

NOAA Climate Science & Services

Monthly Climate Update

A look back at November, Autumn and the Year-to-Date

A preview of January-March

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NOAA's National Climatic Data Center

Kevin Werner

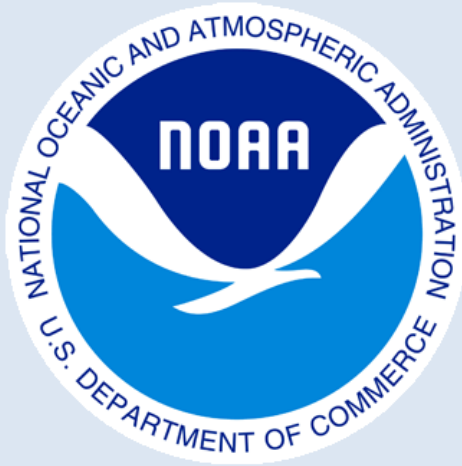
Western Regional Climate Services Director

NOAA's National Climatic Data Center

Steve Baxter

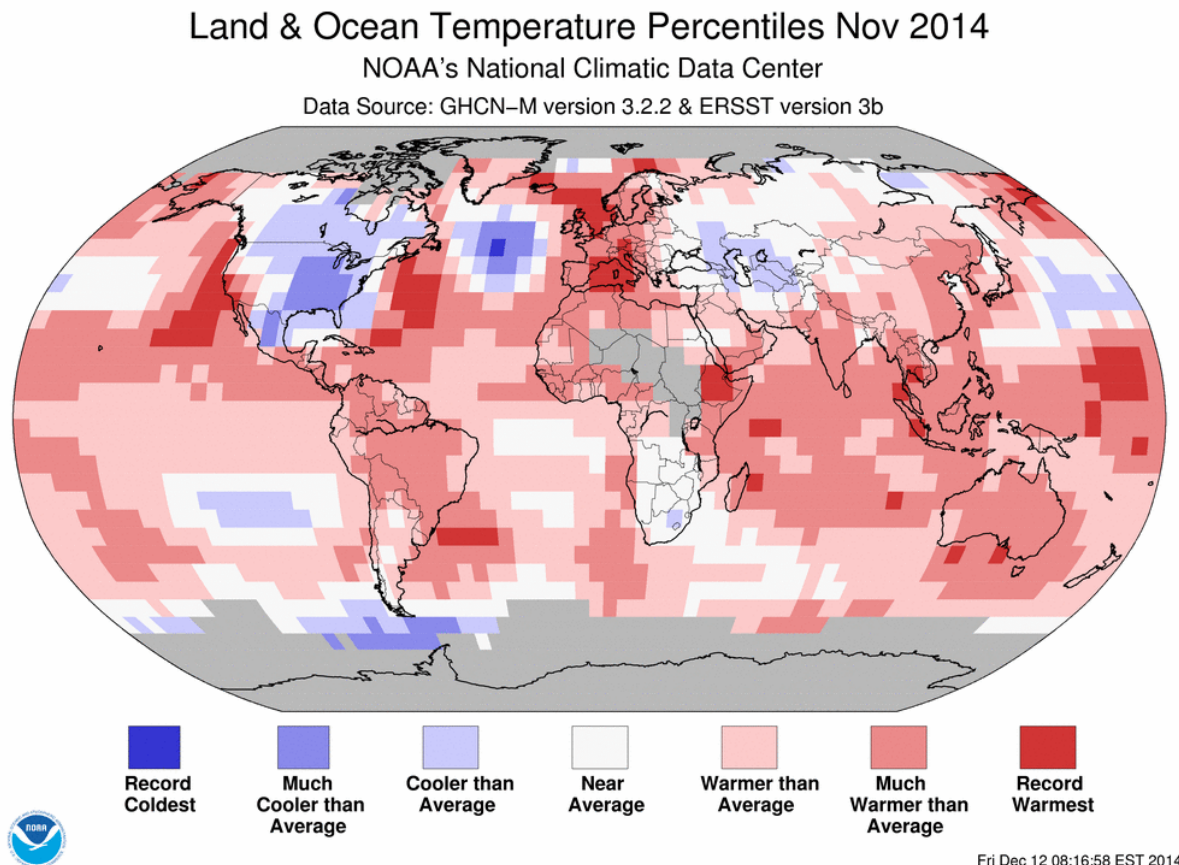
Seasonal Forecaster

NOAA's Climate Prediction Center



Global Temperature: November 2014

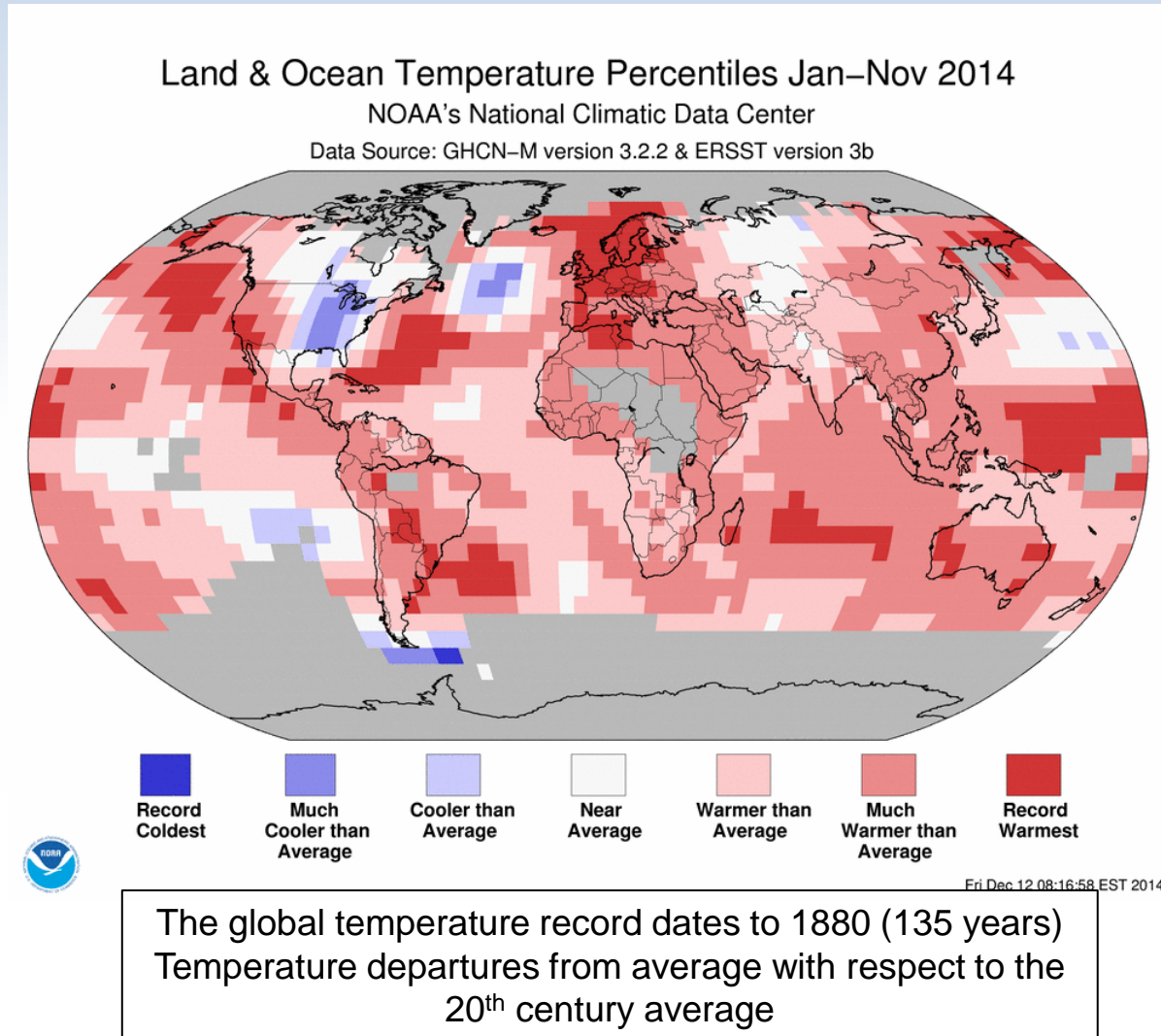
- **Globe: +1.17°F**
 - 7th warmest Nov
- **Land: +1.48°F**
 - 13th warmest Nov
 - N. America was cool
 - Europe & Australia were warm
- **Ocean: +1.06°F**
 - 7th consecutive month with record warm oceans
 - Record warmth in each ocean basin
 - Record cold in N. Atlantic



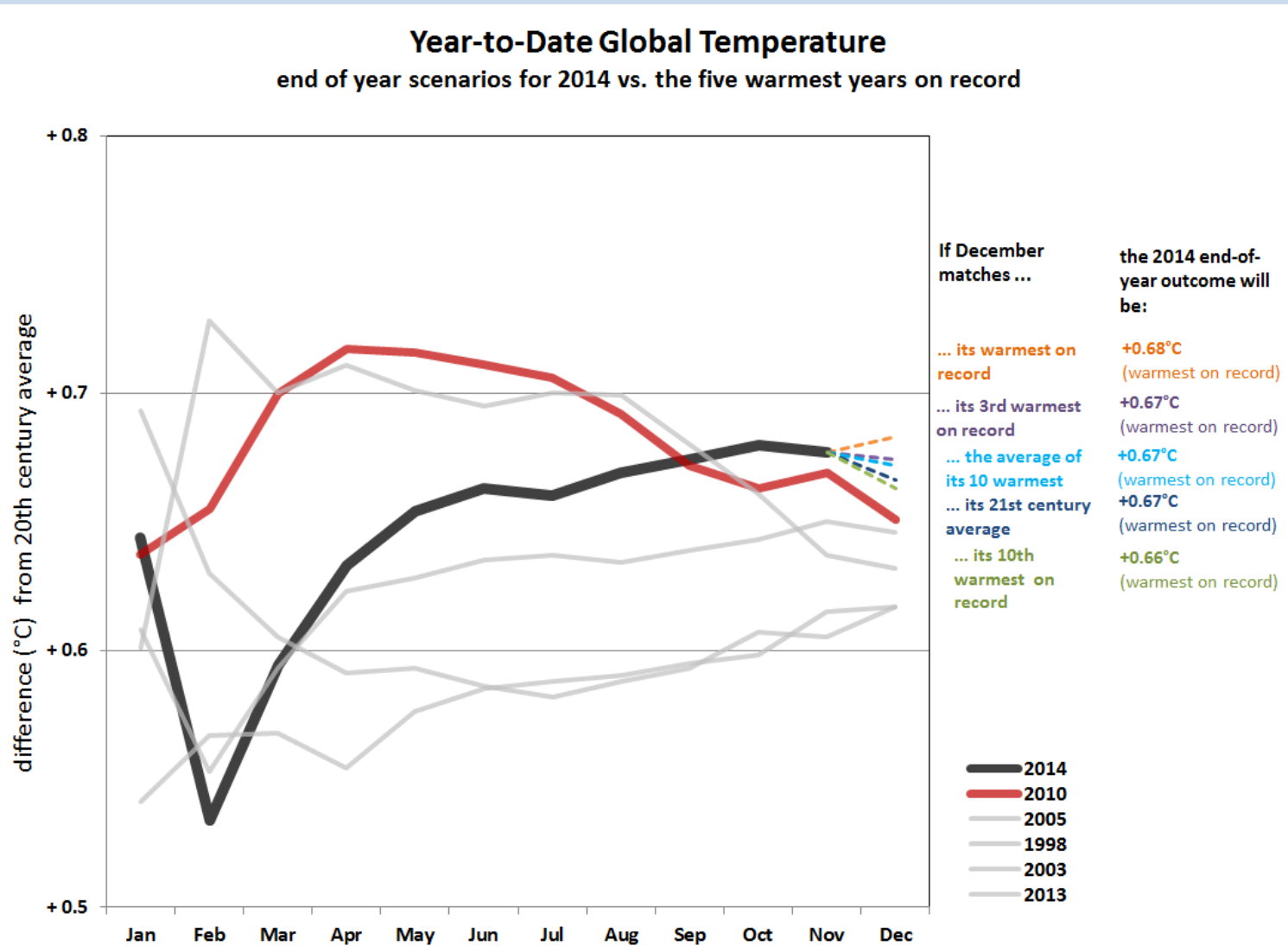
The global temperature record dates to 1880 (135 years)
Temperature departures from average with respect to the
20th century average

Global Temperature: Year-to-Date 2014

- **Globe: +1.22°F**
 - Record warmest Jan-Nov
- **Land: +1.71°F**
 - 6th warmest Jan-Nov
 - N. America was cool
 - Most other land areas were warm
- **Ocean: +1.03°F**
 - Record warmest Jan-Nov
 - Record warmth in each ocean basin
 - Cool in N. Atlantic and parts of the S. Ocean



Global Temperature: Year-to-Date 2014

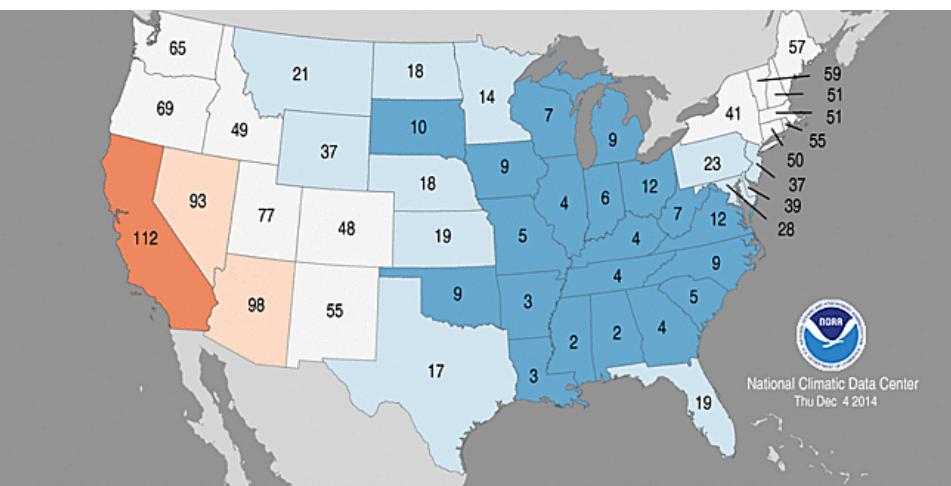


U.S. November 2014

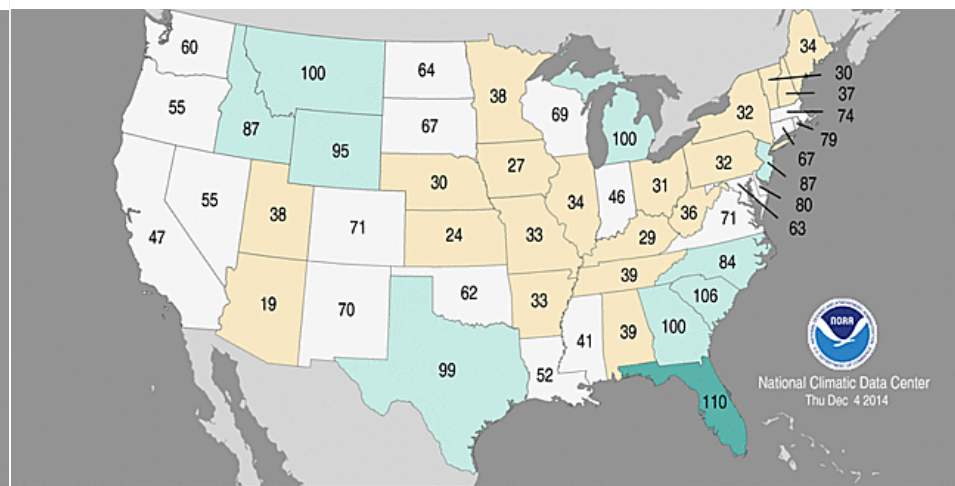
Temperature: 39.3°F, 2.4°F below 20th century avg, 16th coldest Nov

Precipitation: 2.07", 0.16" below 20th century average

Statewide Temperature Ranks, November 2014
Period: 1895-2014 (120 years)



Statewide Precipitation Ranks, November 2014
Period: 1895-2014 (120 years)



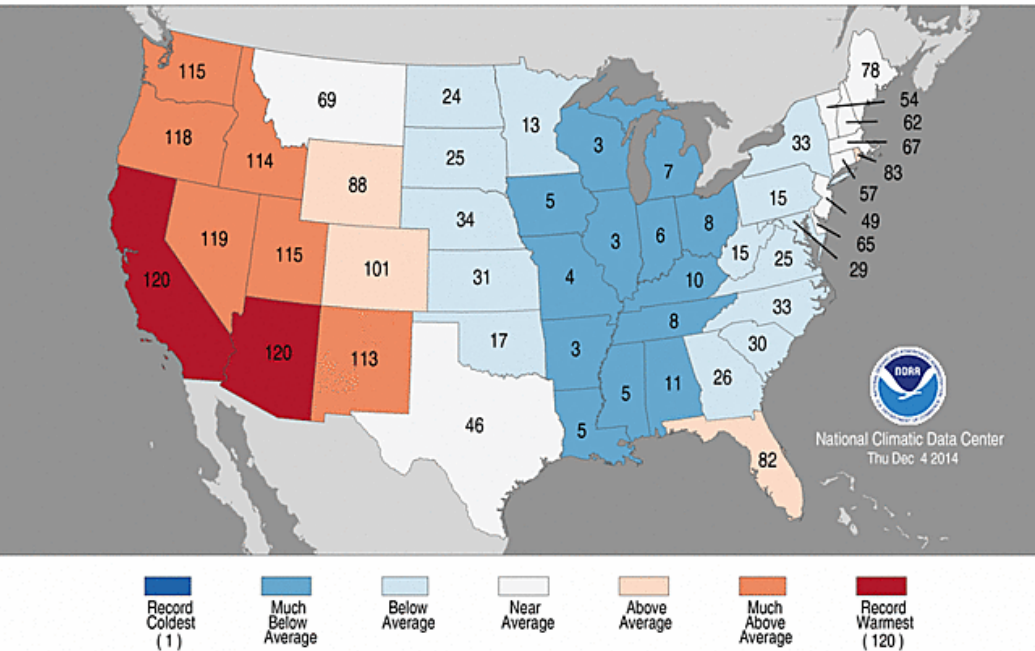
- Cold in the East, 18 states had a top 10 cold November. No state was record cold.
- Warm in the Southwest, CA had its ninth warmest November on record.

- Scattered wet and dry conditions across the country. No state top 10 wet/dry.
- Snow cover extent record large for November in the 49-year satellite record.

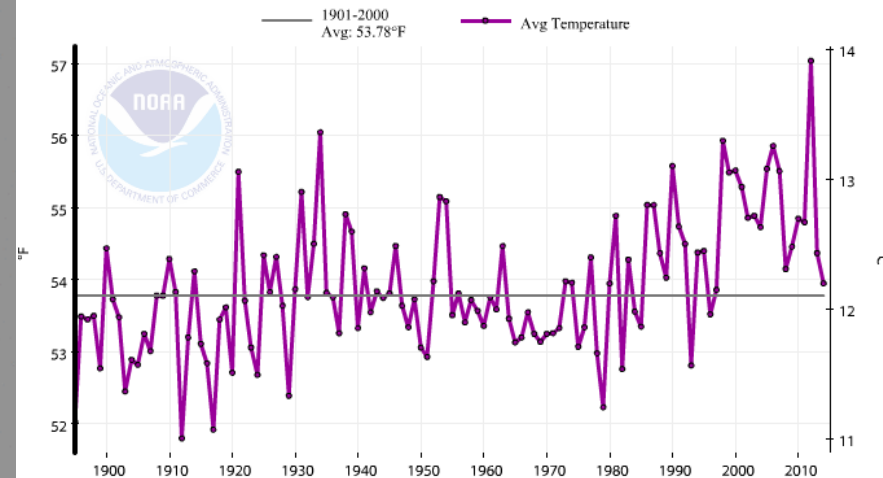
U.S. Temperature: Jan-Nov 2014

- **Contiguous U.S:** 54.0°F; 0.2°F above 20th century avg; near-median year-to-date

Statewide Average Temperature Ranks
January–November 2014
Period: 1895–2014



Contiguous U.S. Average Temperature, Jan-Nov



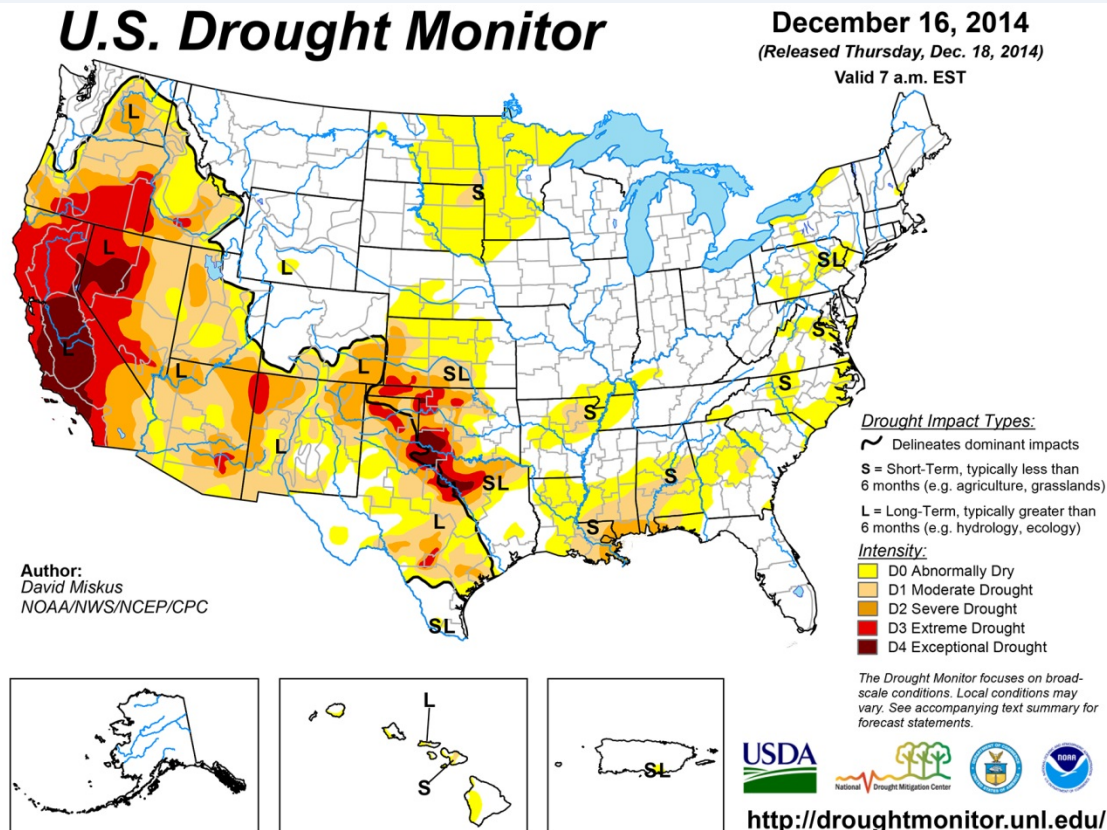
- Coldest year-to-date since 1997 for CONUS, with a warm West and cold East.
- Twelve states top 10 cold, eight states top 10 warm. No states record cold.
- Arizona and California both record warm for the January–November period.
- Alaska had second warmest January–November.

Current U.S. Drought

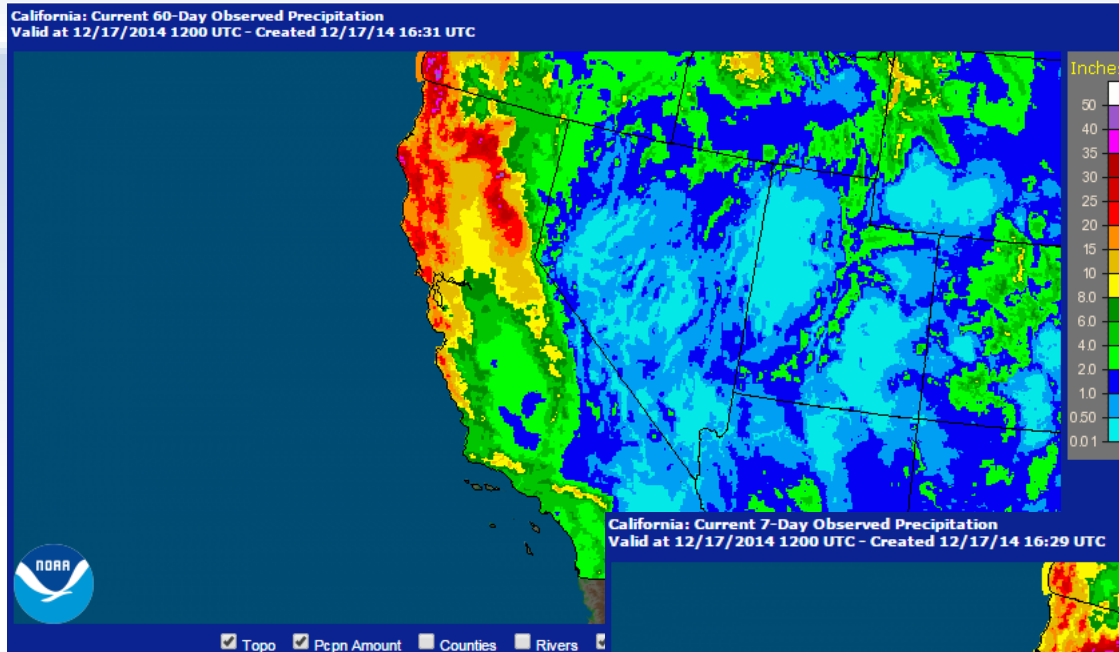
30.1% of Contiguous U.S. in Drought

(↑0.5% since beginning of November)

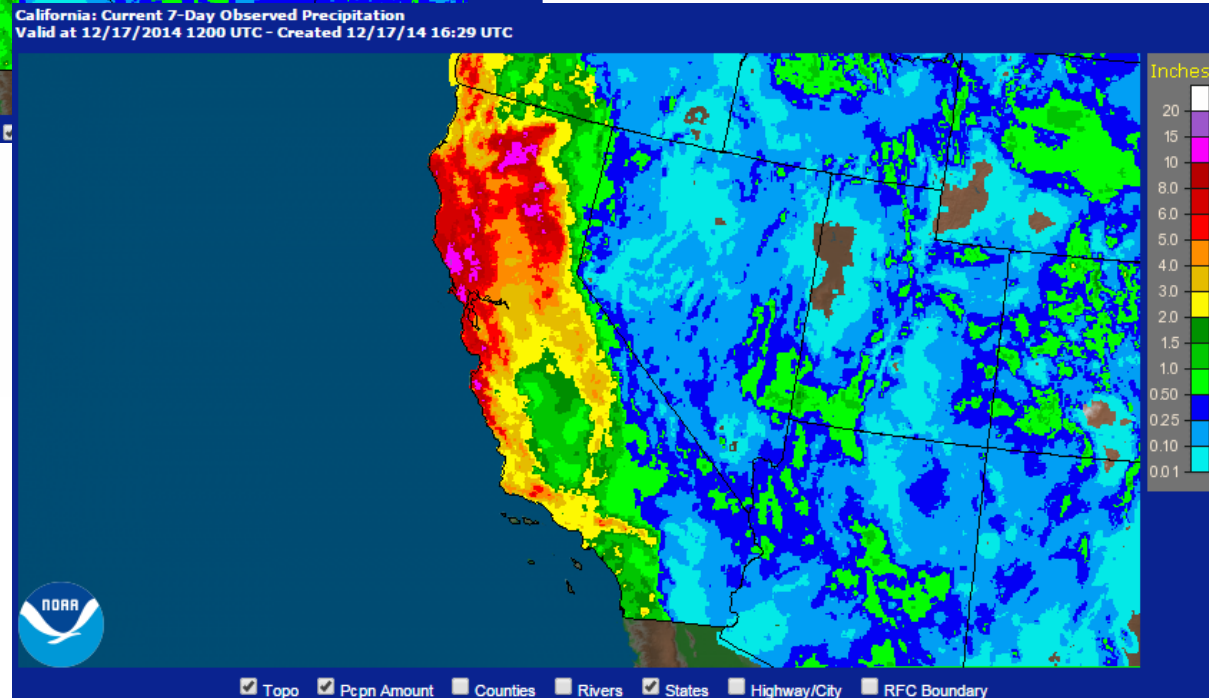
- **Improvement:** Parts of the Southern Plains, Southeast, California, and coastal New England.
- **Degradation:** Upper Midwest, central Gulf Coast, and Hawaii.
- **Status quo:** Much of the West and parts of the Southern Plains .



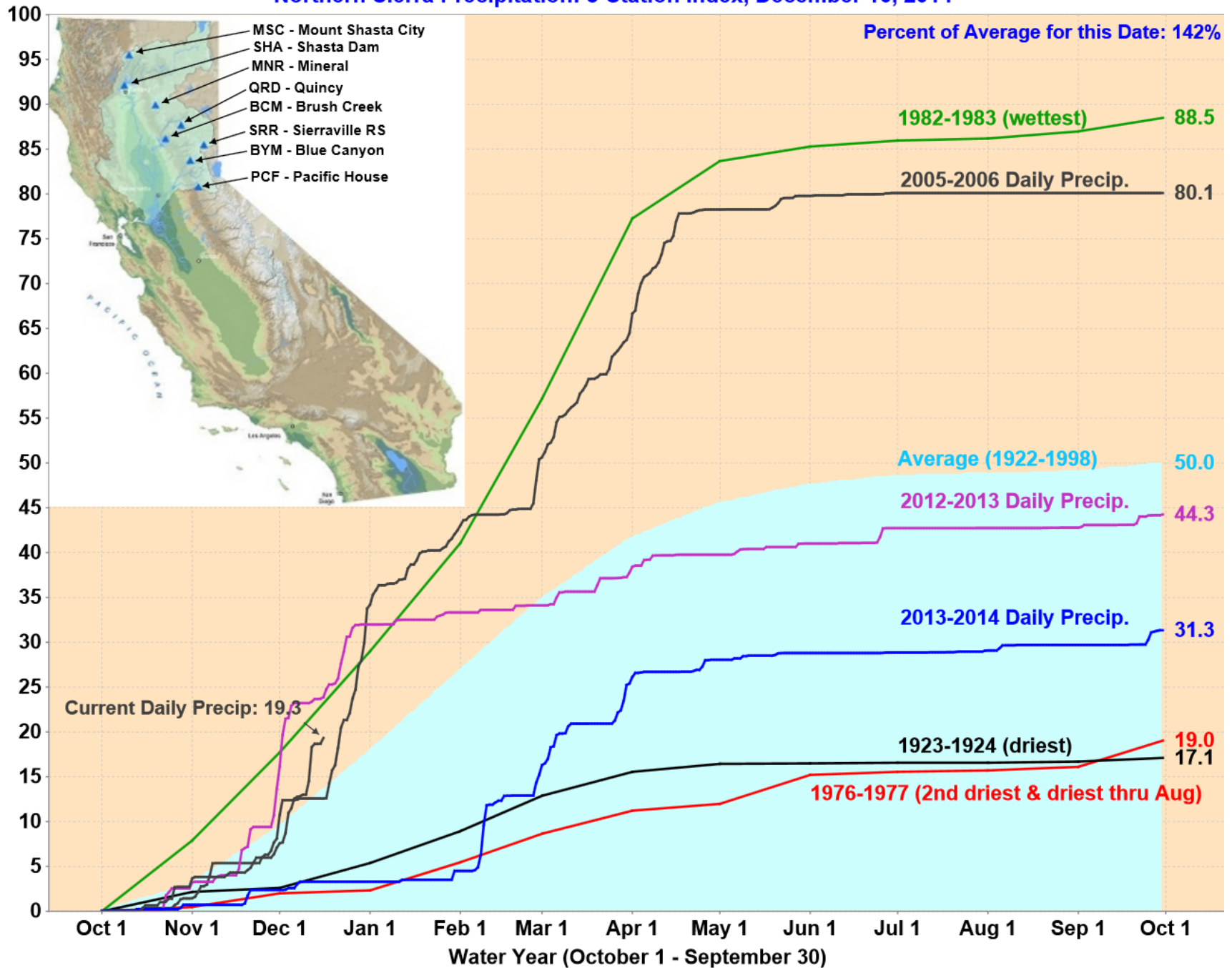
Recent Precipitation



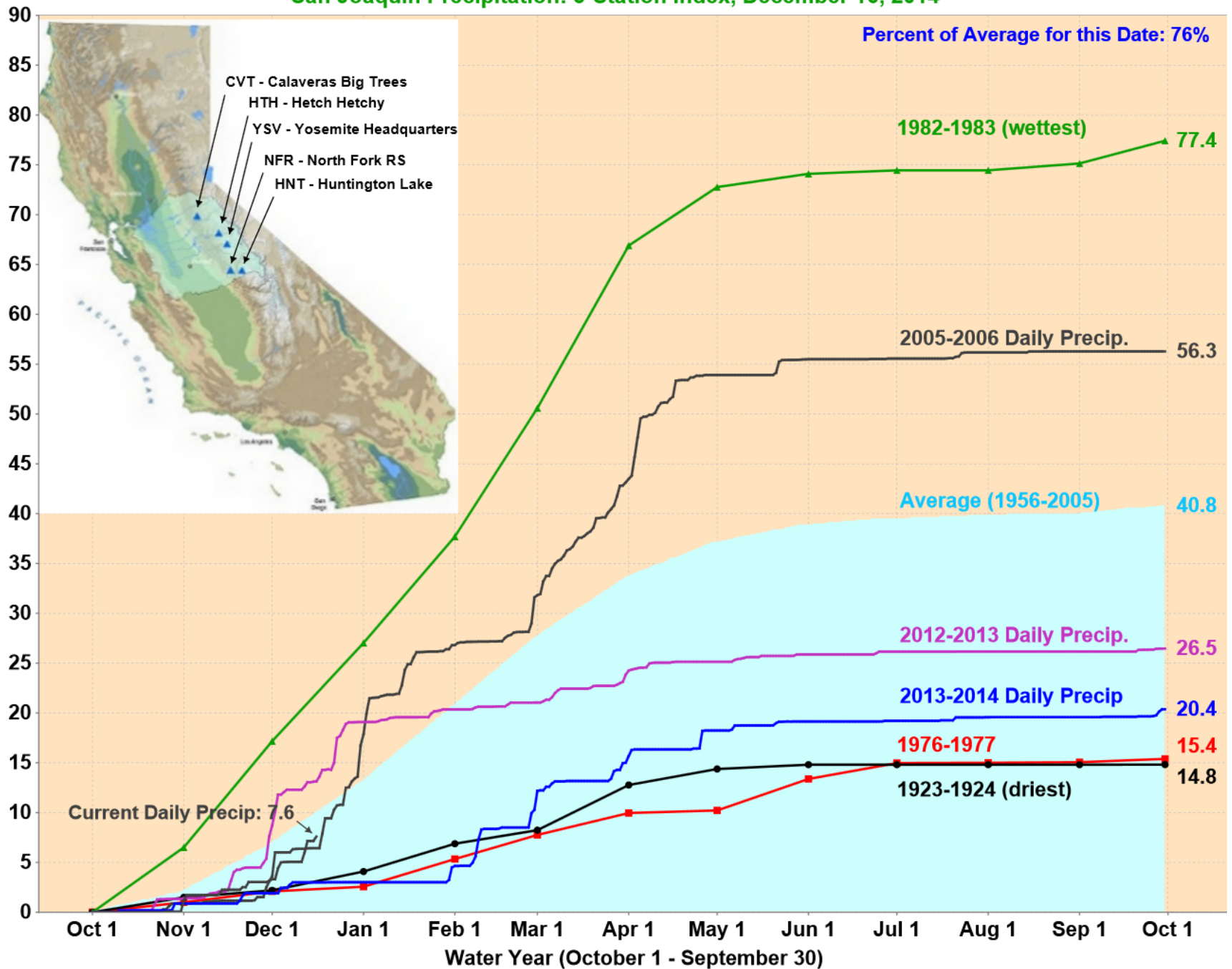
- Healthy Precipitation totals over Northern California so far this water year (since Oct 1)



Northern Sierra Precipitation: 8-Station Index, December 16, 2014



San Joaquin Precipitation: 5-Station Index, December 16, 2014

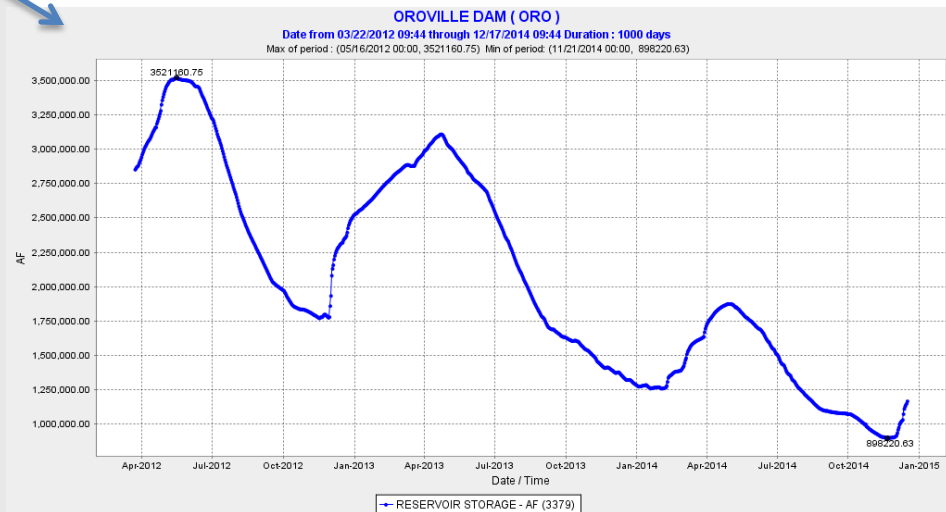
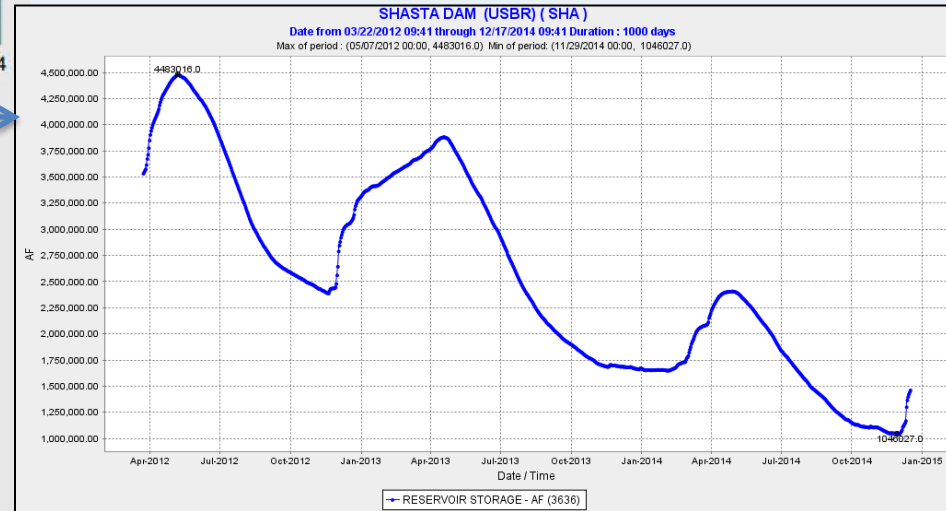
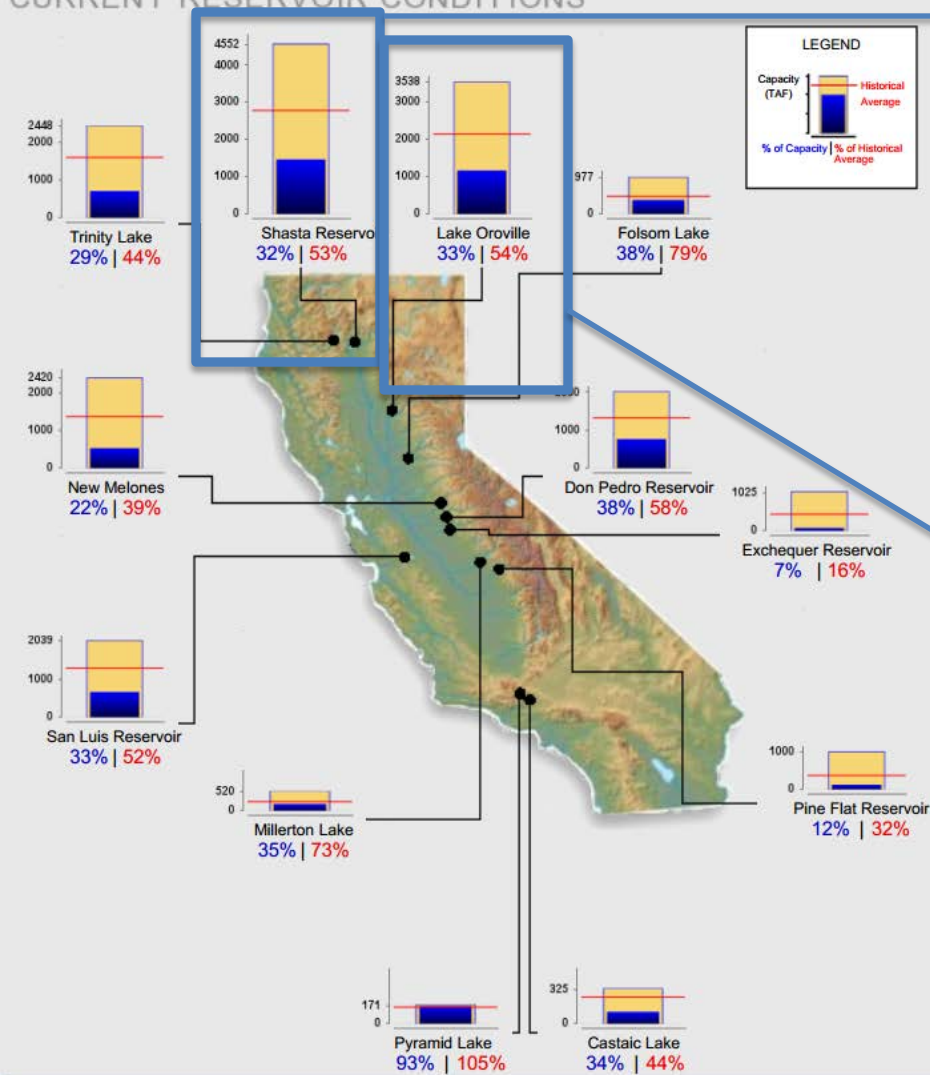




Reservoir Conditions

Ending At Midnight - December 16, 2014

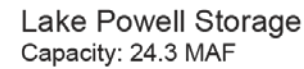
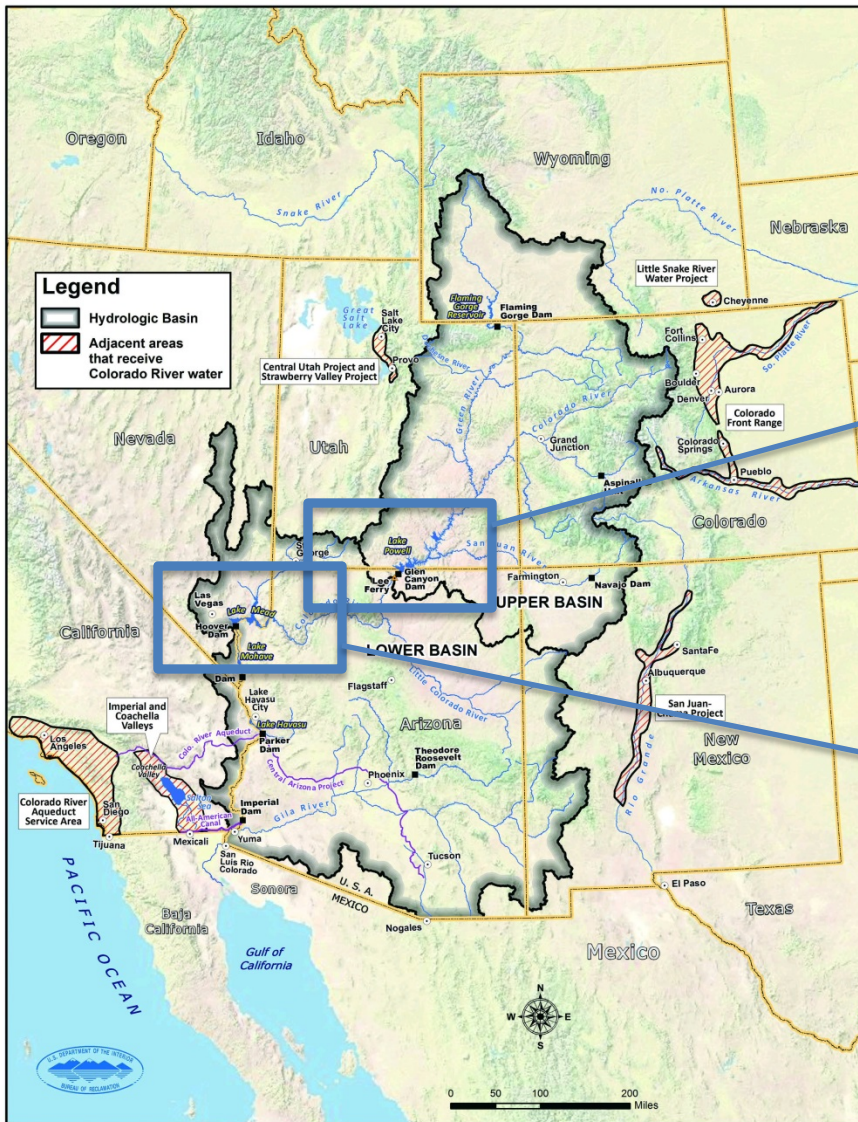
CURRENT RESERVOIR CONDITIONS



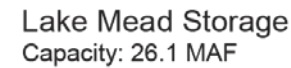
Graph Updated 12/17/2014 09:45 AM



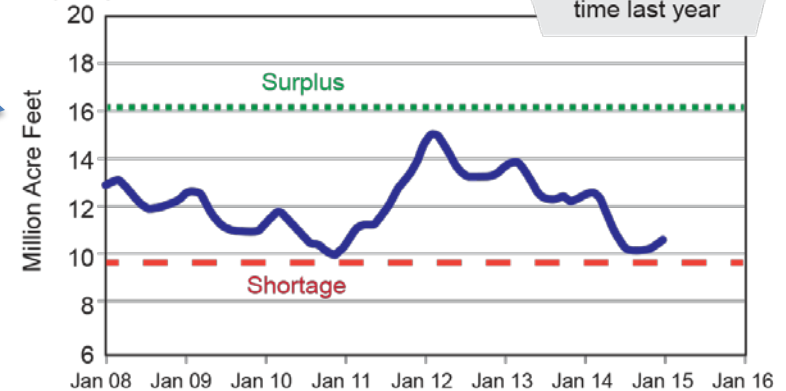
Colorado River



1.27 MAF more in storage than this time last year



1.82 MAF more in storage than this time last year

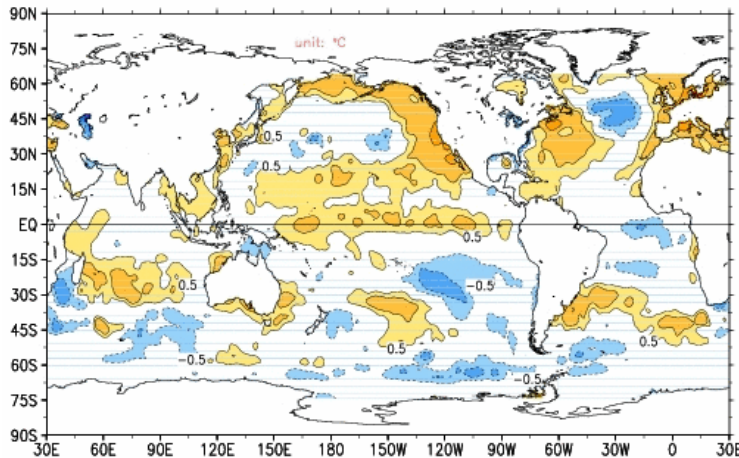


Summary

- California:
 - Accumulated precipitation deficit in Sierra Nevada Mountains between 30 and 50 inches over the last three years.
 - This deficit is evident in current reservoir levels, groundwater state, and other physical drought indicators.
 - Recent storms have brought northern Sierra Mountains above normal for the year but left southern Sierra somewhat below normal. This is helpful but far from sufficient to overcome deficits.
 - Overcoming drought will take much above average precipitation over this and likely future winters.
- Colorado River
 - 11 of past 15 years have received below average precipitation.
 - Reservoir levels on Lakes Powell and Mead near historic low levels.
- Hydrologic outlook depends on the winter season

Sea Surface Temperatures and ENSO

Average SST Anomalies
14 Nov 2014 – 9 Dec 2014



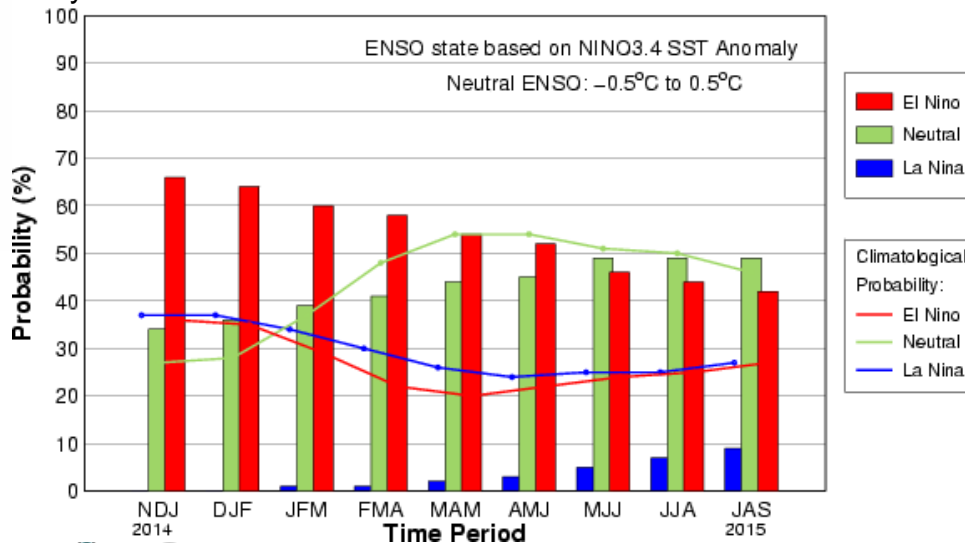
- Sea surface temperatures

- Above normal SSTs across the equatorial Pacific
- Above normal SSTs along the west coast of North America

- ENSO forecast

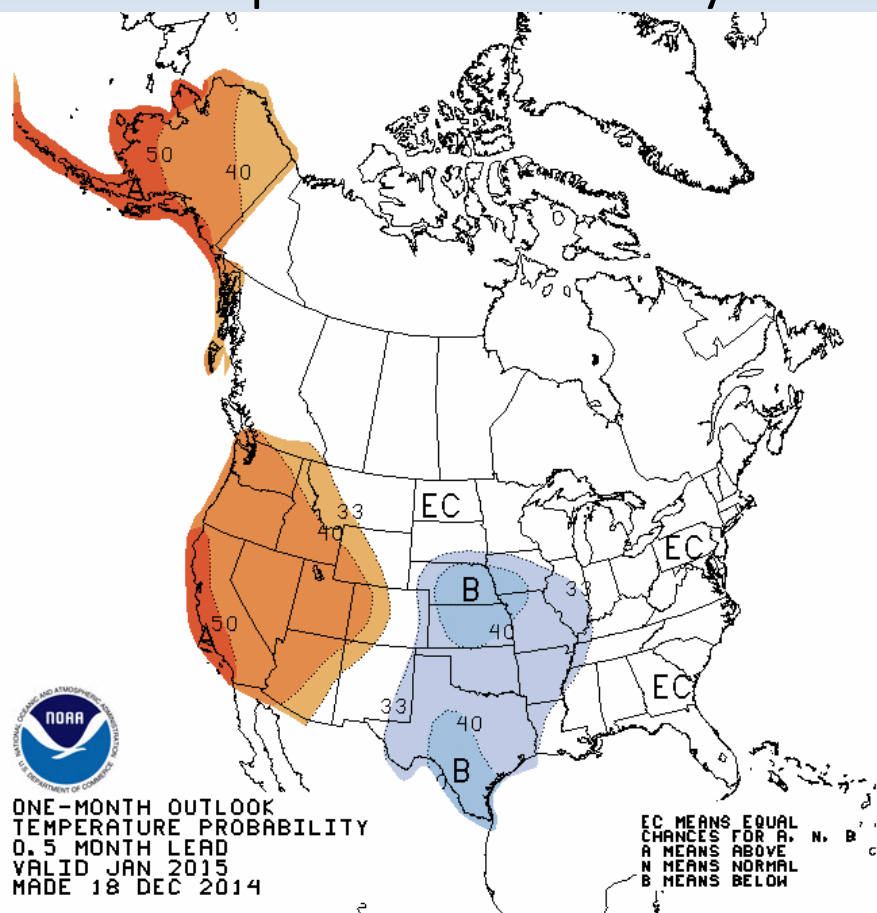
- ~65% chance of El Niño
- Anomalies between +0.5 C and +1.0 C, favors a weak El Niño

Early-Dec CPC/IRI Consensus Probabilistic ENSO Forecast

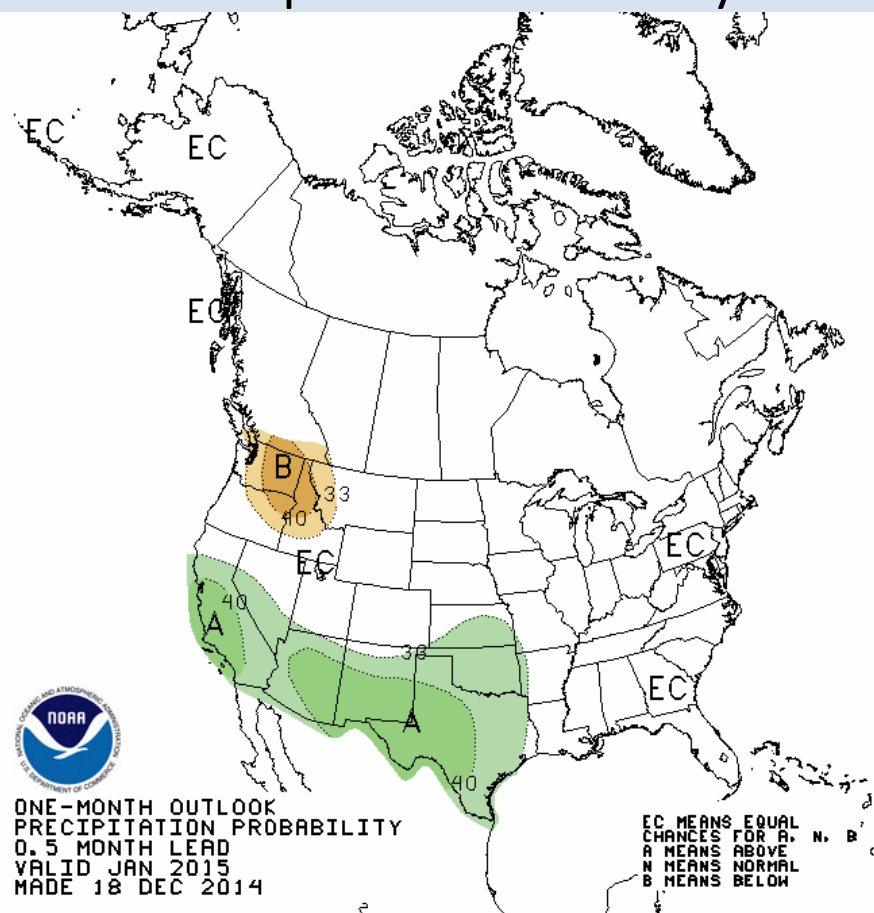


Monthly Forecast (January)

January Average Temperature Probability

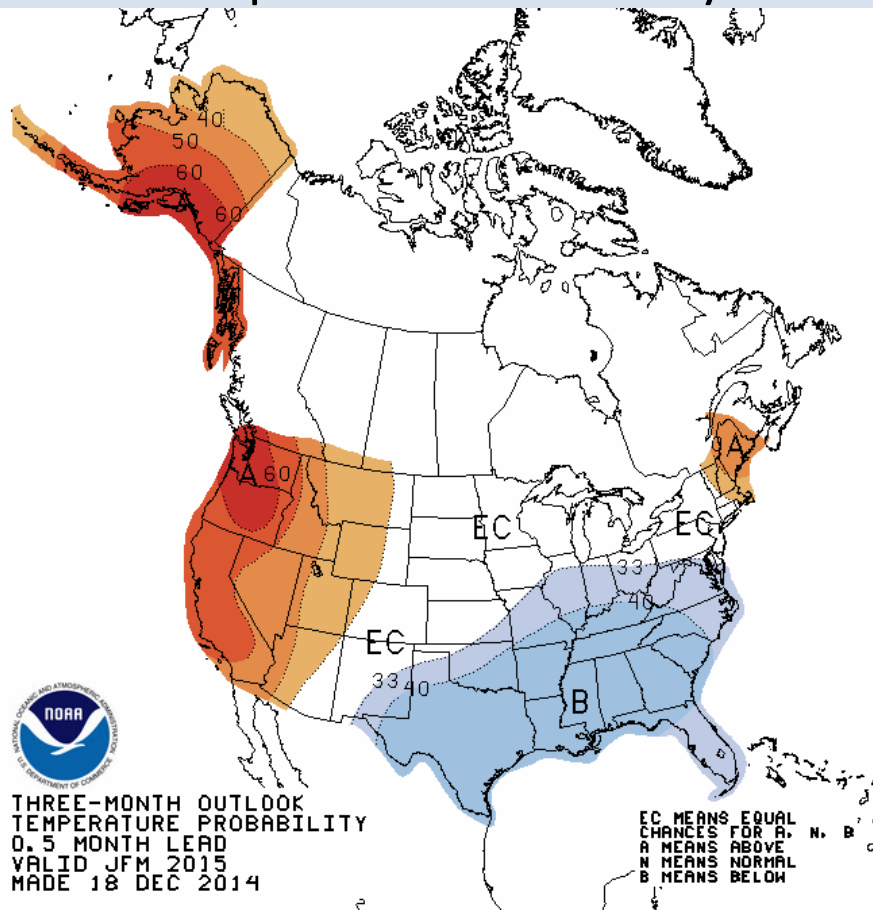


January Total Precipitation Probability

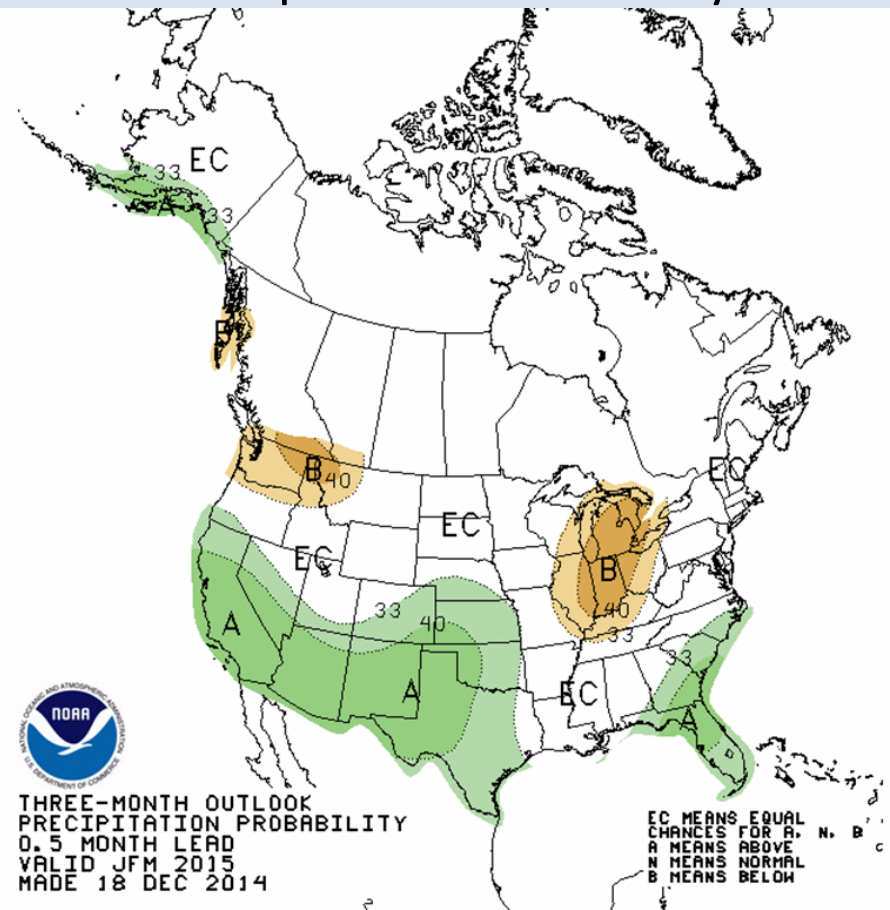


Seasonal Forecast (Jan-Feb-Mar)

Jan-Feb-Mar Average Temperature Probability



Jan-Feb-Mar Total Precipitation Probability

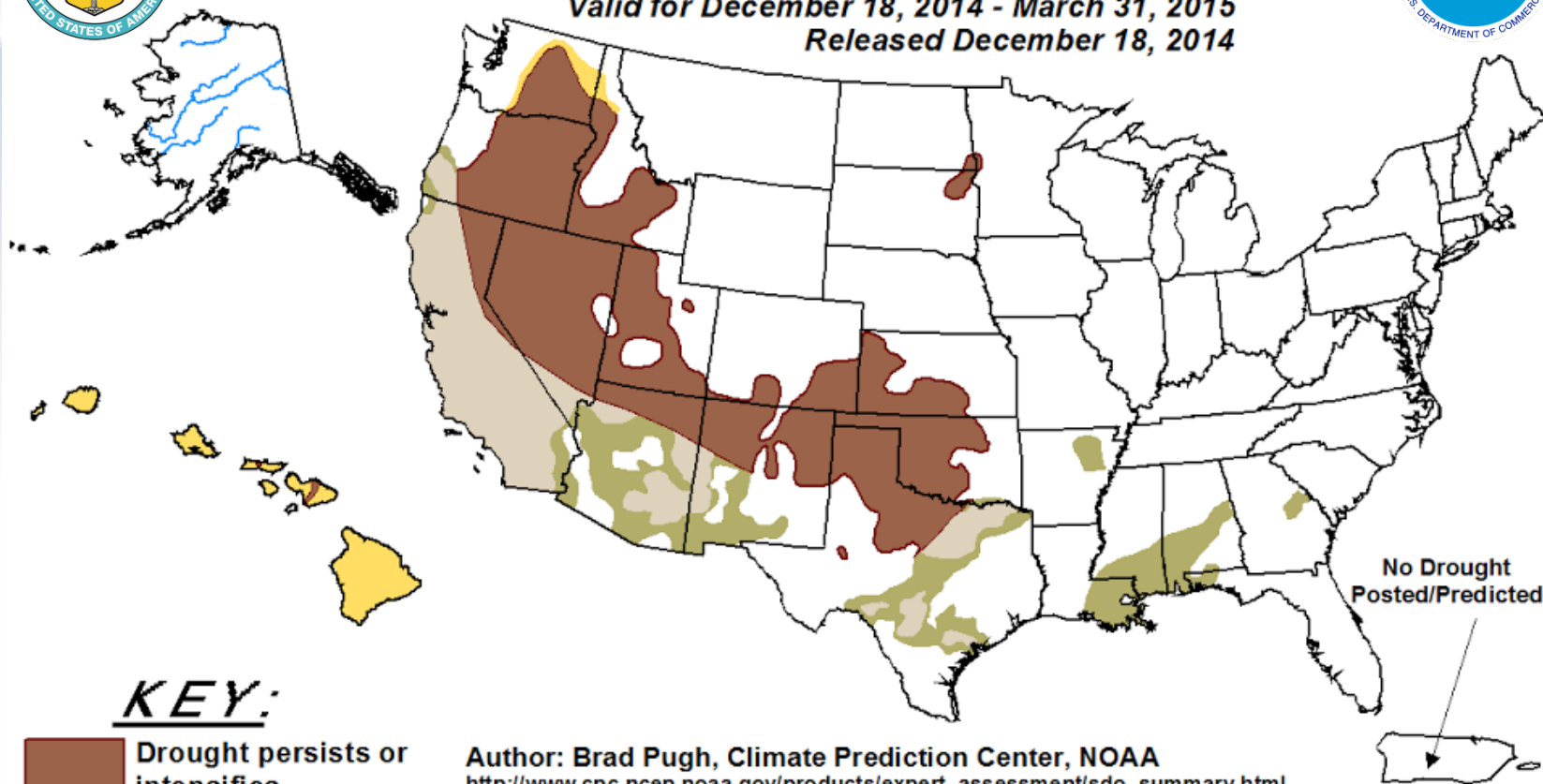








U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for December 18, 2014 - March 31, 2015
Released December 18, 2014



KEY:

-  Drought persists or intensifies
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely

Author: Brad Pugh, Climate Prediction Center, NOAA

http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.html

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity).

For weekly drought updates, see the latest U.S. Drought Monitor.

NOTE: The tan area areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period although drought will remain.

The Green areas imply drought removal by the end of the period (D0 or none)

For More Information



TODAY'S PRESENTATION:

- <http://www.ncdc.noaa.gov/sotc/briefings>

NOAA's National Climatic Data Center: www.ncdc.noaa.gov

- Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/
- Dates for upcoming reports: <http://www.ncdc.noaa.gov/monitoring-references/dyk/monthly-releases>

NOAA Western Regional Climate Services: <http://www.ncdc.noaa.gov/rcsd/western>

NOAA's Climate Prediction Center: www.cpc.ncep.noaa.gov

U.S. Drought Monitor: <http://drought.gov>

Climate Portal: www.climate.gov

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