

# Berkeley, CA rainfall July 1,2015 to March 7, 2016 (9:00 am)

March 7, 2016 UC Berkeley weather update

2015-16 Rain Year Berkeley and Richmond (all number are inches of rainfall)								
Date	Berkeley daily	Berkeley YTD	Last 30 days total	Last 7 days total	Richmond daily	Richmond YTD	Last 30 days total	Last 7 days total
7/1-10/31/15	0.05	0.05			0.15	0.15		
11/1/2015	0.56	0.61			0.63	0.78		
11/9/2015	0.46	1.07			0.56	1.34		
11/15/2015	0.26	1.33			0.45	1.79		
11/24-25/15	0.09	1.42			0.19	1.98		
12/2/2015	0.36	1.78			0.45	2.43		
12/6-7/2015	0.04	1.82			0.09	2.52		
12/10-11/2015	0.39	2.21			0.88	3.4		
12/13/2015	0.79	3			1	4.4		
12/18-21/15	1.96	4.96			2.13	6.53		
12/21 -22/15	0.62	5.58			0.5	7.03		
12/22/2015	0.09	5.67			0.02	7.05		
12/23-24/15	0.12	5.79			0.29	7.36		
12/28/2015	0.05	5.84			0.02	7.38		
12/30/2015	0.01	5.85	4.07		0.03	7.41	4.98	
1/4/2016	0.13	5.98			0.1	7.51		
1/5/2016	1	6.98			1.41	8.82		
1/6-7/2016	1.45	8.43	6.61		2.1	10.92	8.48	
1/9/2016	0.06	8.49			0.12	11.04		
1/13/2016	0.47	8.96	6.75		0.69	11.81	8.41	
1/14/2016	0.16	9.12	6.12	2.14	0.42	12.23	7.83	
1/15/2016	0.2	9.32	6.32	0.89	0.23	12.46	8.06	
1/16/2016	0.26	9.58	6.58	1.15	0.31	12.77	5.74	
1/17/2016	1.1	10.68	7.68	2.19	1.15	13.92	9.52	
1/18/2016	0.44	11.12	8.12	2.63	0.57	14.49	10.09	
1/19/2016	1.19	12.31	7.35	3.35	1.34	15.83	9.3	4.02
1/22/2016	0.45	12.76	7.18	3.64	0.43	16.26	9.23	4.03
1/23/2016	0.02	12.78	7.11	3.46	0.09	16.35	9.3	3.89
1/29/2016	0.42	13.2	7.36	0.44	0.49	16.84	9.48	0.58
2/2/2016	0.06	13.26	7.41	0.48	0.07	16.91	9.52	0.56
2/17/2016	0.19	13.45	3.87	0.19	0.24	17.15	4.38	0.24
2/18/2016	0.17	13.62	2.94	0.36	0.17	17.32	3.4	0.41
2/19/2016	0.04	13.66	0.88	0.21	0.07	17.24	1.04	0.24
2/26/2016	0.01	13.67	0.89	0.05	0	17.39	1.04	0.07
2/29/2016	0.01	13.68	0.9	0.02	0.01	17.4	1.05	0.01
3/3/2016	0	13.68	0.42	0.02	0.01	17.41	0.5	0.02
3/4/2016	0.41	14.09	0.83	0.42	0.57	17.98	1.07	0.59
3/5/2016	2.34	16.43	3.17	2.76	1.85	19.83	2.92	2.44
3/6/2016	0.52	16.95	3.75	3.28	0.55	20.38	3.54	2.99
3/7/2016	0.49	17.44	4.18	3.76	0.3	20.68	3.77	3.28
QPF to 3/10/16	0.66	18.1	4.84	4.42	0.89	21.57	4.66	4.17

\* QPF = NWS Quantitative Precipitation Forecast through Saturday noon



## CONDITIONS TO LOOK FOR

1. Compare the rainfall for the year and 24-hour forecast with the following criteria.

- a. **7"** of rain for the season starting on July 1 (year).
- b. **5"** of rain in the last 30 days (month).
- c. **3"** of rain in the last 7 days (week).
- d. **2"** of rainfall is forecast in the next 24 hours (day).

**7** Year  
**5** Month  
**3** Week  
**2** Day

2. If these conditions are met, flooding may occur sometime in the next 24 hours. Warnings on TV and radio should be monitored. Your [Personal Evacuation Plan](#) should be implemented if you sense flooding may occur. For information on an evacuation plan, check out the American Red Cross website.

**Current critical antecedent conditions status for UC Berkeley and BGC:**  
Both Berkeley campus and BGC are **almost fully primed** for flooding- however, no significant storm (2" in the next 24 hours) is forecast by NWS through the end of the forecast period (March 10), but a potential atmospheric river sets up on the upcoming weekend.

# Current National Weather Service forecast March 7, 2016 morning

Forecast For Lat/Lon: 37.8650/-122.2610 (Elev. 190 ft)  
Albany CA  
Forecast Created at: 9am PST Mar 7, 2016  
Custom Weather Forecast Table

	Mon Mar 07				Tue Mar 08				Wed Mar 09				Thu Mar 10				Fri Mar 11				Sat Mar 12				Sun Mar 13			
Weather	Numerous Rain Showers and TStorms		Chance Rain Showers and TStorms						Chance Rain				Slight Chance Rain		Likely Rain		Likely Rain		Chance Rain		Likely Rain		Chance Rain					
Daily-Temp	High 61 Low --				High 62 Low 43				High 67 Low 50				High 66 Low 54				High 64 Low 53				High 66 Low 50				High 65 Low 50			
Chance of Precip	60%	40%	10%	5%	5%	5%	15%	40%	40%	15%	15%	20%	70%	70%	60%	60%	65%	65%	25%	25%	30%	30%	55%	55%	45%	45%	40%	40%
Precip	0.05"	0.03"	0.00"	0.00"	0.00"	0.00"	0.00"	0.02"	0.00"	0.00"	0.00"	0.00"	0.09"	0.23"	0.24"													
12-hr Snow Total	0"		0"		0"		0"		0"		0"		0"		0"													
6-Hour Temp	4am 51	10am 56	4pm 60	10pm 50	4am 45	10am 54	4pm 61	10pm 54	4am 51	10am 60	4pm 66	10pm 59	4am 55	10am 61	4pm 65	10pm 58	4am 54	10am 59	4pm 63	10pm 55	4am 51	10am 59	4pm 65	10pm 56	4am 51	10am 59	4pm 64	10pm 55
Cloudiness	77%	73%	41%	16%	17%	43%	74%	87%	68%	70%	61%	63%	80%	80%	77%	77%	78%	78%	76%	76%	65%	65%	69%	69%	79%	79%	62%	62%
Dewpoint	47	47	43	43	39	42	41	47	46	50	51	53	51	54	56	54	52	53	51	51	48	52	52	51	48	50	49	50
Relative Humidity	87%	71%	52%	77%	81%	65%	47%	76%	83%	71%	57%	81%	87%	79%	71%	89%	91%	78%	64%	86%	89%	76%	62%	84%	87%	73%	59%	85%
Wind	W 15	S 10	NE 3	NW 15	N 13	NW 8	W 8	S 7	S 8	S 6	SW 5	S 5	S 8	S 12	S 12	S 9	N 6	NE 3	W 6	NE 6	E 3	S 6	SW 13	S 14	SW 13	SW 12	SW 9	SW 6
Snow Level (ft)	3555	3507	4009	4430	4835	5583	6413	8097	7943	7840	7783	7783	7783	7824	7456	0	0	0	0	0	0	0	0	0	0	0	0	0

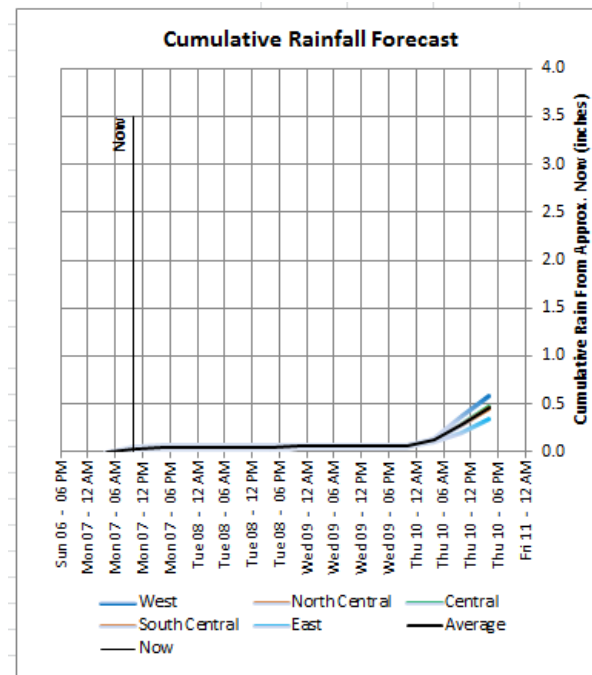


This morning- Berkeley Global Campus at Richmond Bay. Finally water everywhere.

## Forecast synopsis (Monday March 7, 2016)

On Monday the SF Bay Area will see a break in the rain after the low pressure center associated with the weekend storm moves south and east. Unsettled weather is then expected mid week with slight chances of rain.

More rain is then expected beginning Thursday March 10 and through the weekend. How much is uncertain, but there is a potential for another atmospheric river to set up similar to Saturday's storm.



QPF through March 10.  
From Contra Costa County Flood Control District's Forecast Tool  
<http://www.cccounty.us/4923/Flood-Forecast-Tool>

NATIONAL WEATHER SERVICE SAN FRANCISCO CA  
643 AM PST MON MAR 7 2016

...UNOFFICIAL RAINFALL TOTALS SINCE FRIDAY...

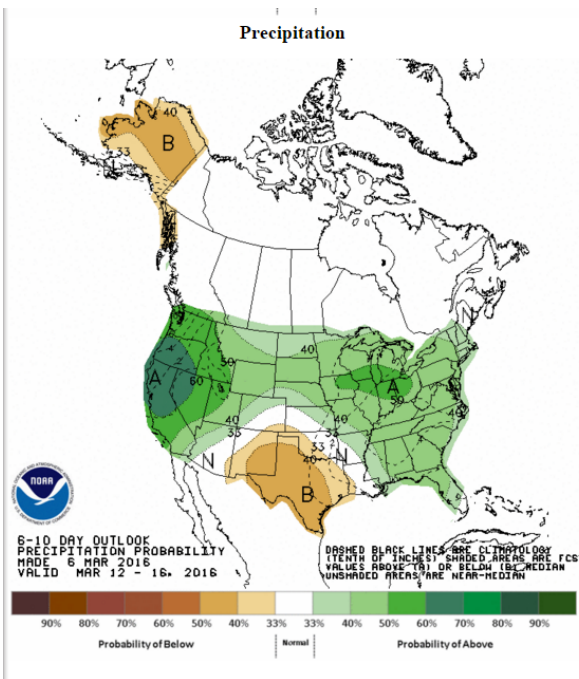
LOCATION	AMOUNT	TIME/DATE	ELEVATION
...ALAMEDA COUNTY...			
SE SIDE OF FREMONT	3.97 IN	0550 AM 03/07	580 FT
OAKLAND N RAW	3.75 IN	0533 AM 03/07	1402 FT
EASTMONT	3.24 IN	0536 AM 03/07	426 FT
OAKLAND NEAR 35TH AVE @ 580	3.08 IN	0552 AM 03/07	200 FT
1 NNE PIEDMONT	3.06 IN	0532 AM 03/07	3609 FT
NE OAKLAND NEAR CLAREMONT	3.03 IN	0548 AM 03/07	960 FT
SE OAKLAND NEAR EDWARDS AVE	2.89 IN	0546 AM 03/07	426 FT
OAKLAND S RAW	2.86 IN	0533 AM 03/07	1095 FT
OAKLAND - PIEDMONT AVE	2.83 IN	0549 AM 03/07	193 FT
OAKLAND MUSEUM	2.55 IN	0353 AM 03/07	30 FT
LAKE MERRITT	2.50 IN	0554 AM 03/07	51 FT
CLAREMONT	2.49 IN	0544 AM 03/07	360 FT
FREMONT NEAR SCOTT CREEK RD	2.49 IN	0549 AM 03/07	593 FT
HAYWARD AIR TERMINAL	2.44 IN	0354 AM 03/07	43 FT
NW SIDE OF HAYWARD	2.34 IN	0531 AM 03/07	6 FT
1 SE UNION CITY	2.32 IN	0541 AM 03/07	54 FT
1 SE CASTRO VALLEY	2.30 IN	0548 AM 03/07	400 FT
LIVERMORE FIRE DEPARTMENT	2.28 IN	0530 AM 03/07	313 FT
WEST BERKELEY	2.27 IN	0543 AM 03/07	49 FT
DUBLIN - MURRAY ELEMENTARY	2.21 IN	0540 AM 03/07	360 FT
NE OAKLAND NEAR CLAREMONT	2.15 IN	1243 AM 03/07	1092 FT
ROSE PEAK	2.14 IN	0514 AM 03/07	3060 FT
ALAMEDA POINT	2.06 IN	0542 AM 03/07	13 FT
UNION CITY	2.04 IN	0540 AM 03/07	147 FT
LIVERMORE AIRPORT	1.92 IN	0353 AM 03/07	393 FT
CALAVERAS RD RAW	1.90 IN	0518 AM 03/07	1230 FT
CASTRO VALLEY	1.71 IN	0152 AM 03/07	534 FT
UNION CITY	1.70 IN	0539 AM 03/07	10 FT
3 NE LIVERMORE	1.62 IN	0527 AM 03/07	570 FT
PLEASANTON - SUTTER GATE PAR	1.56 IN	0554 AM 03/07	331 FT
FREMONT	1.44 IN	0544 AM 03/07	45 FT
ALTAMONT RAW	1.18 IN	0512 AM 03/07	1436 FT
ALMOND PARK LIVERMORE	1.14 IN	0542 AM 03/07	567 FT

...CONTRA COSTA COUNTY...

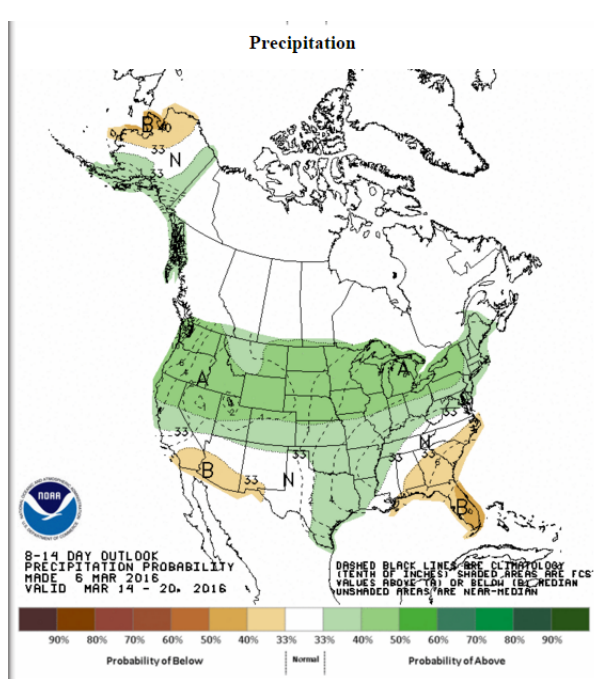
ORINDA FIRE STATION	6.25 IN	0514 AM 03/07	801 FT
BALD PEAK - TILDEN PARK	5.65 IN	0514 AM 03/07	588 FT
ST. MARYS COLLEGE	4.99 IN	0517 AM 03/07	645 FT
ROSSMOOR	4.86 IN	0500 AM 03/07	479 FT
MOUNT DIABLO PEAK	4.83 IN	0514 AM 03/07	2362 FT
LAFAYETTE	4.74 IN	0534 AM 03/07	341 FT
ROCKY RIDGE	4.53 IN	0514 AM 03/07	1517 FT
BRIONES RAW	4.33 IN	0528 AM 03/07	1450 FT
RICHMOND CITY HALL	4.13 IN	0500 AM 03/07	55 FT
DANVILLE LIBRARY	3.62 IN	0500 AM 03/07	380 FT
CUMMINGS PEAK	3.61 IN	0512 AM 03/07	895 FT
ORINDA NEAR SAN PABLO RESERV	3.57 IN	0550 AM 03/07	3284 FT
ARROYO DEL HAMBRE	3.54 IN	0500 AM 03/07	800 FT
LIME RIDGE OPEN SPACE	3.29 IN	0552 AM 03/07	226 FT
FLOOD CONTROL HQ	3.25 IN	0520 AM 03/07	161 FT
MARSH CREEK FIRE STATION	3.22 IN	0517 AM 03/07	679 FT
LAFAYETTE	3.20 IN	0533 AM 03/07	488 FT
MT DIABLO PARK HQ	3.16 IN	0500 AM 03/07	1600 FT
RODEO FIRE DEPT	3.12 IN	0514 AM 03/07	21 FT
2 SSW CONCORD	2.99 IN	0535 AM 03/07	68 FT
N SIDE OF EL CERRITO	2.99 IN	0544 AM 03/07	328 FT
YGNACIO VALLEY FIRE	2.97 IN	0518 AM 03/07	55 FT
SOUTH ORINDA	2.94 IN	0540 AM 03/07	738 FT
ALAMO	2.92 IN	0543 AM 03/07	324 FT
DANVILLE	2.83 IN	0551 AM 03/07	544 FT
BLACK DIAMOND RAW	2.79 IN	0528 AM 03/07	1600 FT
KENSINGTON	2.75 IN	0544 AM 03/07	685 FT
EL CERRITO	2.73 IN	0540 AM 03/07	2034 FT
SOBRANTE RIDGE REGIONAL PRES	2.68 IN	0554 AM 03/07	284 FT
SAN RAMON	2.65 IN	0526 AM 03/07	426 FT
HIGHLAND PEAK	2.61 IN	0500 AM 03/07	2581 FT
TASSAJARA	2.60 IN	0500 AM 03/07	30 FT
WALNUT CREEK - SE	2.55 IN	0540 AM 03/07	295 FT
MALLORY RIDGE RAW	2.55 IN	0514 AM 03/07	1948 FT
CONCORD - MEADOW HOMES	2.41 IN	0545 AM 03/07	49 FT
1 NW CLAYTON	2.36 IN	0540 AM 03/07	347 FT
LAFAYETTE HILLS	2.34 IN	0540 AM 03/07	203 FT
DUBLIN FIRE STATION	2.33 IN	0514 AM 03/07	450 FT
LOS MEDONOS	2.16 IN	0516 AM 03/07	131 FT
CONCORD AIRPORT	2.13 IN	0353 AM 03/07	18 FT
BLACKHAWK	2.10 IN	0544 AM 03/07	816 FT
LOS VAQUEROS RAW	2.07 IN	0514 AM 03/07	1100 FT
WEAPONS STATION FIRE STA.	2.06 IN	0520 AM 03/07	49 FT
BETHEL ISLAND FIRE STA.	1.88 IN	0507 AM 03/07	20 FT
CONCORD PAVILION	1.87 IN	0500 AM 03/07	558 FT
KREGOR PEAK	1.83 IN	0514 AM 03/07	1129 FT
IRONHOUSE SANITARY DISTRICT	1.79 IN	0500 AM 03/07	23 FT
PITTSBURG MARINA	1.78 IN	0540 AM 03/07	32 FT
BRENTWOOD CORP YARD	1.55 IN	0514 AM 03/07	47 FT
MARSH CREEK RESERVOIR	1.49 IN	0514 AM 03/07	223 FT
RODDY RANCH GOLF CLUB	1.49 IN	0511 AM 03/07	403 FT
BYRON AIRPORT	1.47 IN	0508 AM 03/07	43 FT
WEST SIDE OF BRENTWOOD	1.40 IN	0544 AM 03/07	203 FT
BIXLER PUMPING PLANT	1.27 IN	0505 AM 03/07	16 FT
LAS TRAMPAS	1.04 IN	0514 AM 03/07	1759 FT

East Bay rain fall totals since Friday. Note the significant variability due to orographic effects (the “wringer” effect from rain clouds being lifted over higher topography, but also a result of locally stronger storm cells moving through the Bay Area. The Strawberry Canyon hill area has received around 25% more rainfall than the Berkeley flatlands.

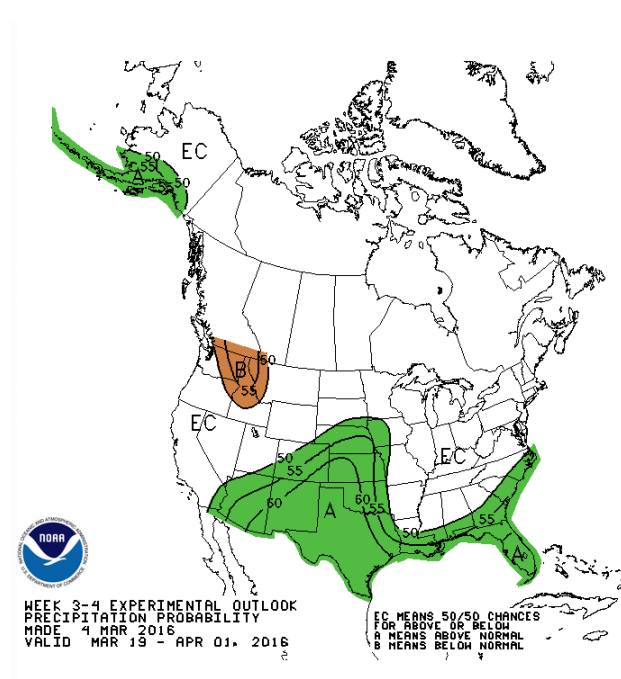
NOAA forecasts continued above rainfall through mid- March.



NCEP 6-10 day precipitation forecast  
(Made 3/6/16 for March 12-16, 2016)



NCEP 8-14 day precipitation forecast  
(Made 3/6/16 for March 14-20, 2016)



NCEP 3- 4 week precipitation probability  
(Made 3/4/16 for March 19- April 1)



## March 7, 2016 update

March 1 snowpack survey = 83% of average

<http://www.water.ca.gov/news/newsreleases/2016/030116d.pdf>

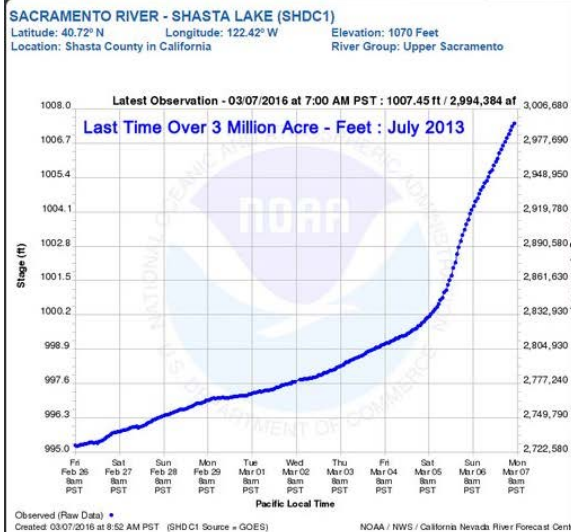
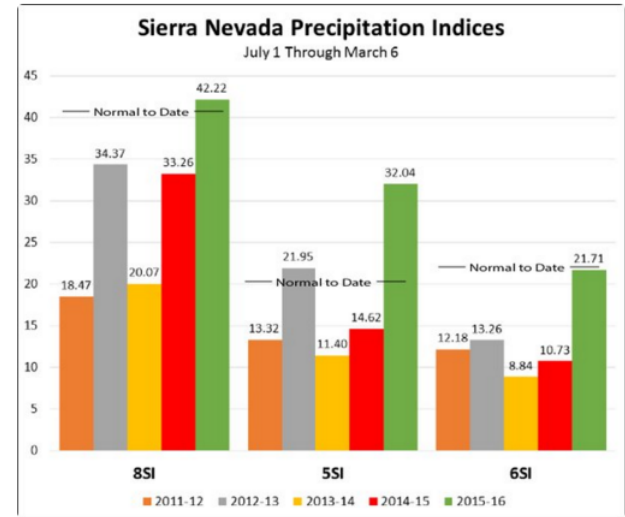
“Mother Nature is not living up to predictions by some that a ‘Godzilla’ El Niño would produce much more precipitation than usual this winter,” said DWR Director Mark Cowin. “We need conservation as much as ever.”

Rainfall through March 7 has resulted in significant improvement in seasonal water resources.



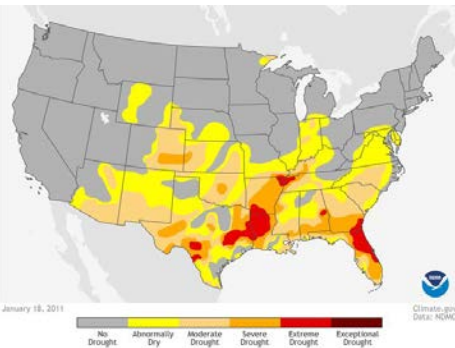
Jan Null @ggweather · 3h

Weekend pushes important seasonal precip Sierra Indices to at or above normal. The highest to date in 5 years.

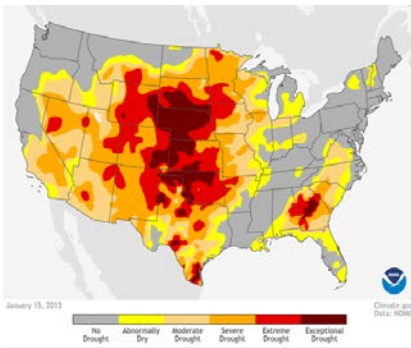


NWS CNRFC @NWSNCRFC · 56m

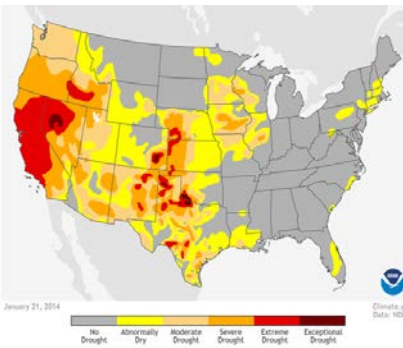
Good weekend inflows for northern CA reservoirs. Shasta almost over 3M AcFt & Oroville over 2M AcFt! #ElNino #cawx



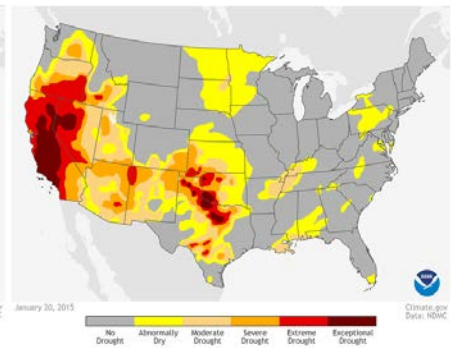
January 17, 2012



January 15, 2013

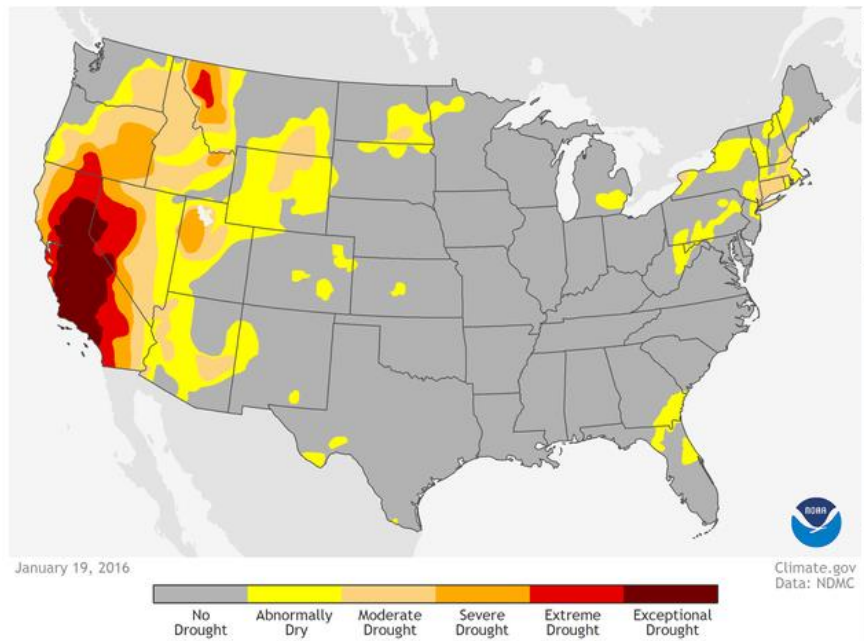


January 21, 2014



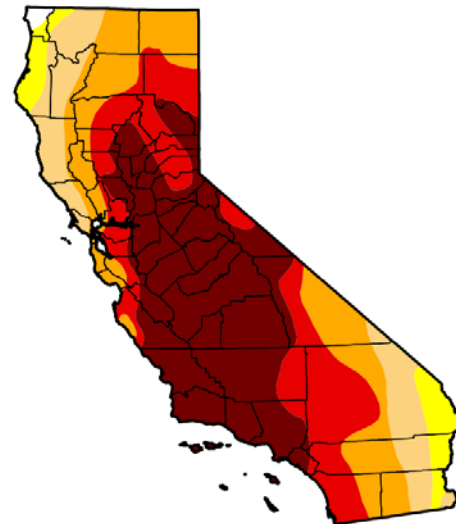
January 20, 2015

## Drought Progress 2012- 2016



### U.S. Drought Monitor California

**February 23, 2016**  
(Released Thursday, Feb. 25, 2016)  
Valid 7 a.m. EST



#### 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.

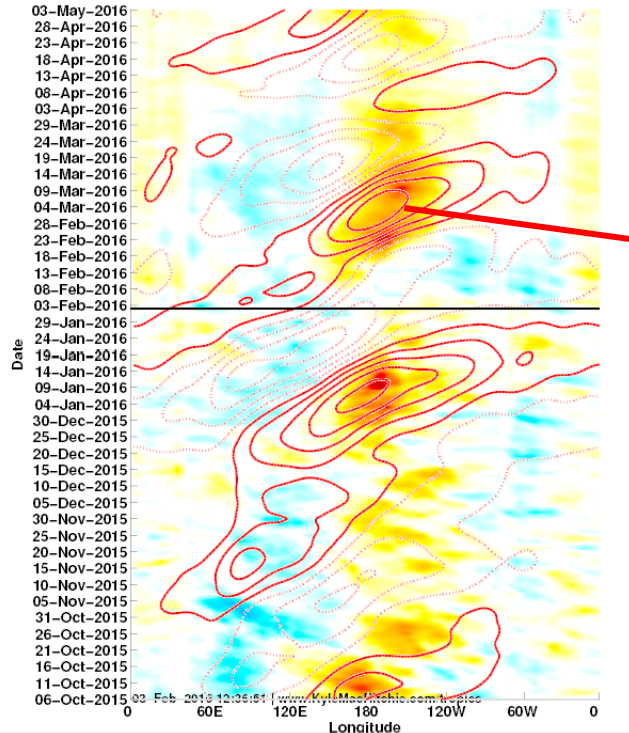
Author:  
Eric Loebehausen  
U.S. Department of Agriculture

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

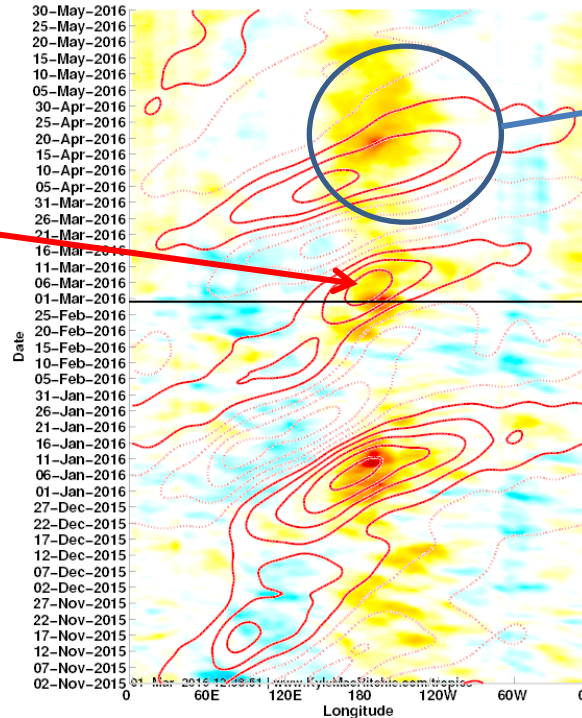
February 23, 2016 Current Conditions

# Why the pattern change now?

Real Time CFS 800/850 hPa U-Wind – 7.5S to 7.5N



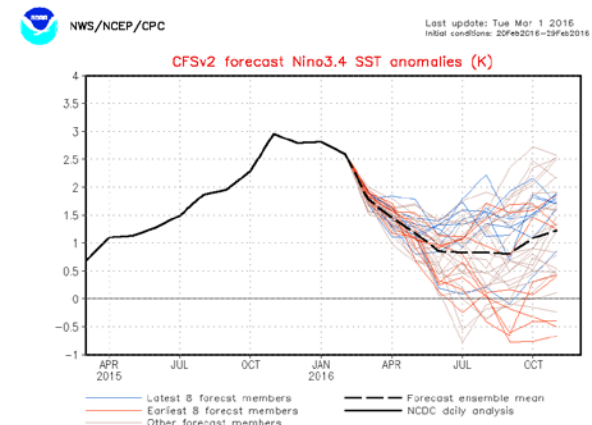
Real Time CFS 800/850 hPa U-Wind – 7.5S to 7.5N



Another active MJO period?

February 3, 2016 chart and forecast:  
Red contours = MJO active phase  
forecast- as in January 2016 which led to  
above normal precipitation for most of  
northern CA, the active phase of the  
MJO is expected to return in March and  
may enhance the El Nino base state,  
possibly bringing more rain to the state.  
(Figure from  
<http://www.kylemacritchie.com/real-time-maps/>)

March 1, 2016: The active phase of the  
Madden Julian Oscillation has propagated  
to the eastern Pacific and constructively  
interfering with (enhancing) the El Nino  
base-state enhancing convective activity.  
Note another active phase may lead to  
further enhancement in mid to later April.  
El Nino conditions (sea surface  
temperatures > 0.5 in the Nino3.4 region)  
may continue through the summer into  
early fall.



# Ensemble GFS (GEFS) MJO Forecast

RMM1 and RMM2 values for the most recent 40 days and forecasts from the ensemble Global Forecast System (GEFS) for the next 15 days

light gray shading: 90% of forecasts

dark gray shading: 50% of forecasts

The GFS ensemble MJO index forecast depicts a continuation of MJO activity during the period with eastward propagation through Phases 8 and 1, but with a predicted decrease in amplitude.

Yellow Lines - 20 Individual Members  
Green Line - Ensemble Mean

