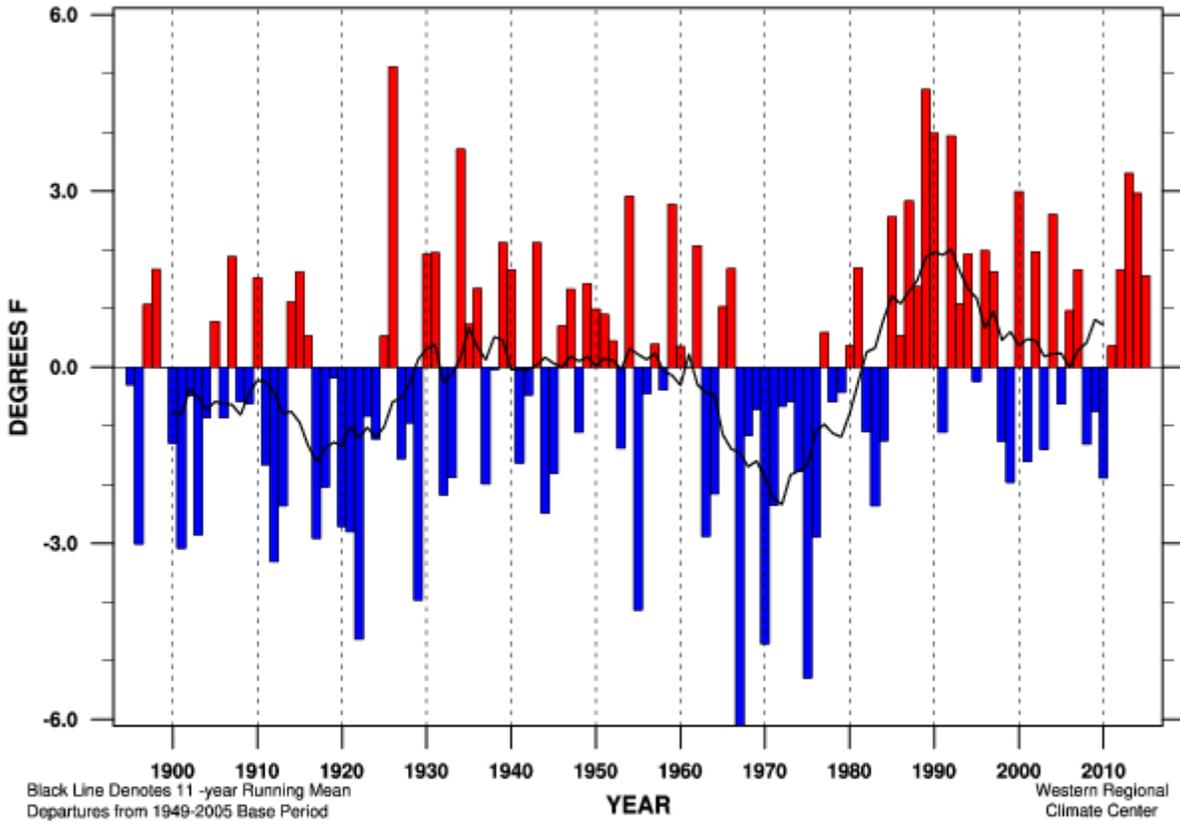
Linear Trend 1895-present	+ 0.24 ± 0.55 in.	(+ 14 ± 33%) per 100 yr	
Linear Trend 1949-present	- 0.19 ± 1.42 in.	(- 11 ± 86%) per 100 yr	
Linear Trend 1975-present	+ 0.05 ± 2.85 in.	(+ 3 ± 174%) per 100 yr	
Wettest Year	4.44 in. (27%) in 1967	MEAN	1.64 in.
Driest Year	0.18 in. (10%) in 1909	STDEV	1.08 in.
April 2015	1.09 in. (66%)	RANK	48 of 121

California Statewide Maximum Temperature Departure April



Linear Trend 1895-present	+ 0.85 ± 1.81°F/100yr	
Linear Trend 1949-present	+ 1.39 ± 4.93°F/100yr	
Linear Trend 1975-present	+ 4.88 ± 9.99°F/100yr	
Warmest Year	73.3 °F (+ 7.8 °F) in 1934	MEAN 65.5 °F
Coldest Year	53.3 °F (-12.2 °F) in 1967	STDEV 4.02 °F
April	2015 68.7 °F (+ 3.2 °F)	RANK 98 of 121

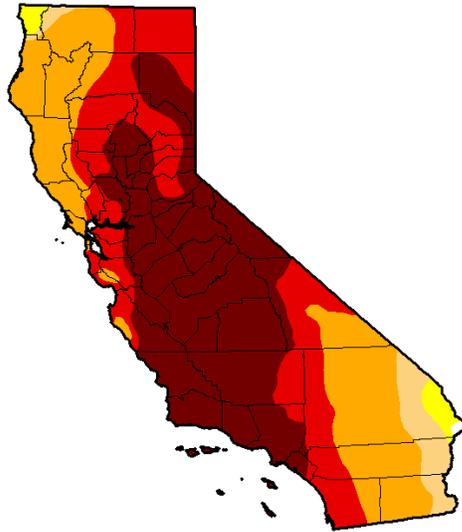
California Statewide Minimum Temperature Departure April



Linear Trend 1895-present	+ 1.34 ± 1.08 °F/100yr	
Linear Trend 1949-present	+ 2.67 ± 2.74 °F/100yr	
Linear Trend 1975-present	+ 4.28 ± 5.60 °F/100yr	
Warmest Year	45.0 °F (+ 5.1°F) in 1926	MEAN 39.9 °F
Coldest Year	33.8 °F (- 6.1°F) in 1967	STDEV 2.27 °F
April	2015 41.4 °F (+ 1.6°F)	RANK 91 of 121

United States Drought Monitor

U.S. Drought Monitor California



March 31, 2015
(Released Thursday, Apr. 2, 2015)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.15	99.85	98.11	93.44	86.60	41.41
Last Week 3/24/2015	0.15	99.85	98.11	93.44	86.60	41.41
3 Months Ago 12/30/2014	0.00	100.00	98.12	94.34	77.94	32.21
Start of Calendar Year 12/31/2014	0.00	100.00	98.12	94.34	77.94	32.21
Start of Water Year 9/30/2014	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago 4/1/2014	0.00	100.00	99.81	95.21	88.76	23.49

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

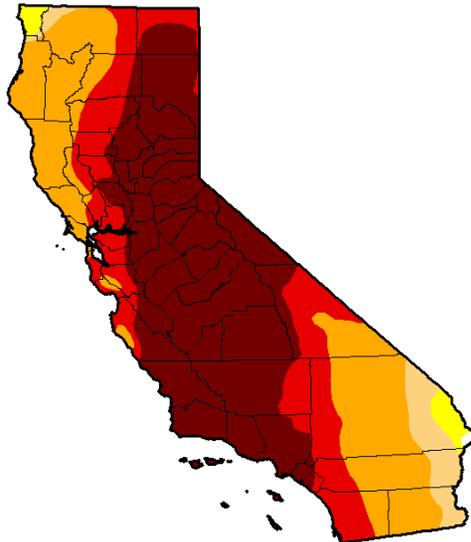
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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

U.S. Drought Monitor California



April 28, 2015
(Released Thursday, Apr. 30, 2015)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.14	99.86	98.11	93.44	86.60	46.77
Last Week 4/21/2015	0.14	99.86	98.11	93.44	86.60	46.77
3 Months Ago 12/7/2014	0.00	100.00	98.13	94.34	77.52	39.99
Start of Calendar Year 12/31/2014	0.00	100.00	98.12	94.34	77.94	32.21
Start of Water Year 9/30/2014	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago 4/29/2014	0.00	100.00	100.00	96.01	76.68	24.77

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe 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/>