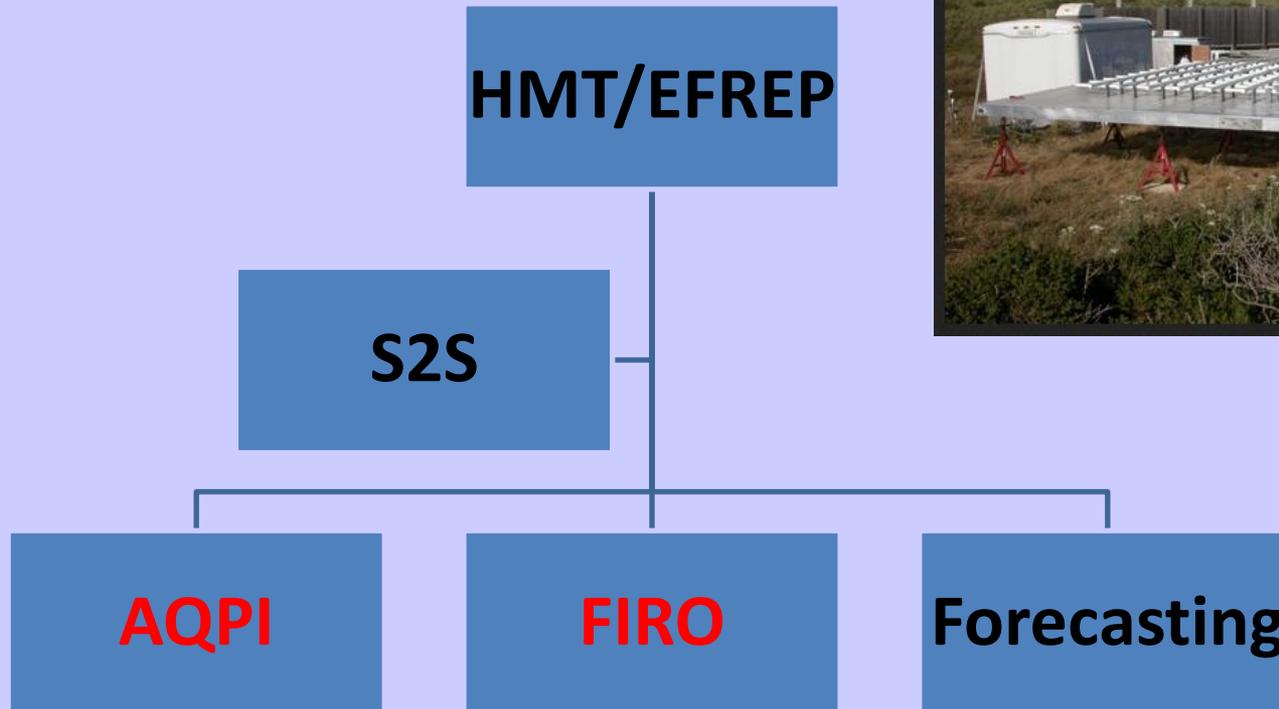


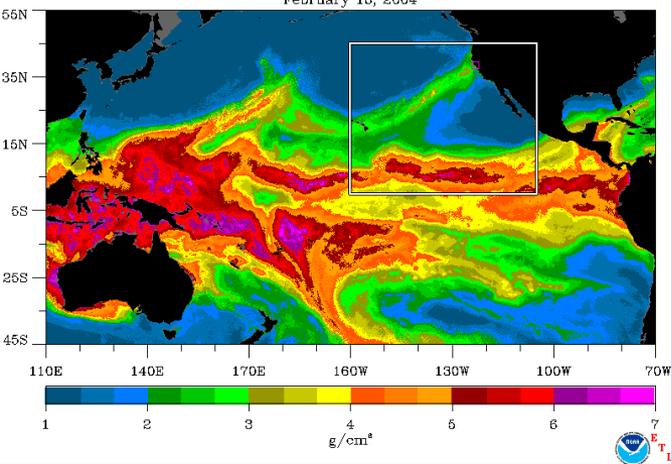
Panel – Atmospheric Rivers & Their Impact on Water Management

In the Beginning There Was HMT/EFREP...

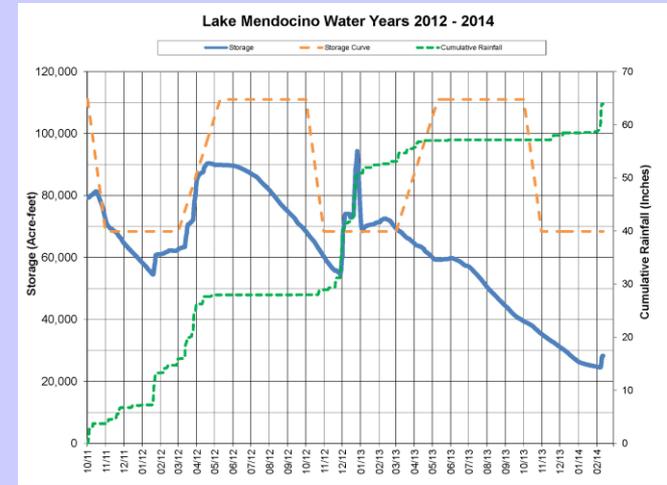


NOAA Hydrometeorology Testbed/DWR Enhanced Flood Response & Emergency Preparedness programs, a state-federal research observations partnership

SSM/I Water Vapor (Schuessel algorithm)
February 16, 2004



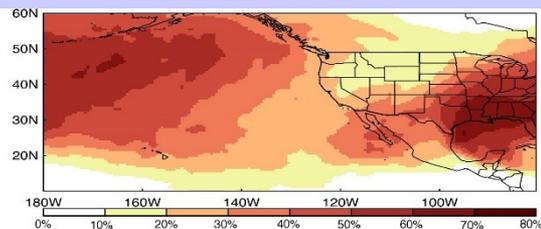
Atmospheric River (AR)



Forecast-Informed Reservoir Operations (FIRO)

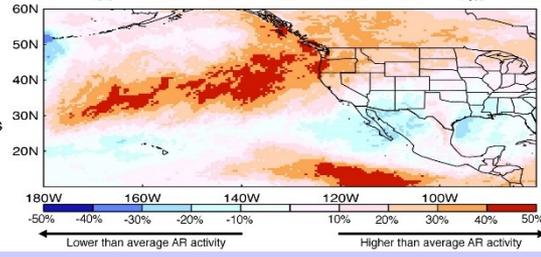
AR Occurrence Climatology

- Chance of an AR occurring sometime during a week-long period in mid-January
- Climatology based on all week-3 ECMWF forecasts from 1996-2015 for mid-January



AR Occurrence Forecast Relative to Climatology

- Week 3 ECMWF forecast valid for Jan 16-22, 2018
- Values shown are forecast minus climatology (top)
- ECMWF ensemble forecast includes 51 members



Sub-Seasonal to Seasonal (S2S) forecasting



Advanced Quantitative Precipitation Information (AQPI)

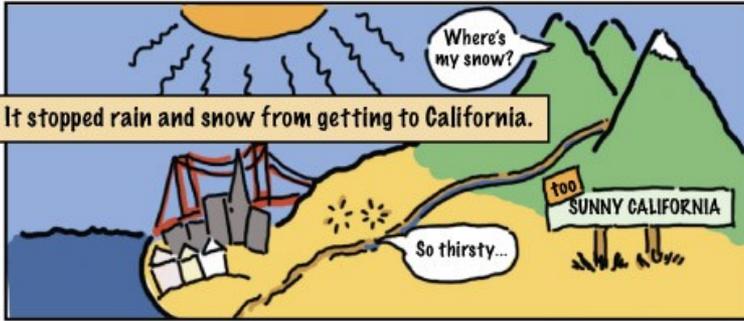
State of California Investments in Observing & Understanding Atmospheric River Storms

- NOAA HMT/DWR EFREP (state share) -- \$15M
- DWR AQPI grant to Bay Area water agencies -- \$19M
- Calwater I & II field observing campaigns -- \$5M
- Other research with University of California system & NASA -- \$3.5M

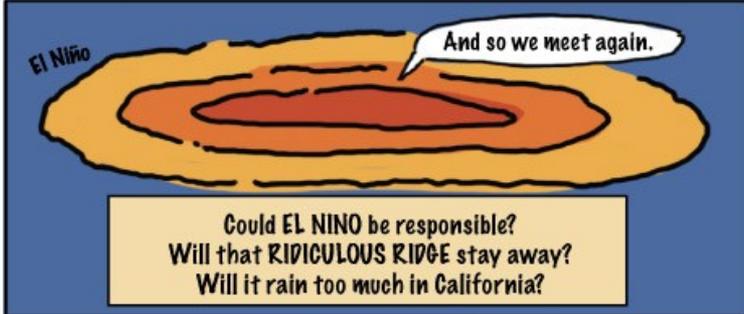
The Ridiculously Resilient Ridge has the power to block storms over the Pacific.



It stopped rain and snow from getting to California.



But then one day the Ridiculously Resilient Ridge disappeared and storms started blowing through.



Could EL NINO be responsible?
Will that RIDICULOUS RIDGE stay away?
Will it rain too much in California?

by Lisa Gardiner at the UCAR Center for Science Education (scied.ucar.edu)

Find out in the next installment of THE WEATHER.