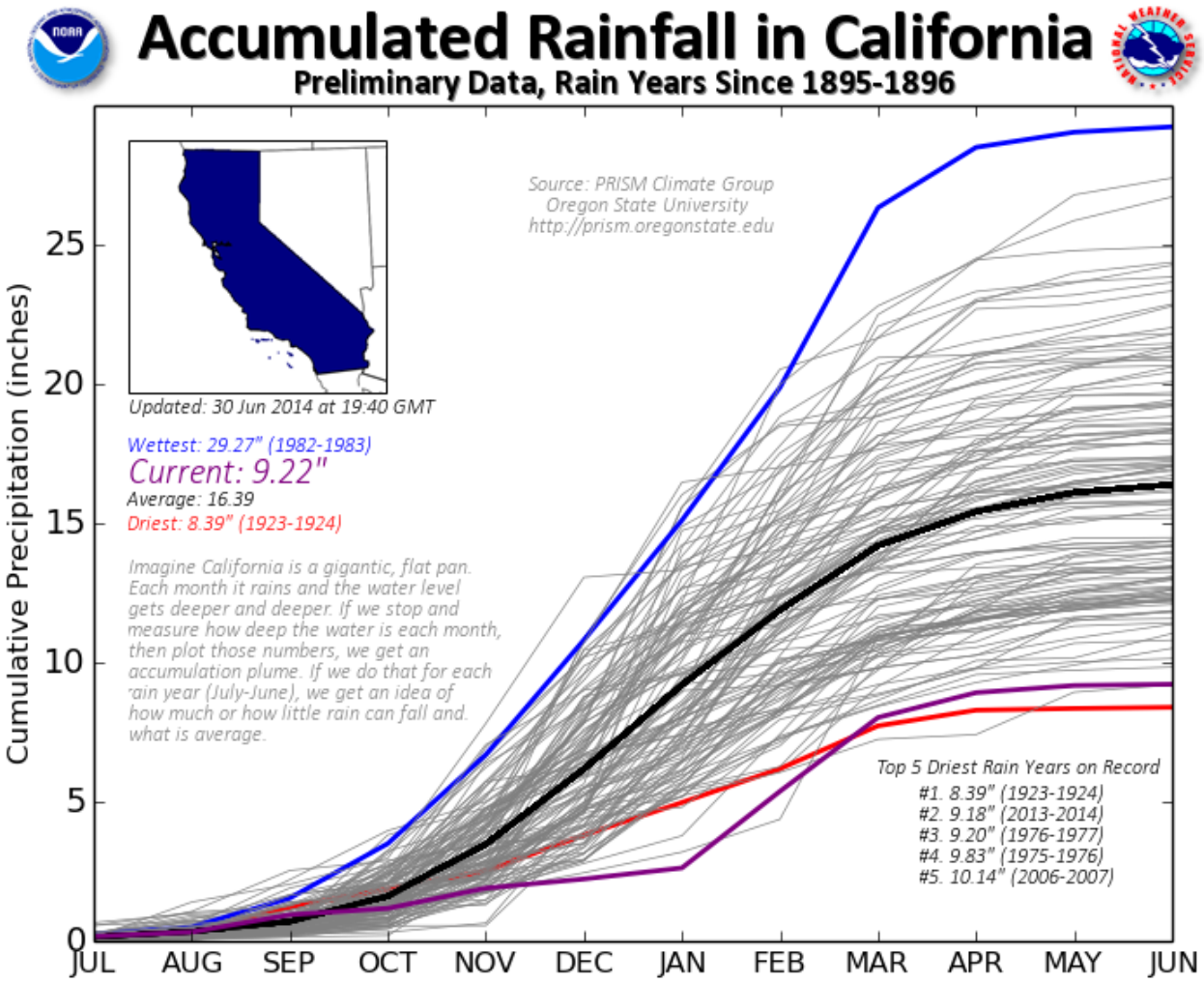
2013-2014 Rain Year in Review

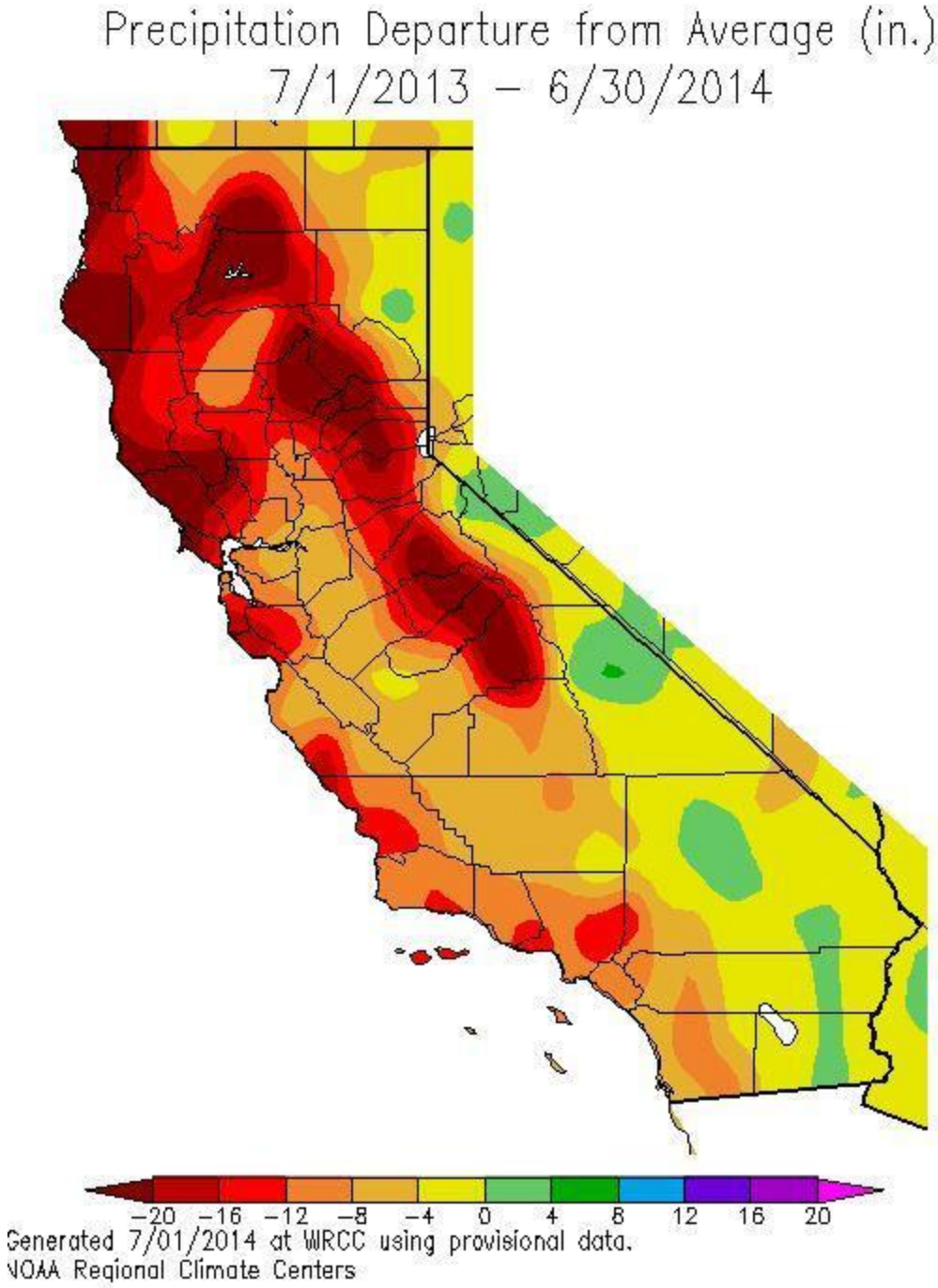
(Rain Year Beginning 7/01/13 and ending 6/30/14)

For the San Francisco Bay Area and Monterey Bay Area

The 2013-14 Rain Year was one of the driest on record across California. Accumulated yearly rainfall averaged across the entire state totaled only 9.18 inches as of June 30, which made the 2013-14 rain year the second driest in California in the past 119 years, slightly edging out the worst of the drought years in the 1970s (9.20 inches in 1976-77 and 9.83 inches in 1975-76). Only 1923-24 was drier at 8.39 inches. By comparison, the average statewide rainfall is 16.39 inches and accumulated rainfall during the wettest year (1982-83) was 29.27 inches.



Graphic showing accumulated rainfall across California since 1895-96. The 2013-14 rain year is depicted with the purple line. The driest rain year (1923-24) is in red, the average is in black and the wettest year (1982-83) is in blue.



Graphic showing precipitation departure from average for the 2013-2014 rain year. Note that portions of the North Bay had rain year precipitation deficits of more than 20 inches.

Closer to home, across the San Francisco Bay Area and Monterey Bay Area, the 2013-14 rain year was also one of the driest on record. Rain totals for the year were generally only about half of normal, but ranged from as little as a third of normal in parts of San Mateo and Alameda Counties to as much as two-thirds of normal in portions of the North and East Bay. A few locations in the North Bay (Muir Woods and Napa) accumulated about three-quarters of their 30-year precipitation average.

2013-14 Rain Year Regional Precipitation Summary:

Location	2013-14 Rainfall	Normal Yearly Rainfall	Percent of Normal
North Bay			
Angwin	23.01	41.30	56
Calistoga	15.74	40.87	39
Cloverdale	22.14	43.13	51
Kentfield	25.32	47.98	53
Muir Woods	29.50	38.26	77
Napa	19.79	27.71	71
Napa Airport	10.34	20.39	51
Occidental	34.23	56.99	60
Petaluma Airport	16.09	26.65	60
Saint Helena	18.15	36.64	50
San Rafael	16.00	35.23	45
Sonoma County Airport	14.57	36.28	40
Sonoma	15.44	31.43	49
San Francisco Peninsula			
Half Moon Bay	9.44	29.00	33
Palo Alto	8.36	16.15	52
Redwood City	7.33	20.32	36
San Francisco Airport	8.81	20.65	43
San Francisco Downtown	12.54	23.65	53
Woodside	12.74	29.61	43
East Bay			
Antioch	8.35	13.22	63
Berkeley	16.87	26.60	63
Concord	10.93	18.12	60
Concord Airport	10.45	16.46	63
Fremont	6.63	16.68	40
Hayward Airport	5.87	18.04	33
Livermore	6.91	15.23	45
Livermore Airport	7.19	15.71	46
Martinez	11.80	20.23	58
Mount Diablo Junction	15.80	25.04	63
Newark	6.85	15.09	45
Oakland	9.19	23.96	38
Oakland Airport	10.02	20.81	48
Richmond	13.40	24.93	54

South Bay & Santa Cruz County			
Ben Lomond	22.32	50.48	44
Gilroy	8.97	20.54	44
Los Gatos	5.92	23.08	26
Moffett Federal Airfield	6.45	14.68	44
Mount Hamilton	13.06	26.13	50
San Jose	6.33	15.82	40
Santa Cruz	13.57	31.35	43
Watsonville	9.92	23.50	42
Watsonville Airport	9.23	20.27	46
Monterey and San Benito Counties			
Big Sur Station	18.09	44.88	40
Carmel Valley	10.08	19.36	52
Hollister	5.39	14.19	38
King City	5.47	12.06	45
Monterey	8.63	21.10	41
Monterey Airport	8.58	16.12	53
Pinnacles National Park	9.09	17.84	51
Salinas	8.90	17.24	52
Salinas Airport	8.01	15.45	52

Four climate stations experienced their driest rain year on record (Half Moon Bay, Los Gatos, Oakland Museum and Santa Cruz). An additional nine locations recorded their second lowest rain year total, and eight more locations were third driest. The table below lists all climate stations where 2013-14 rain year totals ranked as one of the top three driest:

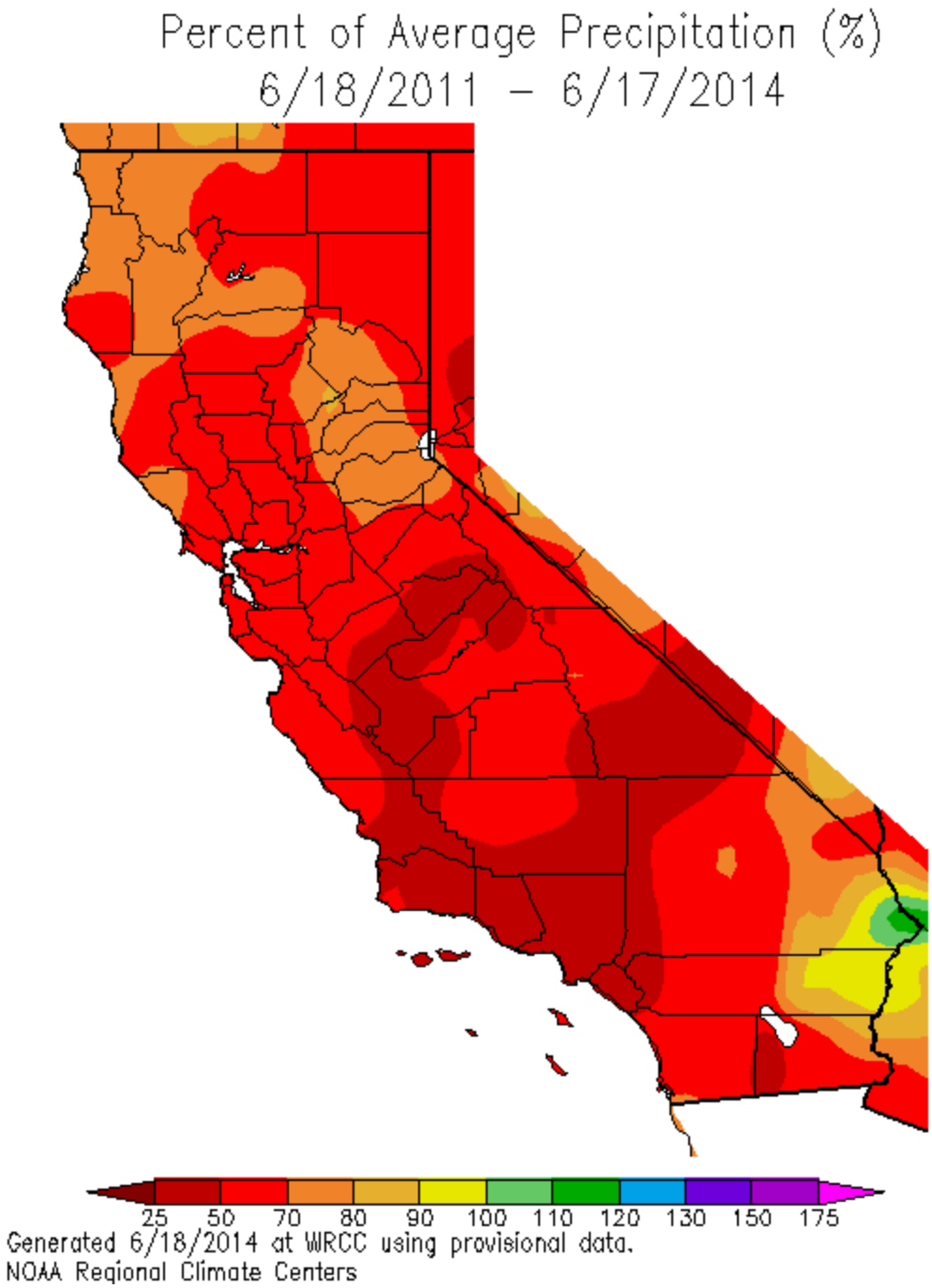
Location	**Driest Rain Year / Amount (inches)**	**2nd Driest Year / Amount**	**3rd Driest Year / Amount**	**Years of Record**
Half Moon Bay	**2013-14 / 9.44**	1971-72 / 13.09	1975-76 / 13.56	72
Los Gatos	**2013-14 / 5.92**	1975-76 / 8.15	2006-07 / 8.85	121
Oakland Museum	**2013-14 / 9.19**	1975-76 / 9.55	1976-77 / 10.62	42
Santa Cruz	**2013-14 / 13.57**	1975-76 / 13.88	1912-13 / 14.09	121
Gilroy	1975-76 / 7.27	**2013-14 / 8.97**	1993-94 / 10.87	67
Monterey	1912-13 / 8.13	**2013-14 / 8.63**	1975-76 / 9.86	72

Pinnacles NP	1975-76 / 8.61	**2013-14 / 8.90**	1967-68 / 9.14	77
Redwood City	1975-76 / 6.43	**2013-14 / 7.33**	1971-72 / 9.07	85
Salinas Airport	2001-02 / 3.65	**2013-14 / 5.87**	1971-72 / 6.45	83
San Jose	1975-76 / 5.77	**2013-14 / 6.33**	1912-13 / 6.35	118
San Rafael	1975-76 / 13.62	**2013-14 / 16.00**	1989-90 / 16.73	59
Watsonville	1975-76 / 8.61	**2013-14 / 9.92**	1912-13 / 10.79	101
Woodside	1975-76 / 10.45	**2013-14 / 12.74**	1976-77 / 14.01	45
Angwin	1993-94 / 22.29	2006-07 / 22.74	**2013-14 / 23.01**	70
Ben Lomond	1975-76 / 19.01	1976-77 / 20.99	**2013-14 / 22.32**	78
Big Sur Station	1975-76 / 15.48	1976-77 / 17.20	**2013-14 / 18.09**	95
Calistoga	1975-76 / 14.36	1976-77 / 14.45	**2013-14 / 15.74**	82
Cloverdale	1976-77 / 16.59	1975-76 / 17.50	**2013-14 / 22.14**	58
Palo Alto	1975-76 / 5.69	1971-72 / 7.04	**2013-14 / 8.36**	58
SFO Airport	1975-76 / 7.73	1971-72 / 8.45	**2013-14 / 8.81**	68
Sonoma	1976-77 / 12.38	1975-76 / 13.29	**2013-14 / 15.44**	74

Downtown San Francisco, which has the longest rainfall record (165 years) of any regional climate site, had their 15th driest rain year with only 12.54 inches (53% of normal).

Other facts about San Francisco rainfall for the 2013-14 rain year:

- Rainfall was below normal during eight of twelve months. Only September, February, and April measured above normal precipitation.
- During five very dry months (October, December, January, May and June) rainfall totals in San Francisco were less than 10% of normal.
- February was the wettest month. 5.84 inches of rain fell in San Francisco during February which represented nearly half (46%) of San Francisco's rainfall total for the entire rain year. This was true throughout the region. In fact, some North Bay locations picked up two-thirds of their yearly rainfall in the month of February alone.
- There were only 42 days with measurable rain in San Francisco during the 2013-14 rain year. This compares to an average of 67 days. Only four other rain years in the history of recorded rainfall in San Francisco saw fewer days with measurable rain.
- The 2013-14 rain year was the third consecutive year with below normal precipitation across the region. In San Francisco, accumulated rainfall during the past three rain years ranked as the 4th driest three-consecutive rain year period (behind 1974-1977, 1958-1961 and 1897-1900).



Graphic showing percent of average precipitation for the past three rain years (June 2011-June2014). Note that much of the San Francisco Bay Area has seen only 50-70% of normal accumulated rainfall for the past three years. Locations farther to the south have fared even worse with parts of Monterey and San Benito county having accumulated less than half of normal.

The following are brief reviews of monthly precipitation summaries for the San Francisco and Monterey Bay Areas during the 2013-2014 rain year:

July and August 2013

As is typical for these summer months, most inland climate stations received no measurable rainfall during July and August. Several locations near the coast picked up very light amounts of precipitation in the form of occasional marine layer drizzle.

September 2013

Moist southerly flow at the beginning of the month produced isolated light showers in the East Bay shortly after midnight on September 1.

A cold front swept through the area on Saturday, September 21, which happened to be the final day of summer. This was the most significant rain event to occur in the San Francisco Bay Area since April 4. Rain was briefly heavy just prior to cold frontal passage. 1.5 inches of rain fell on Mount Tamalpais in Marin County. Isolated 1 inch totals occurred in the North Bay Mountains and East Bay Hills. Elsewhere in the San Francisco Bay Area rain totals on September 21 generally ranged from 0.25 to 0.75 inches. These rain amounts easily broke daily rainfall records for most locations. The cold front weakened rapidly as it pressed south into the Monterey Bay Area that afternoon. Rain totals from Monterey Bay southward were mostly less than a quarter of an inch and in some cases just a few hundredths.

Rain that fell on the 21st was the only rainfall that occurred at most climate stations during September. But because rain amounts with the system were unusually heavy for September, rain totals for the month as a whole were well above normal at most San Francisco Bay Area climate stations.

October 2013

A couple of cool weather systems produced light amounts of rainfall across the southern part of the region during October. But for the most part, October 2013 was a very dry month. Normal October rainfall generally ranges from about one to two inches across the region. But in October 2013, most San Francisco Bay Area climate stations reported no measurable rain.

A cold front was initially dry as it swept through the San Francisco Bay Area late on October 27. But by the time the front had reached the Monterey Bay Area early on the 28th, it had tapped into additional moisture and managed to generate light to moderate rainfall. Greatest rain amounts were near Monterey Bay where totals from 0.25 to 0.50 inches were common.

Monthly rain totals for October ranged from zero percent of normal across most of the San Francisco Bay Area to nearly half of normal around the Monterey Peninsula and in Carmel Valley.

November 2013

All of November's measurable precipitation occurred during just one rain event on the 19th and 20th. Heaviest rain occurred during the early afternoon hours of November 20 when rain rates up to a half inch per hour were reported across the central portion of the San Francisco Bay Area. Rainfall totals with this weather system generally ranged from 0.50 to 1.50 inches across the San Francisco Bay Area. As much as three inches of rain fell on isolated portions of the North Bay. Lighter rainfall amounts of only 0.25 to 0.50 inches occurred farther to the south across the Monterey Bay Area.

Given that all of November's measurable precipitation occurred in only one rain event, rain totals for the month were below normal at all National Weather Service climate stations and well below normal at most locations. Some East Bay locations fared the best, picking up as much as 88 percent of their November average

(Concord Airport). But for the most part, rain totals for November 2013 were at only half the 30-year average, or less

December 2013

The only rain event of significance occurred during the night of December 6 and 7, and that rain event only produced light to moderate amounts of precipitation. As a result, December 2013 precipitation was well below normal – anywhere from 5-15% of normal at most climate stations and less than 5 percent of normal at some North and East Bay locations. December 2013 was one of the driest Decembers on record. San Francisco, with 165 years of rainfall records, experienced its sixth driest December with only 0.39 inches of rain for the month. In addition, December 2013 was the second driest December at Half Moon Bay and Santa Cruz, the third driest at Oakland and San Jose, and the fourth driest at Kentfield and Monterey.

Calendar Year Precipitation

The bulk of precipitation that falls across the San Francisco Bay Area and Central California Coast comes between late autumn and early spring – generally between November and April, what is typically referred to as the "rainy season." For this reason, the "rain year" in California begins on July 1 and ends on June 30. As of December 31st, with half the rain year complete, the year-to-date rain totals (July 1- December 31) were well below the 30-year average and ranged from 15 to 30 percent of normal.

Calendar year rain totals are typically not viewed with much interest in California. But 2013 was an exception. The last half of the 2012-2013 rain year (January-June 2013) was exceptionally dry. And the first half of the 2013-2014 rain year was also very dry. In fact, all six of 2013's rainy season months (January, February, March, April, November, and December) were much drier than normal. The result – 2013 was easily the driest calendar year on record across the entire region. San Francisco, which has the longest rainfall record of any climate station in the area, experienced its driest calendar year on record, by far. For all of 2013, San Francisco picked up a meager 5.59 inches of rainfall, only 24 percent of its normal 23.65 inches, and well below the previous dry calendar year record of 9.00 inches in 1917.

January 2014

January 2014 was the driest January on record at most climate stations across the San Francisco Bay Area and Monterey Bay Area.

.A few weak weather disturbances managed to generate isolated light rain between January 8 and 11, but at most only a few hundredths of rain was recorded during these days. Only one weather system, one near the end of the month on January 30, was strong enough to produce widespread rainfall across the region. And even that system managed to produce, at most, a quarter of an inch locally in the hills. Most lower elevation locations picked up a tenth of an inch or less.

Rain totals for January 2014 were exceptionally low. Monthly rain totals were less than a half inch at even the wettest locations, while most locations didn't even manage a quarter of an inch. A few locations picked up no rainfall at all, or only trace amounts. Rainfall totals for January were less than 5 percent of normal at most climate stations.

January 2014 was the driest January on record for the vast majority of climate stations – some of which have climate records that span over a century. The table below lists all climate stations which experienced their driest January on record:

Location	Normal January precip (inches)	January 2014 precip (inches)	Previous Driest January and Amount		Length of Climate Record (years)
San Francisco Bay Area:					
Angwin	7.76	0.15	2007	0.48	70
Berkeley	4.98	0.10	1984	0.22	114
Calistoga	8.16	0.20	2007	0.35	82
Cloverdale	8.43	0.24	2009	0.48	58
Gilroy	4.38	0.06	1976	0.21	67
Half Moon Bay	5.53	0.17	1984	0.26	72
Kentfield	9.13	0.02	1976	0.33	112
Livermore	2.87	0.08	1948	0.20	111
Los Gatos	4.94	0.11	1948	0.22	121
Martinez	4.01	0.08	1984	0.33	86
Mount Diablo Junction	4.77	0.13	1984	0.31	61
Muir Woods	6.97	0.38	1984	0.54	73
Napa	5.13	0.11	1976	0.34	116
Newark	2.95	0.04	1984	0.14	71
Oakland Museum	4.71	0.04	1976	0.31	42
Oakland Airport	3.99	0.04	1984	0.26	50
Occidental	11.11	0.38	1976	0.57	69
Petaluma Airport	4.93	0.12	1920	0.24	99
Redwood City	4.02	0.00	2002	0.24	85
Saint Helena	6.94	0.04	2007	0.43	101
San Francisco Airport	4.19	0.01	2013	0.20	68
San Francisco Downtown	4.50	0.06	1920	0.26	165
San Rafael	6.95	0.00	2007	0.31	59
Sonoma	6.02	0.07	1976	0.36	74
Monterey Bay Area:					
Ben Lomond	10.06	0.02	1976	0.31	78
Monterey	4.40	0.04	1984	0.11	72
Salinas	3.09	0.12	1984	0.12	55
Santa Cruz	6.28	0.05	1976	0.32	121
Watsonville	4.46	0.05	1984	0.23	101

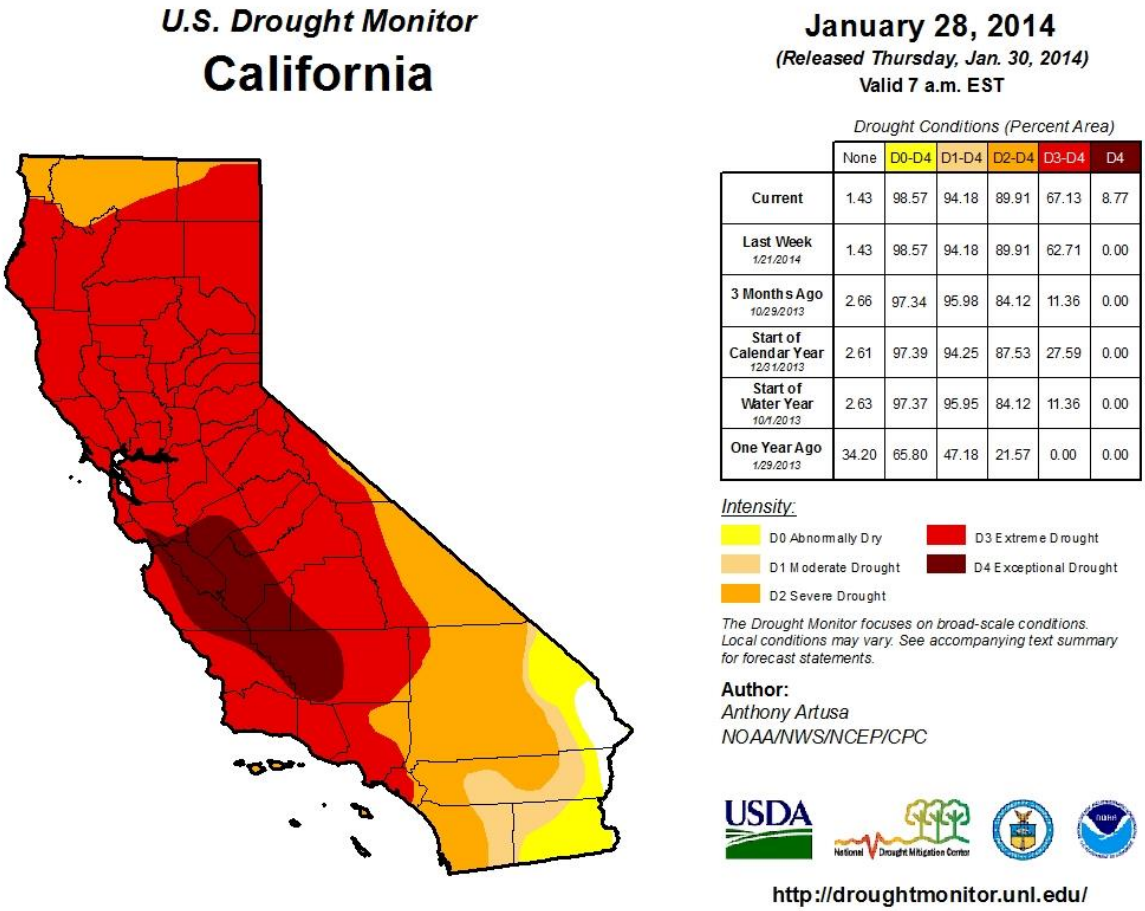
San Jose's 0.12 inch rain total in January was its second lowest January rain total on record. The driest January in San Jose was in 1920 with a total of 0.10. San Jose rainfall records date back to 1893.

In addition, Richmond, the Salinas Airport, and Pinnacles National Park all had their 3rd driest January on record.

Finally, climate stations in King City and Antioch and on Mount Hamilton all experienced their 4th driest January.

Record dry conditions from January 2013 through January 2014 worsened drought conditions in California. On Friday, January 17, Governor Jerry Brown officially declared a drought emergency in California, asking all citizens of the state to cut back on their water use by 20%.

By late January, the US Drought Monitor began to depicted portions of Central California as being in **"exceptional" (D4) drought"**, including portions of Monterey, Santa Cruz and Santa Clara counties and all of San Benito county. D4 is the worst drought category on the Drought Monitor. The degradation was made due to historically low rainfall amounts so far this winter, long-term precipitation deficits stretching several years, and a growing number of increasingly significant drought impacts. This is the first time the D4 category has existed in California since the inception of the Drought Monitor in 2000. In addition, 67% of California was now covered by D3/4 conditions, also the highest since the Drought Monitor began.



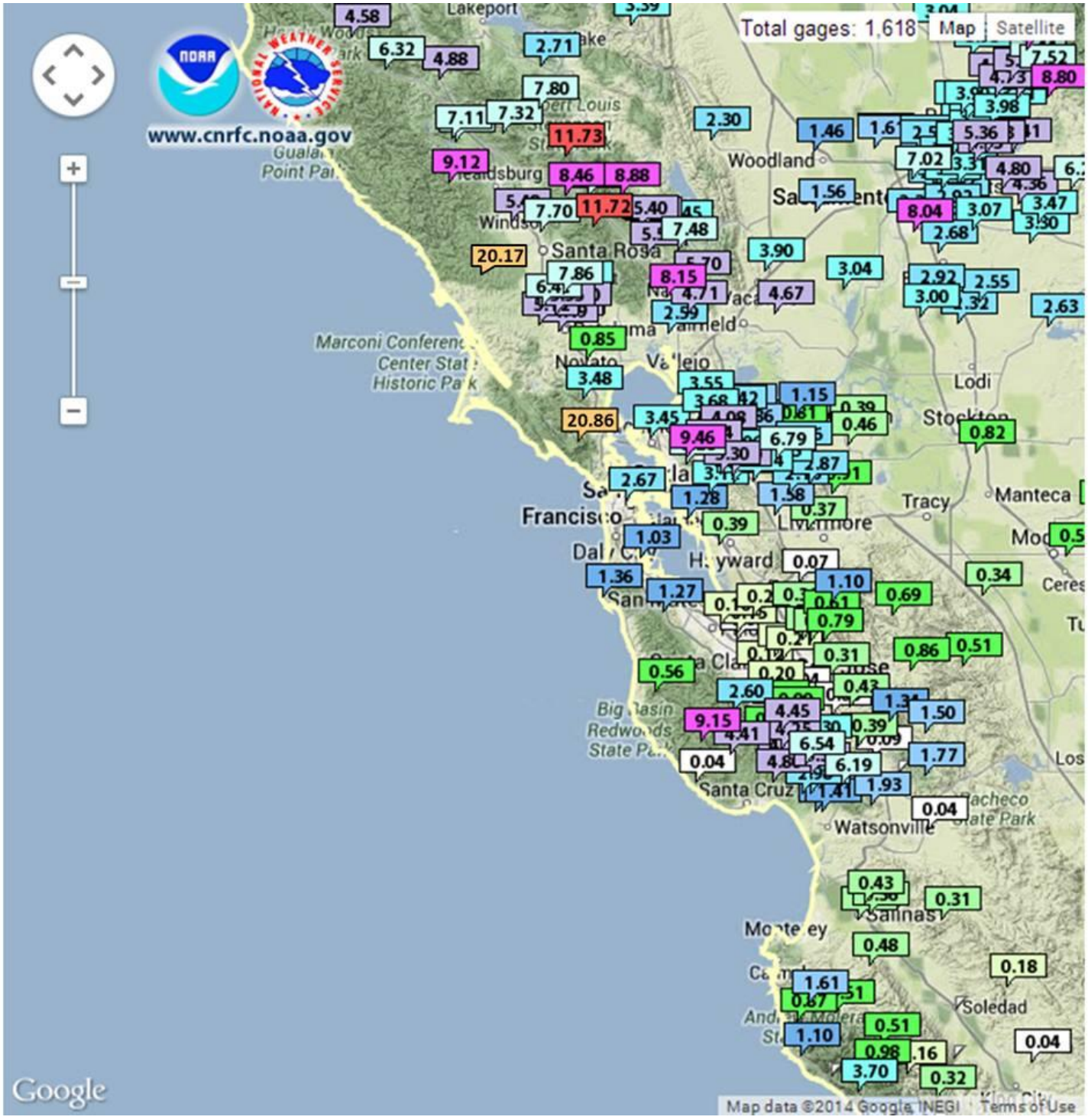
The next day, on January 29, climate.gov released a story highlighting the "Worst Drought on Record" in Calfiornia.

February 2014

Prior to February, California had endured several consecutive months of dry weather with much below normal rainfall. By the end of January, season-to-date rainfall totals (since July 1st) across the San Francisco and Monterey Bay Areas were as low as 10 percent of normal and drought conditions were classified as either "extreme" or "exceptional" across the entire region. A relatively wet February provided relief to parched California farms and cities, and marginally eased drought conditions. Rain fell on several days during February with measurable rainfall occurring on anywhere from 10 to 13 days at climate stations throughout the region. But the bulk of the precipitation occurred during two storm events, the first from February 6 to 9 and the second from February 26 to March 1.

The first rainfall of February occurred on Sunday February 2 (Groundhog Day). Rainfall with this storm system was light to moderate with most locations picking up between 0.25 and 0.75 inches. Local rainfall amounts of up to 1 inch or greater were observed, mainly in the coastal hills.

The first major rain event of the month occurred from February 6 through 9. This event actually consisted of two individual storm systems. The first rolled through the area from north to south on Thursday February 6 and dropped relatively uniform rainfall amounts across the region. Rain totals on the 6th generally ranged from one-half inch to one inch, with lesser amounts in some of the sheltered inland valleys and greater amounts in the coastal hills. Big Sur Station picked up the most rainfall with 2.14 inches. The second, and much wetter, storm system produced impressive rainfall totals from Friday evening February 7 through Sunday March 9, primarily across the North Bay. One of the key reasons this storm produced locally very high rainfall amounts is that it tapped into a plume of very moist air from the subtropics called an atmospheric river (also known as a "Pineapple Express"). Local rain totals in excess of 20 inches were observed in the North Bay during this event. The graphic below shows rainfall totals from Friday through Sunday morning.

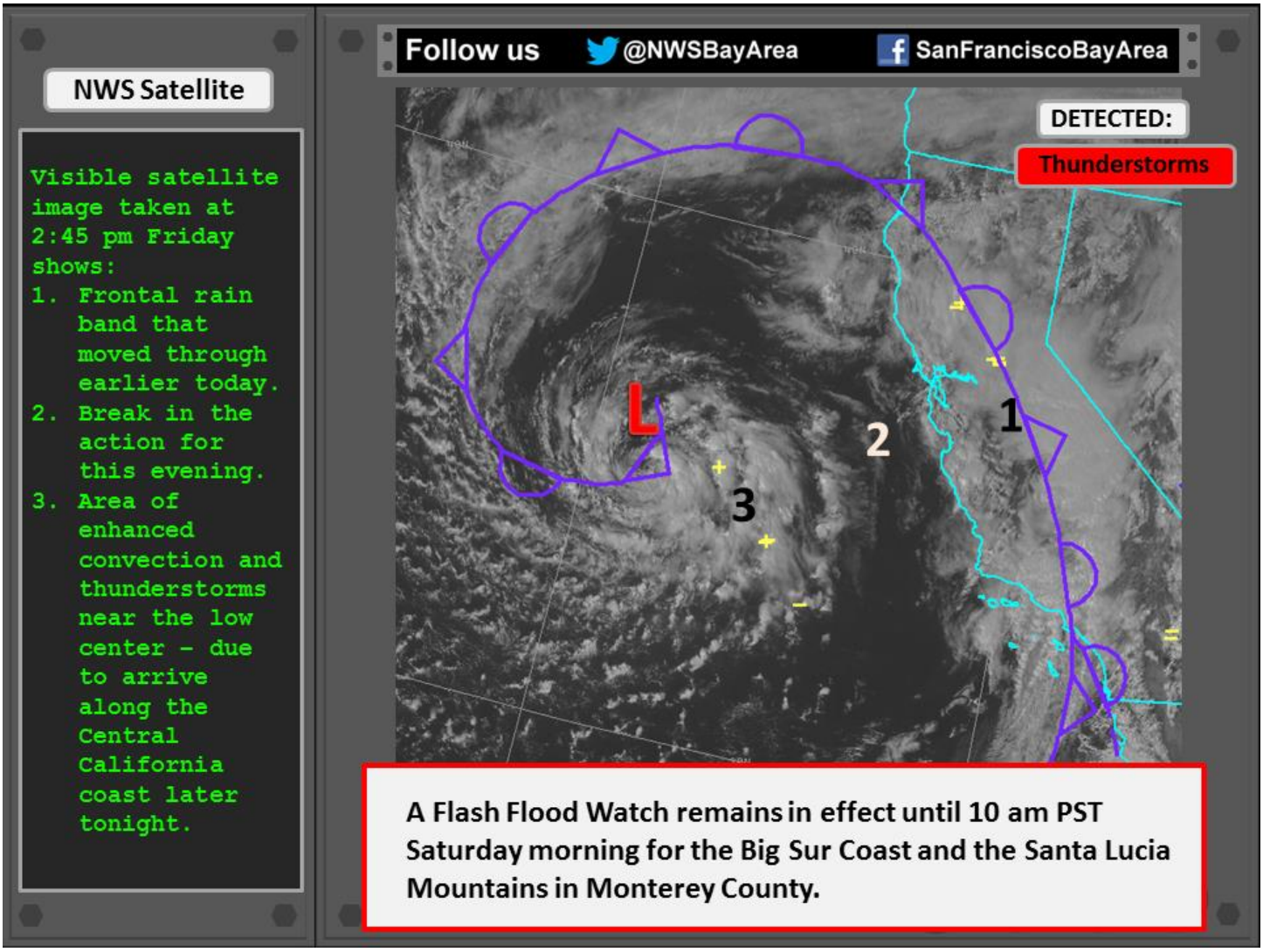


Rainfall totals from Friday, February 7 through Sunday, February 9.

A complete summary for the February 6-9 rain event can be found at the following link:

http://www.wrh.noaa.gov/mtr/stormSummary/Rain_2_6-9_2014/rain_06_8_14.php

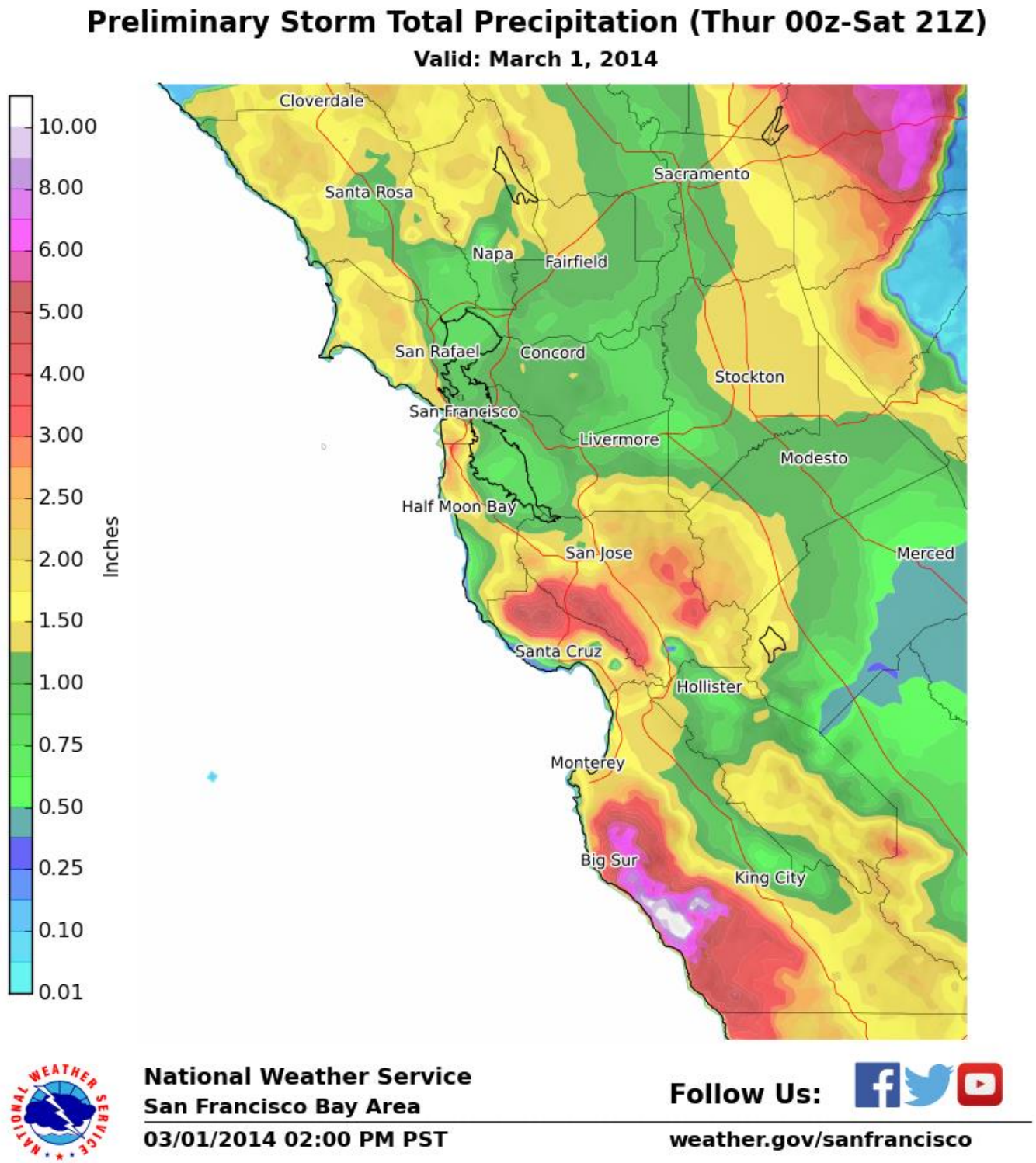
The second significant rain event of February occurred late in the month. An intense cyclone, or low pressure system, developed off the California coast late in February, and produced periods of heavy rain, flooding, thunderstorms, damaging winds, small hail and high surf across the region from Wednesday February 26 through Sunday, March 1. Several beautiful satellite images of this storm system circulated online during the event, including a visible satellite image that was part of a social media posting by the NWS San Francisco Bay Area Forecast Office on the afternoon of Friday, February 28. That Facebook posting is included below:



Social media graphic posted on the afternoon of Friday, February 28

Unlike the big rain event in early February which was mostly focused across the North Bay, the rain event at the end of the month produced the heaviest rainfall totals across the southern part of our forecast area. As much as ten inches of rain was observed across portions of the Santa Lucia Mountains in Monterey County.

The image below depicts rainfall totals across the region from Wednesday afternoon (February 26) through midday Saturday (March 1):



A complete storm summary for the February 26 – March 1 storm event can be found at the following link:

http://www.wrh.noaa.gov/mtr/stormSummary/Rain_2_28_2014/rain_2_28_2014.php

Rainfall totals for the entire month of February were mostly above normal. The North Bay fared the best with all locations receiving above normal rainfall and some picking up more than twice their average February total. The remainder of the San Francisco Bay Area was a mixed bag, with some locations accumulating slightly higher than normal rainfall totals for the month, and some slightly less than normal. Those locations with below normal February rainfall are all located south of the Bay Bridge. Rainfall totals at climate stations in the Monterey Bay area either matched or exceeded their February normals.

March 2014

The wet weather pattern that produced significant rainfall at the end of February continued into the early part of March. An area of low pressure circulating off the central California coast on Saturday March 1 produced bands of showers which swept inland across the region. The most widespread shower activity occurred from Santa Cruz County southward where as much as an inch of rain fell that day. Rainfall amounts tapered off to the north and east. A few thunderstorms formed over the coastal waters, but none of these storms made it inland.

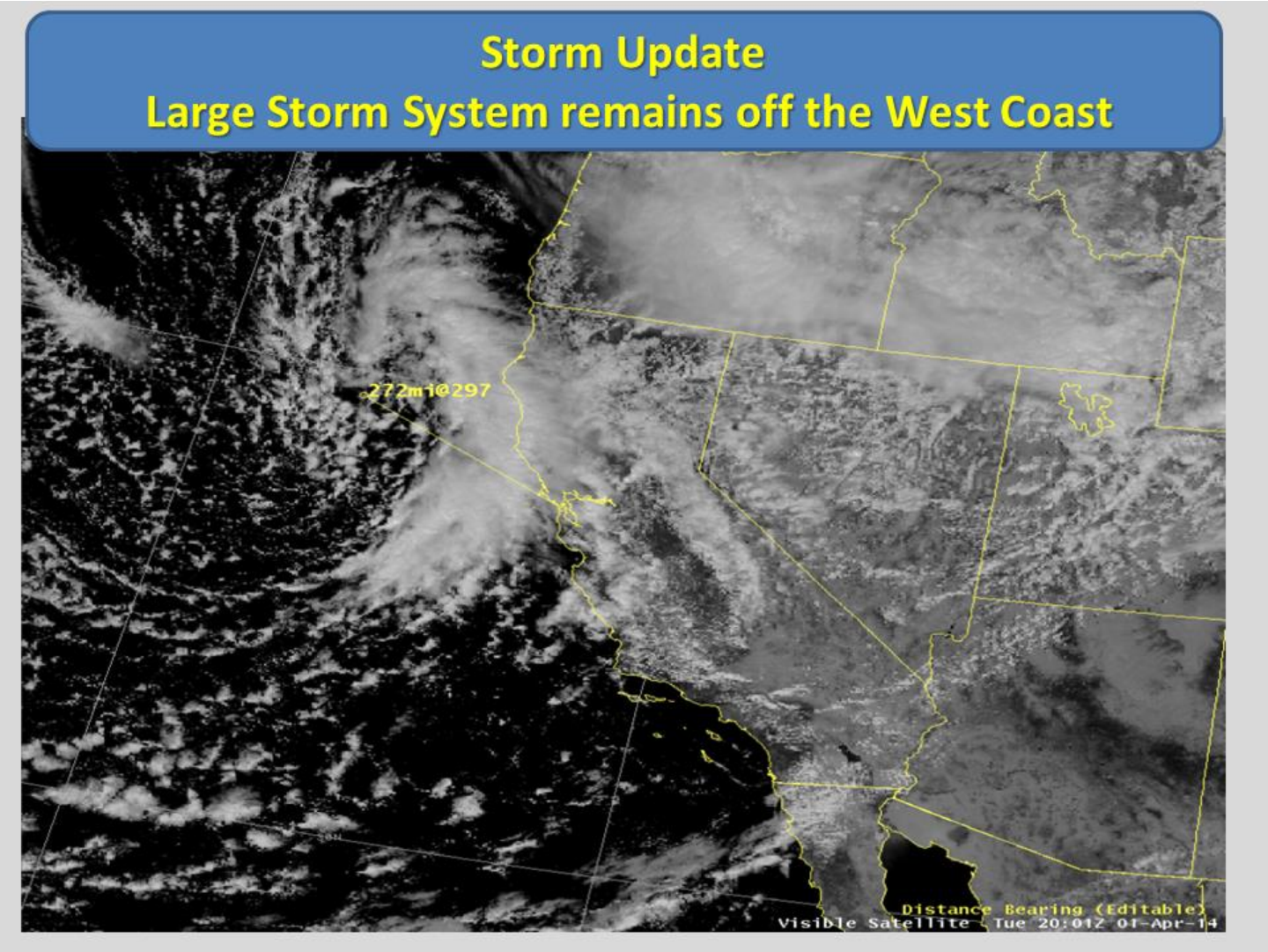
Light amounts of rain continued to fall periodically through March 2 and 3. Then, one more weather system moved through on the night of Wednesday, March 5. Rainfall from this system lasted a relatively short time and was mostly confined the San Francisco Bay Area. Rain rates in the Bay Area were briefly heavy that night as a band of intense showers and isolated thunderstorms rolled through. There were numerous reports of lightning in the Bay Area, mostly across the East Bay.

After rainfall ended during the early morning hours of March 6, dry weather prevailed for more than two weeks until a series of Pacific storm systems moved through the region during the final week of the month. The first system brought light to moderate amounts of rain to the area from late on March 25 through the morning of March 27. A stronger and wetter storm then pushed ashore on Saturday, March 29, dropping anywhere from 0.25 to 1.5 inches of rain across the region with isolated amounts up to 2 inches in the North Bay. One final March storm system swept through the area on the afternoon of Monday, March 31. A strong cold front produced a period of heavy rain that afternoon, along with isolated thunderstorms. Snow levels dropped to 3000 feet and locally lower. One inch of snow accumulated at Lick Observatory atop Mount Hamilton. Although rain rates were heavy with the cold front, the duration of heavy rain was brief and so rain totals on the 31st were generally less than three-quarters of an inch.

Rain totals for March were below normal at most climate stations, due in large part to the extended dry period in the middle of the month. Because much of March's precipitation was convective in nature, the percent-of-normal values varied quite a bit across the region. Some climate stations accumulated only half of their normal March precipitation, while a few spots (Muir Woods, Richmond, and Pinnacles National Park) managed to pick up more than 100 percent of their March average rainfall.

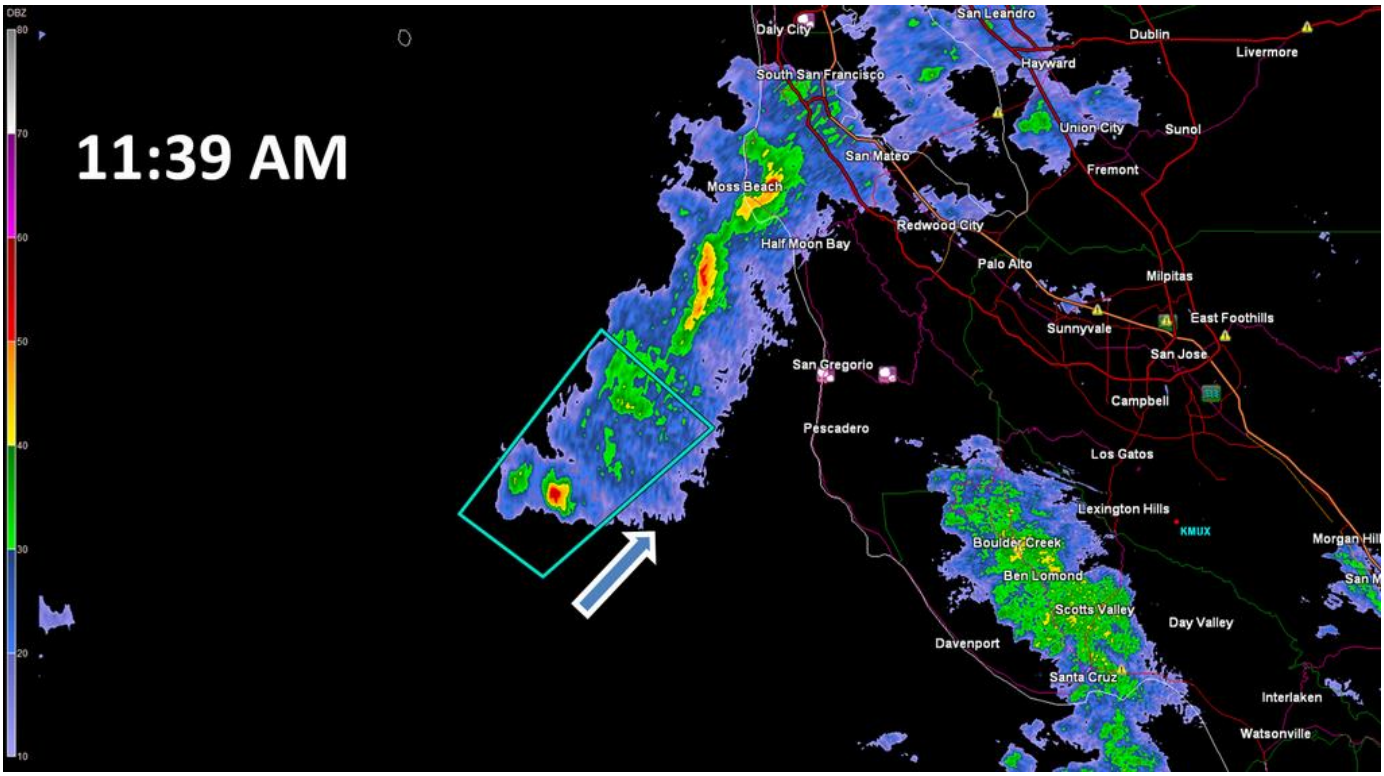
April 2014

April 2014 began wet and stormy and ended dry and very warm. A cold storm system spread numerous showers and isolated thunderstorms across the region on Tuesday, April 1. There were several reports of thunder, heavy downpours, and small hail that day.



Visible satellite image taken at 1 pm PDT on Tuesday April 1 showing a storm system centered offshore, about 270 miles west-northwest of San Francisco. Bands of showers can be seen spiraling inland across northern and central California.

Radar indicated rotation within some of the storms that day, particularly over the coastal waters. Four special marine warnings were issued on the April 1 for portions of the coastal waters off San Mateo County south to Monterey County.



Radar imagery of an intense storm cell off the coast of San Mateo County late on the morning of April 1. The polygon on this image shows the area included under a "Special Marine Warning."

The storm on April 1 was cold enough to produce snow at higher elevations. Snow was reported at 2800 feet in the hills above Big Sur. Three inches of snow fell at Lick Observatory atop Mount Hamilton (4200 feet), while four inches of snow accumulated at Chew's Ridge at an elevation of 4700 feet in the Ventana Wilderness/Los Padres National Forest of Monterey County.

Rainfall totals on April 1 ranged from a quarter inch to an inch in most locations. Several of the more intense showers and thunderstorms produced small hail on April 1.

Hailstones that fell in Napa during the late morning of April 1

A weaker weather system moved through the area on April 4 and dropped as much as a half inch of rain on the North Bay. Rain totals tapered off farther to the south to as little as a few hundredths in the southernmost inland valleys.

One more storm system moved through the area late in the month on Friday, April 25, and dropped moderate amounts of rain. Rain totals on the 25th were mostly between a quarter and a half inch, with some isolated locations in the North Bay picking up slightly more than an inch. An isolated thunderstorm moved through northern Sonoma County early that afternoon producing brief heavy rain and small hail in Healdsburg.

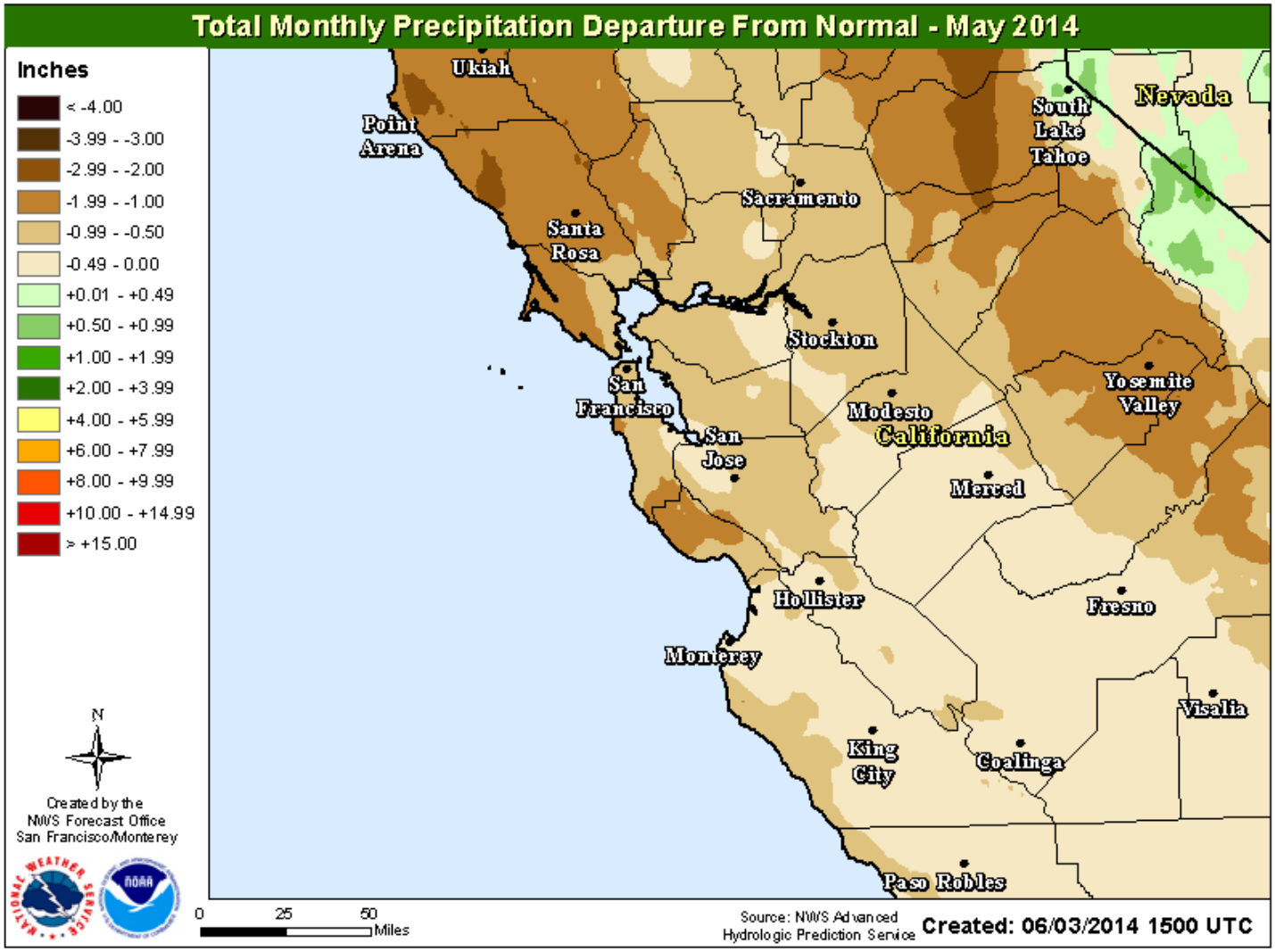
Rainfall totals for the month were close to normal at the majority of climate stations. But because much of April's rainfall was convective in nature, monthly precipitation totals varied considerably from as little as half of normal in some North Bay locations to as much as twice the April average at Antioch and Palo Alto.

May 2014

Two precipitation events during May produced only widely scattered light amounts of rain. A weak cold front moved through the region between the evening hours of Thursday May 8 and the early morning hours of Friday May 9. Measurable rain fell at less than half of all reporting locations. A few North Bay locations picked up more than a quarter of an inch. Muir Woods in Marin County accumulated the most rainfall with a half inch. Otherwise rain totals across the region were less than a tenth of an inch.

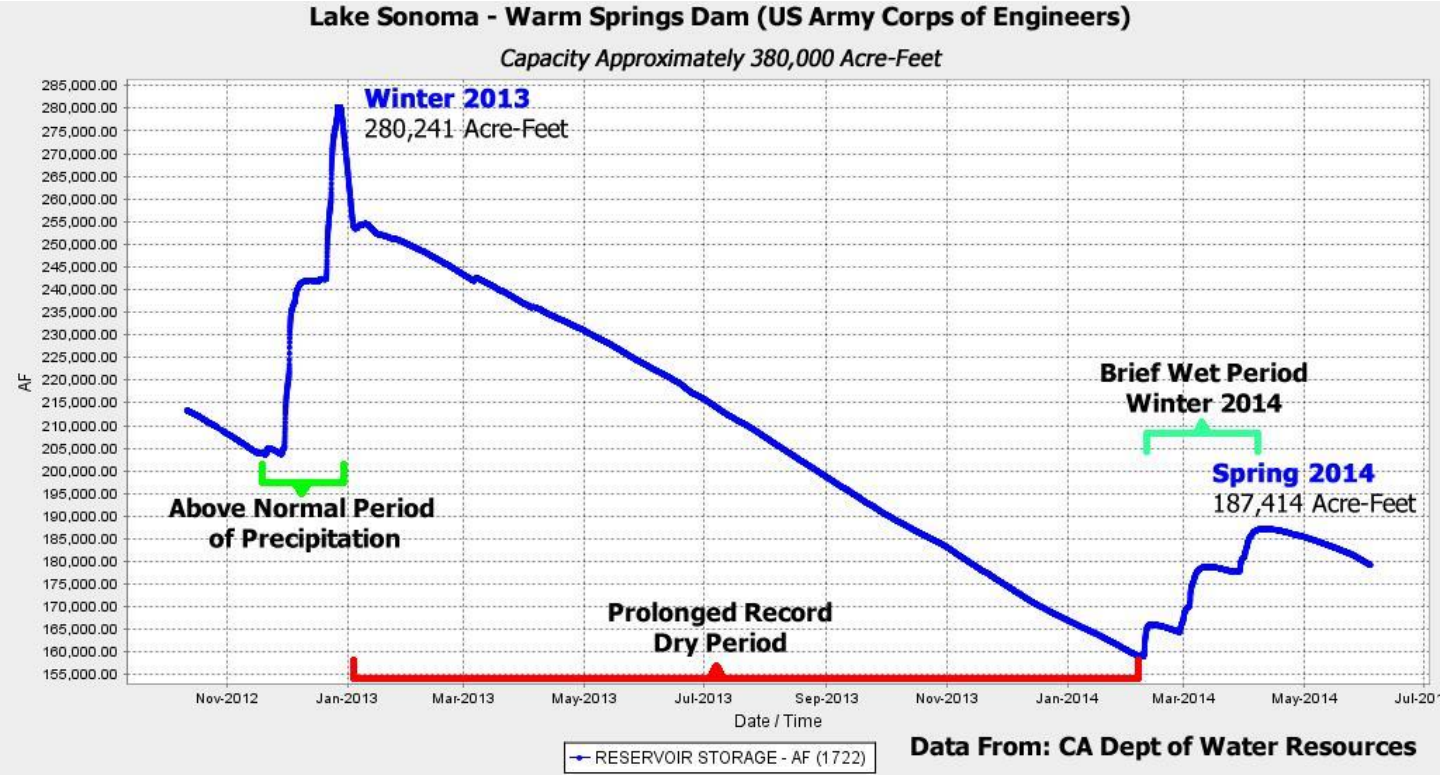
A second rain event occurred between May 19 and 21 as a weak upper low dropped south into California. Rain with this event fell primarily across portions of Monterey county, and also locally in San Mateo county and southeastern Santa Clara County. Isolated light showers occurred from late evening on Monday May 19 through the early afternoon of Tuesday May 20. Carmel Valley picked up the most precipitation from this event with just over a quarter of an inch. Most climate stations received no measurable rain or only a few hundredths. The upper low began to move off to the east on Wednesday May 21, but not before triggering an isolated thunderstorm over southeastern Monterey County which produced at least ten lightning strikes.

Of the 45 climate stations reporting weather information for May, more than half (24) had no measurable rain during the month. Of the 22 climate stations that did report measurable rain, the majority accumulated less than 10 percent of their normal May rainfall. The climate stations that fared best were Carmel Valley with 59 percent of their normal May rainfall and Muir Woods with 36 percent.



May 2014 Total Monthly Precipitation Departure from Normal (in inches)

By the end of May, 25% of California remained in the “exceptional drought” category, which is the most intense drought classification. The exceptional drought classification included the southern two-thirds of the San Francisco Bay Area and the Entire Monterey Bay Area. Reservoir levels began to fall again after showing some improvement during the brief late winter wet period.

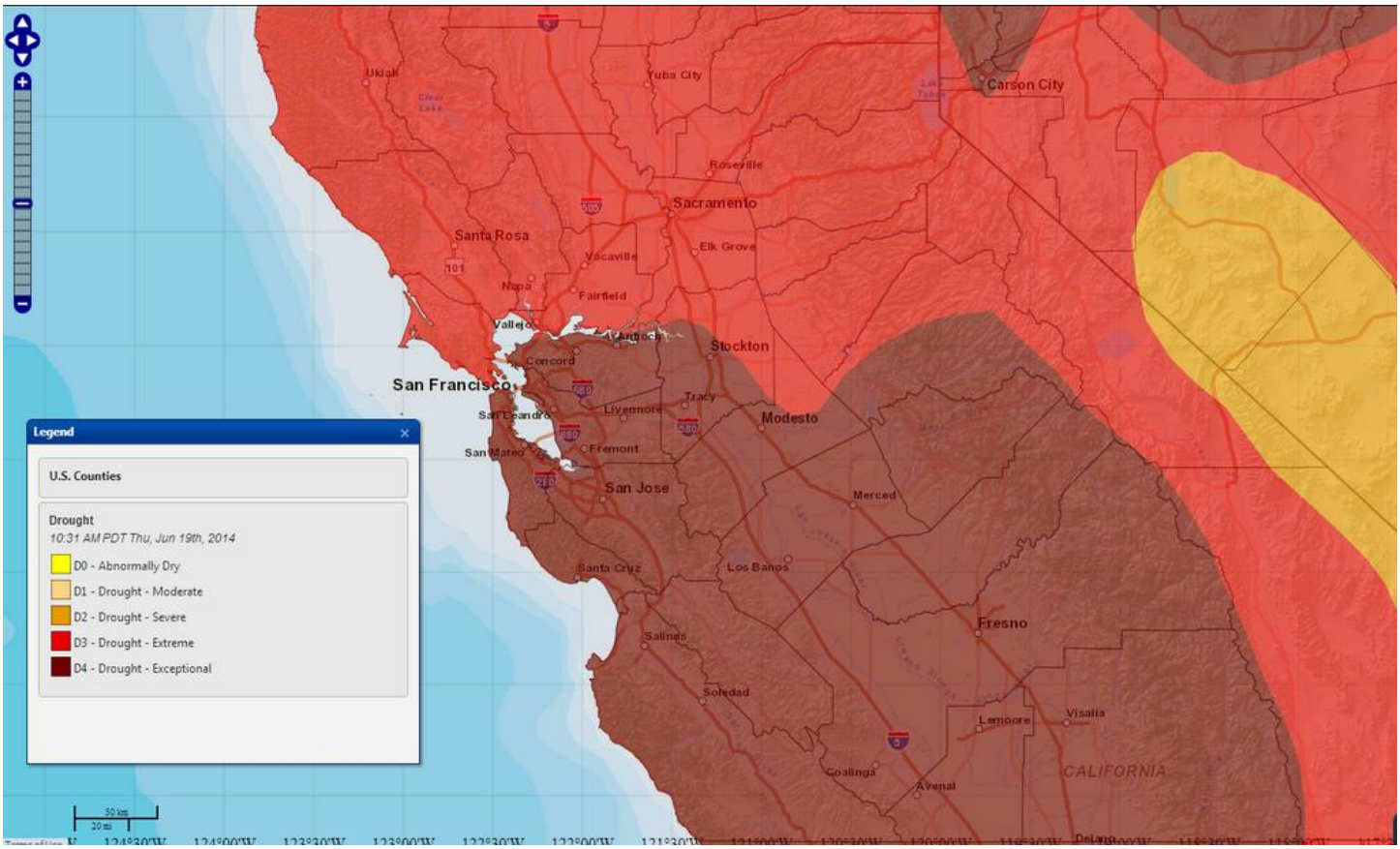


Lake Sonoma reservoir storage between November 2012 and May 2014.

June 2014

A couple of weak late-season weather systems moved through the region from the June 24 through 26. These systems mostly acted to enhance onshore flow and produce patchy coastal drizzle. But a few very light showers tracked across the San Francisco Bay Area during the early morning hours of Thursday June 26, dropping measurable rain as far inland as Livermore.

June is typically a dry month and June 2014 was even drier than usual. Most climate stations received no measurable rain at all in June. Of those locations that did see measurable rain, precipitation totals for the month were only 20 percent of normal, or less. The June 19th issuance of the Drought Monitor (see below) showed little change from May. The North Bay counties remained in the D3 (extreme) drought category while the rest of the region remained in the most intense drought classification, D4 or exceptional.



Graphic showing drought conditions across the region at the end of the 2013-2014 rain year.

Note: This climatological data is preliminary. For official certified climatological data please contact the National Climatic Data Center at 828-271-4800 or http://www.ncdc.noaa.gov.
Official values as determined at the above web site may take several months for authentication and publication.