

# Looking back at El Nino and Sierra snowpack

<http://www.fresnobee.com/2014/04/07/3865279/looking-back-at-el-nino-and-sierra.html?sp=/99/406/263/>



In 2010, during the last El Nino, the snow-pack was about average. Shot was taken near Watts Valley Road.

JOHN WALKER — Fresno Bee Staff Photo

The item this week in the online magazine [Slate](#) had the provocative headline: "El Nino could grow into a monster, new data show."

That would be good news for California and the Sierra Nevada. But, as I have written here before, long-range forecasting is far from certain. I'm not even going there.

Instead, let's look back at [the last four El Nino seasons](#) in the Sierra. None were monsters. The biggest snowfall years happened during a weak El Nino and a weak La Nina.

Before going into details, a little description of the Pacific Ocean conditions we're talking about:

El Nino is a blob of shallow warm water along the equator in the Pacific. Peruvian fishermen used the name, "the Christ child" in Spanish, because they noticed the ocean warming around Christmas.

The warmer the water, the stronger the El Nino. The phenomenon can mean more rain and snow in California, but not always.

The flip side of El Nino -- cool water -- is called La Nina, which can mean a drier California, but not always.

The last four El Nino events happened in these wet seasons: a moderate one in 2002-2003, weak in 2004-2005, weak in 2006-2007 and moderate in 2009-2010.

During that time, the biggest snowpacks happened during the weak El Nino of 2004-2005 at 138% of average and the weak La Nina of 2005-2006 at 136% of average.

The two moderate events gave us 106% of average in 2009-2010 and only 70% of average in 2002-2003. The last one, the weak El Nino of 2006-2007, left the snowpack at a disappointing 45%.

And, if you were wondering, the last "monster" El Nino was in a memorable 1997-1998. California had about twice the average snowpack.