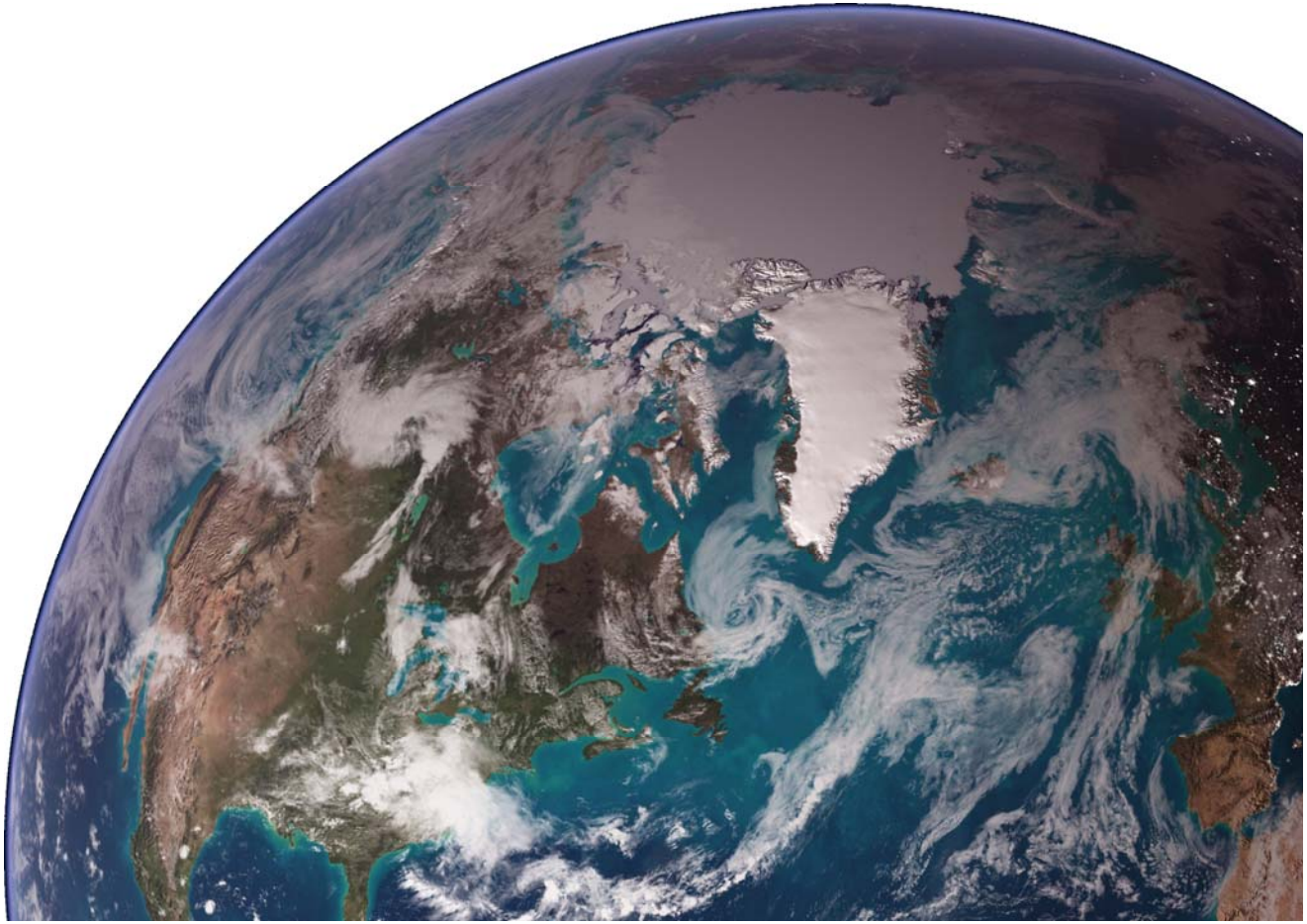
NOAA RESEARCH • ESRL • PHYSICAL SCIENCES DIVISION

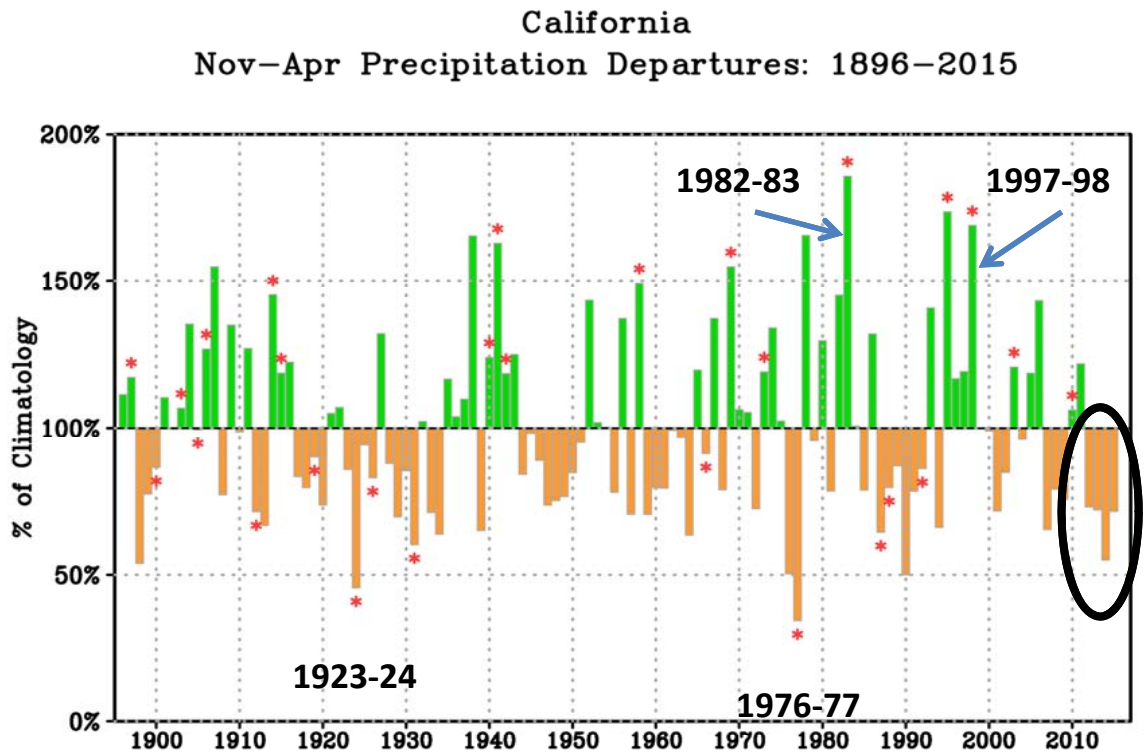
Prospects for an El Niño-Driven California Drought Recovery

Martin Hoerling



NOAA Media Briefing
March 2016

Is El Niño A California Drought Buster?

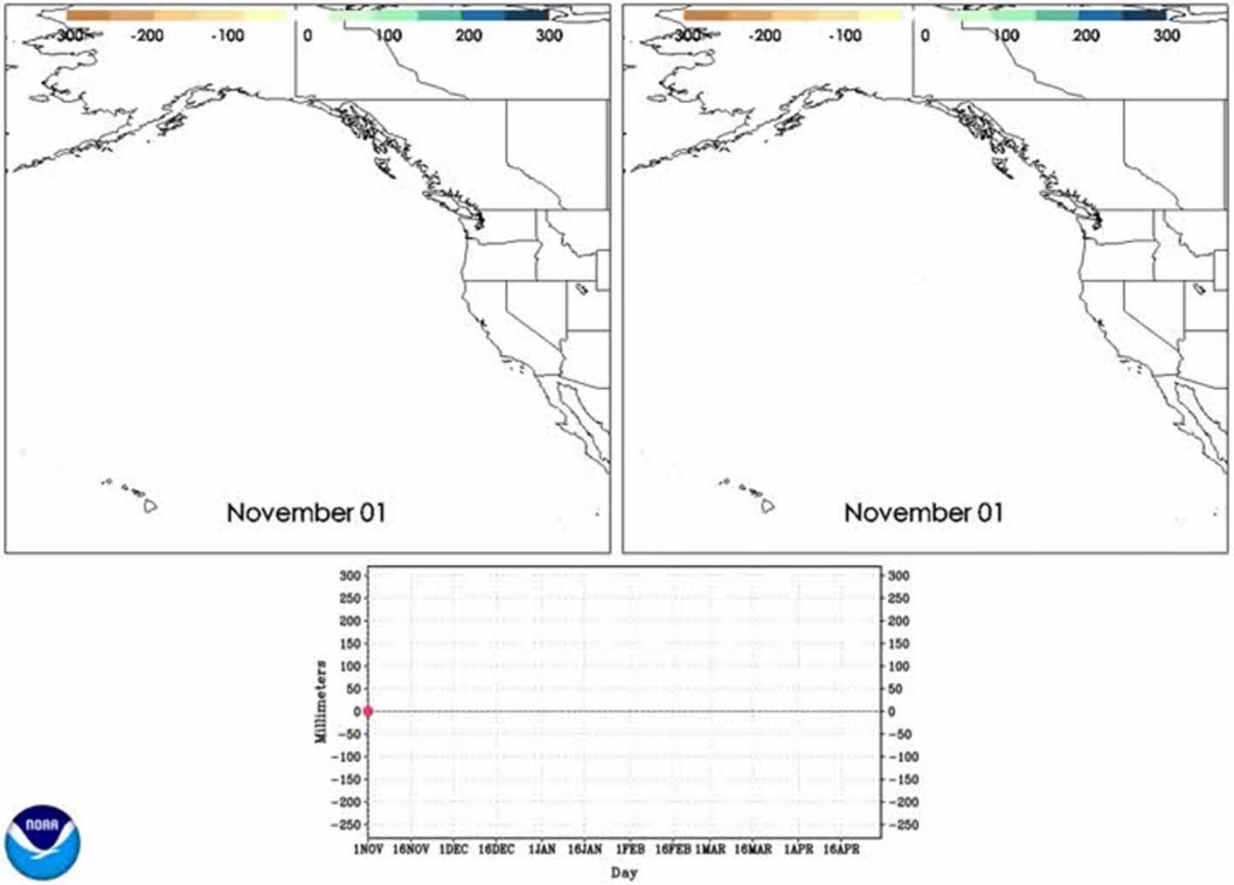


El Niño and California precipitation have had a checkered history

Strong El Nino vs. Drought Years

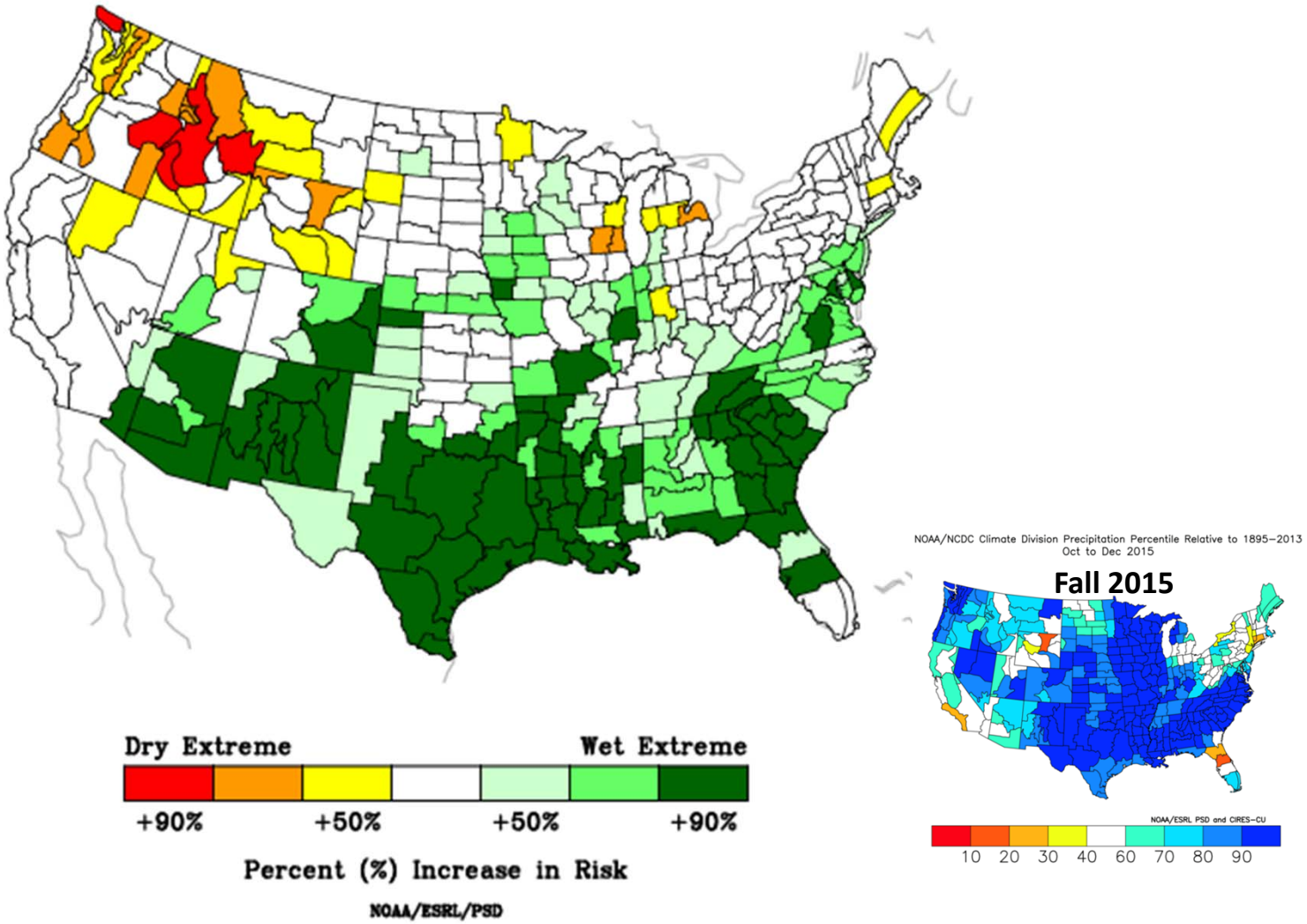
Model: NOAA/NCEP

Strong El Nino (82-83,97-98) Drought Years – 2011-2014



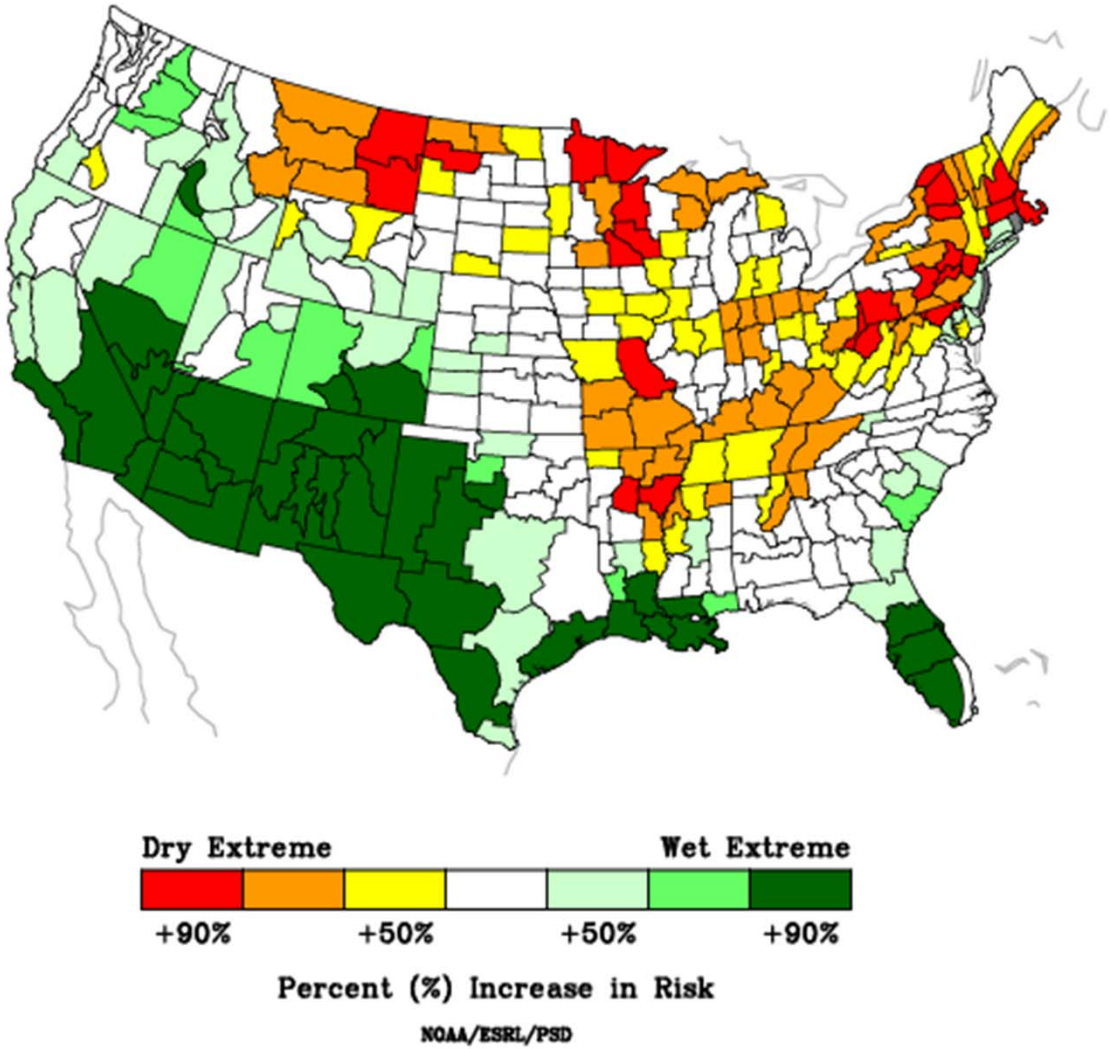
NOAA Climate Model Simulation of Daily Accumulated California rainfall from Nov 1-Apr 30

Fall Impacts of El Niño



Observed Areas of Increased Seasonal Rainfall Extreme During El Niño : Fall Season Oct-Dec

Spring Impacts of El Niño



Observed Areas of Increased Seasonal Rainfall Extreme During El Niño : Spring Season Mar-May

Q: Does El Niño Cure or Cause California Drought?

- El Niño shifts the odds to wetter, but alone doesn't determine the outcome
- Strong El Niños especially are more a cure than a cause of CA drought
- The 2016 El Niño remains strong, with impacts in the SW US still expected