



Russian River Watershed Association

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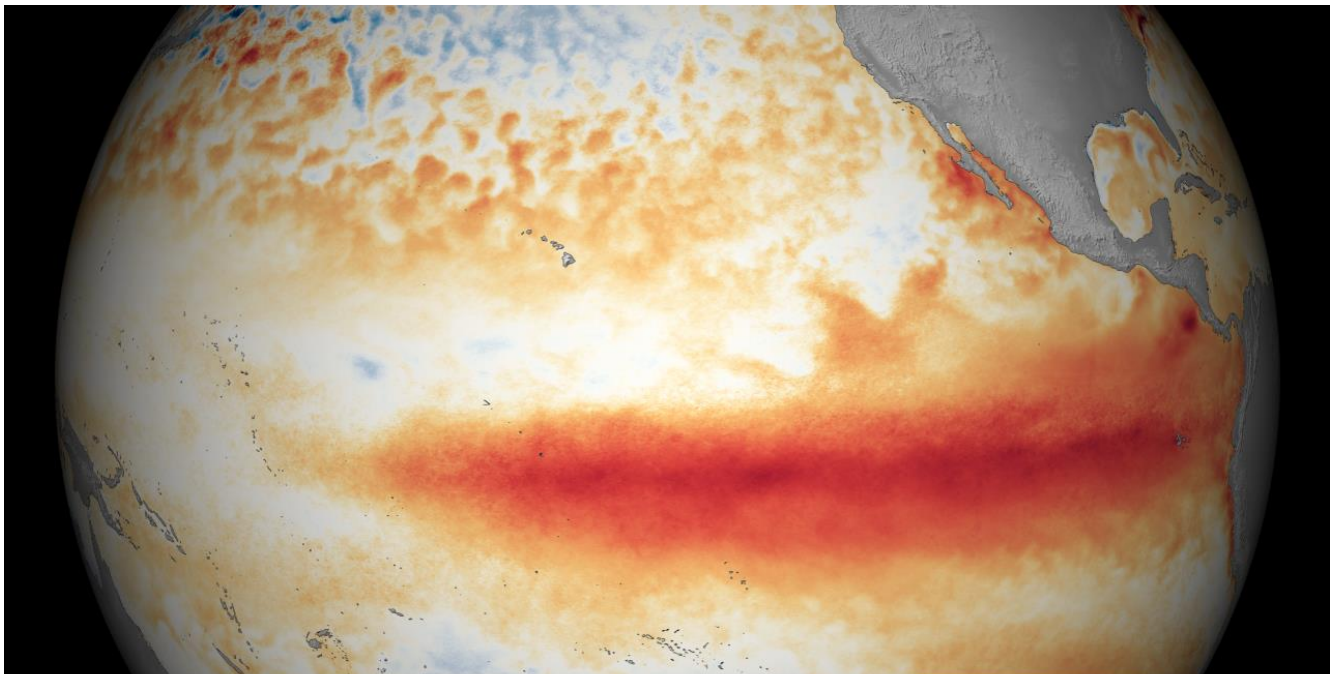
RRWA Environmental Column – March 2016

El Niño: What does it mean for Sonoma and Mendocino Counties?

California has suffered an ongoing drought for five years. This winter much of California has experienced a number of storms which are being attributed to El Niño conditions. Heading into this winter, many people were hoping that El Niño would deliver drought-busting levels of precipitation, as it has been known to do in winters past. El Niño is no guarantee of rainfall, but it does tilt the odds in favor a wetter-than-average winter in California.

What is an El Niño?

[El Niño](#) conditions are characterized by unusually warm ocean temperatures in the Equatorial Pacific. Winds carry this warm water towards the east, as opposed to the west under normal conditions. Rainfall can be induced by the warmer ocean waters. Weather experts have been closely monitoring the increasingly warm ocean temperatures since early 2015, which gave them strong confidence to predict a strong El Niño for 2015/16 in California.



January 2016
compared to 1981-2010

Difference from average temperature (°F)

-9 0 9

Climate.gov/NNVL
Data: Geo-Polar SST

Source: <https://www.climate.gov/enso>

El Niño conditions do not actually “cause” individual storms, but it does **influence their frequency, intensity and characteristics**. The current El Niño event is forecast to rival previous strong El Niño events in 1982/83 and 1997/98. The presence of El Niño can significantly influence weather patterns, ocean conditions, and marine fisheries across large portions of the globe for an extended period of time. How long can we expect El Niño conditions to last? According the official El Niño /Southern Oscillation forecast, it is likely we will transition to neutral conditions in the late spring, which means El Niño conditions will remain through March with the potential to continue through May.



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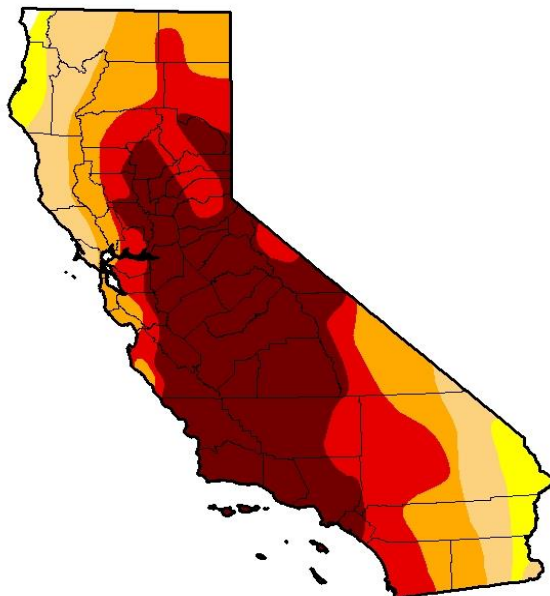
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How has El Niño affected local areas?

This winter, Sonoma and Mendocino Counties have felt positive effects of El Niño. The rains in December and January made a significant uptick in the water levels of Lake Mendocino and Lake Sonoma, which are both key drinking water sources. As of February 15, 2016, Lake Sonoma reached 95.8% of water supply capacity and Lake Mendocino reached 108.6% of its target water supply storage curve, meaning some water can now be released to the Russian River and used for environmental flows. In terms of rainfall for the current water year versus the average, we are moving towards a normal wet year. Between October 1st and mid-February the *average* rainfall for the Ukiah Basin is 24.50" and the average rainfall for the Santa Rosa basin is 20.12". Between October 1st 2015 and mid-February 2016 specifically, the rainfall in Ukiah was just below average with 23.08" and Santa Rosa was at 19.51". With El Niño conditions expected to continue through late spring, the region could see increased rainfall that could meet or exceed average levels.

According to the U.S. Drought Monitor, prior to October 2015, most of Sonoma and Mendocino counties were experiencing a severe drought, with some extreme drought conditions experienced along the Mendocino Coast in September 2015. With the storms of December 2015 and January 2016, rain is wetting the soil, replenishing groundwater, filling our reservoirs, and improving overall drought conditions. As of the February 9, 2016, the U.S. Drought Monitor Report showed most of Sonoma and Mendocino counties have transitioned from severe drought to moderate drought conditions. Despite heavy rainfall in January, rising reservoirs and above-average snowpack, many areas of California are still facing serious drought conditions. The California State Water Resources Control Board recently approved an 8-month extension of existing drought-related emergency regulations. This is a reminder that although El Niño-related precipitation has been bountiful thus far, the overall drought situation in California still remains serious. It is important to remember that even with improved conditions we should continue to use water wisely.

U.S. Drought Monitor California



February 9, 2016

(Released Thursday, Feb. 11, 2016)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.22	99.78	94.77	81.82	61.40	38.48
Last Week 2/2/2016	0.00	100.00	95.26	86.13	63.90	39.41
3 Months Ago 11/10/2015	0.14	99.86	97.33	92.27	70.55	44.84
Start of Calendar Year 12/29/2015	0.00	100.00	97.33	87.55	69.07	44.84
Start of Water Year 9/29/2015	0.14	99.86	97.33	92.36	71.08	46.00
One Year Ago 2/10/2015	0.16	99.84	98.10	93.44	67.46	39.99

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.

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



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For more information on El Niño, drought conditions and water supply levels, check out the resources below.

- El Niño: <https://www.climate.gov/enso>
- Drought Conditions: <http://droughtmonitor.unl.edu/Home.aspx>
- Local Water Supply Levels: <http://www.scwa.ca.gov/current-water-supply-levels/>

This article was authored by Sarah Dukett of the County of Mendocino on behalf of RRWA. RRWA (www.rwatershed.org) is an association of local public agencies in the Russian River Watershed that have come together to coordinate regional programs for clean water, fisheries restoration, and watershed enhancement.