High Plains Drought Update
May 21, 2015

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Drought in Pictures


Whoops!


Texas County:
Spring 2011


Cimarron County:
January 2014


Cimarron County
May 2014


Buffalo, OK:
May 2009


May 2011

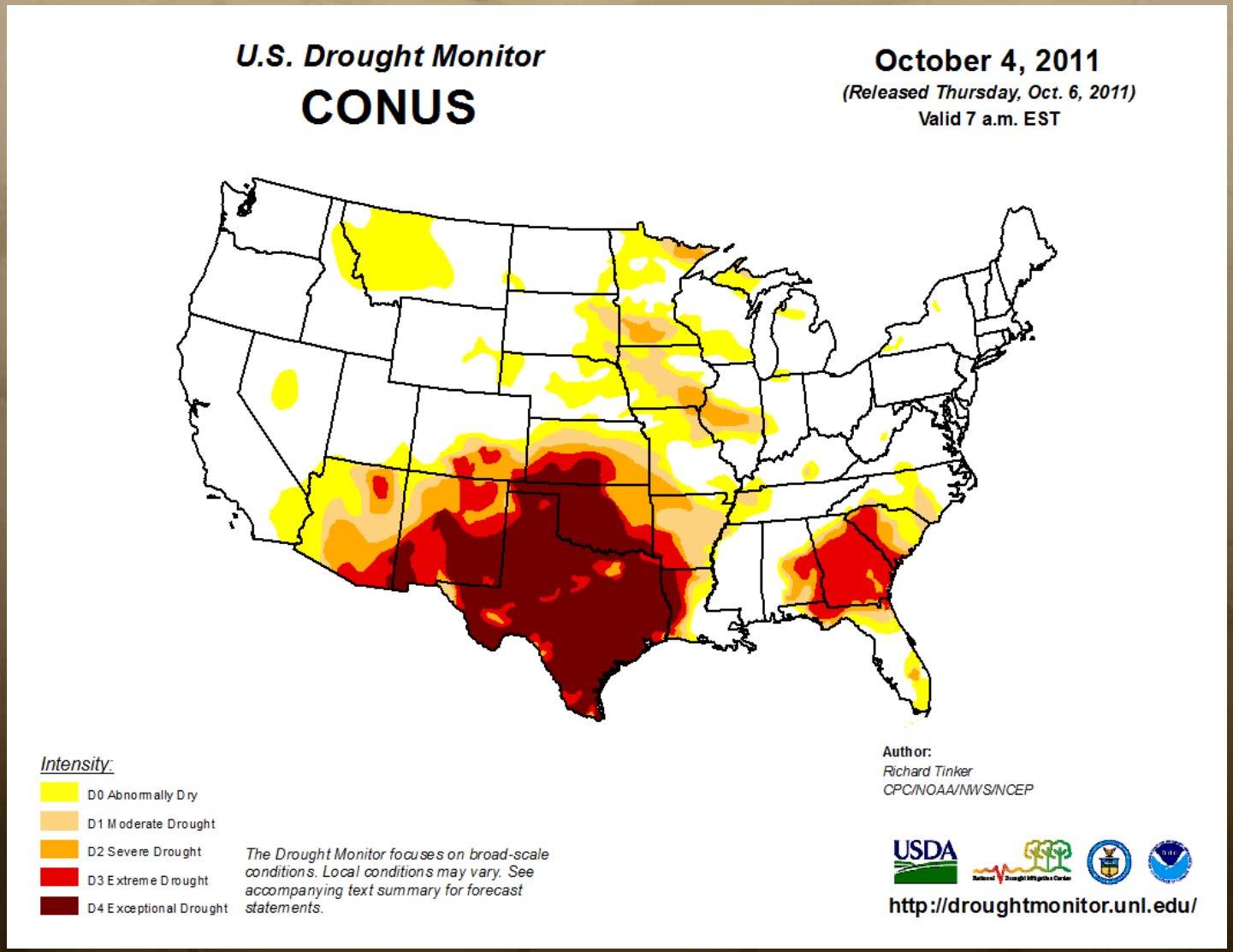

Feb. 2015

The Current High Plains Drought

Synopsis of our 2010-15 drought

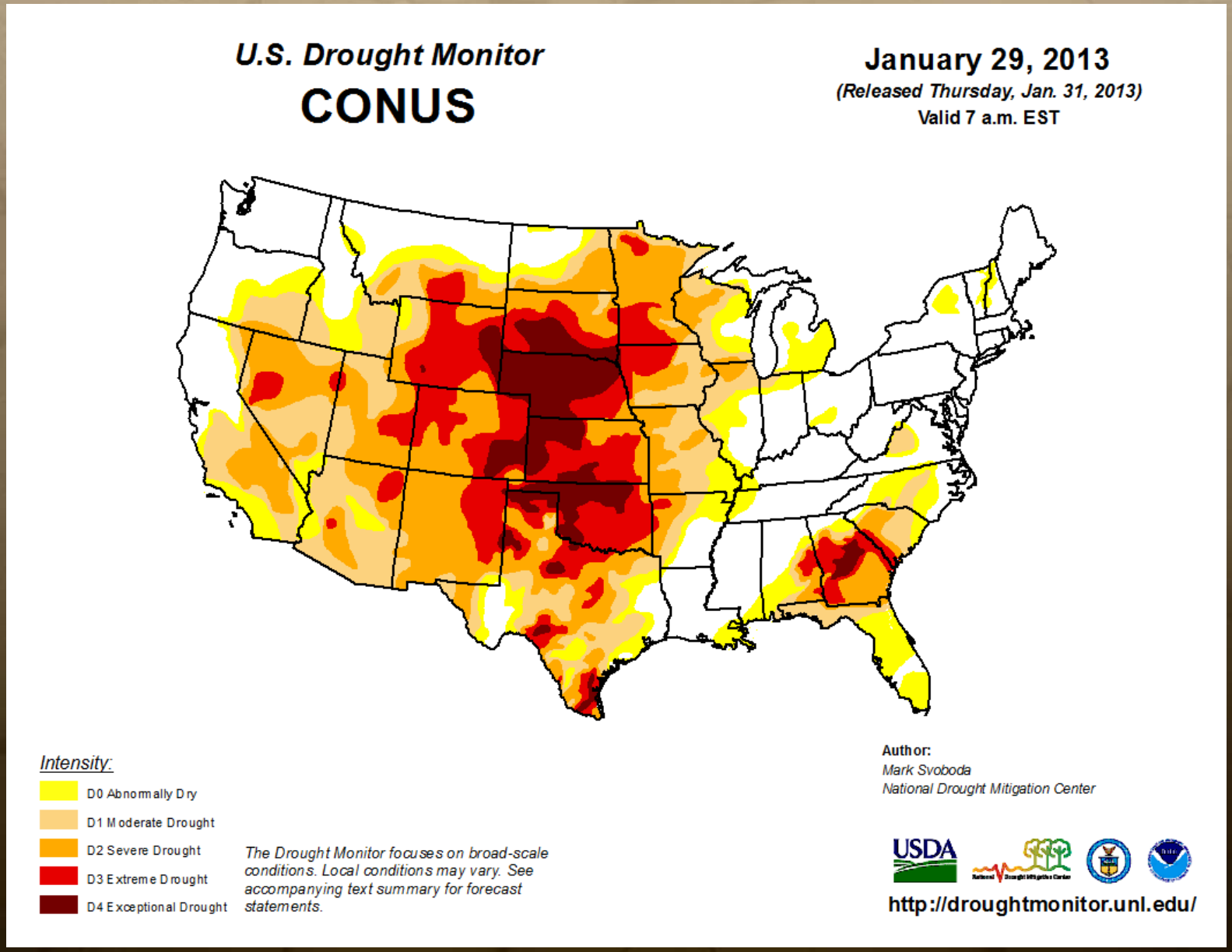
- Drought "begins" October 2010
- Intensified through summer 2011
- Intermittent relief through early 2015, mostly in the east
- Hot climate to cool climate Feb. 2013
- Drought building again through mid-spring 2015
- El Nino intensifies April 2015
- Relief!

The drought at its worst



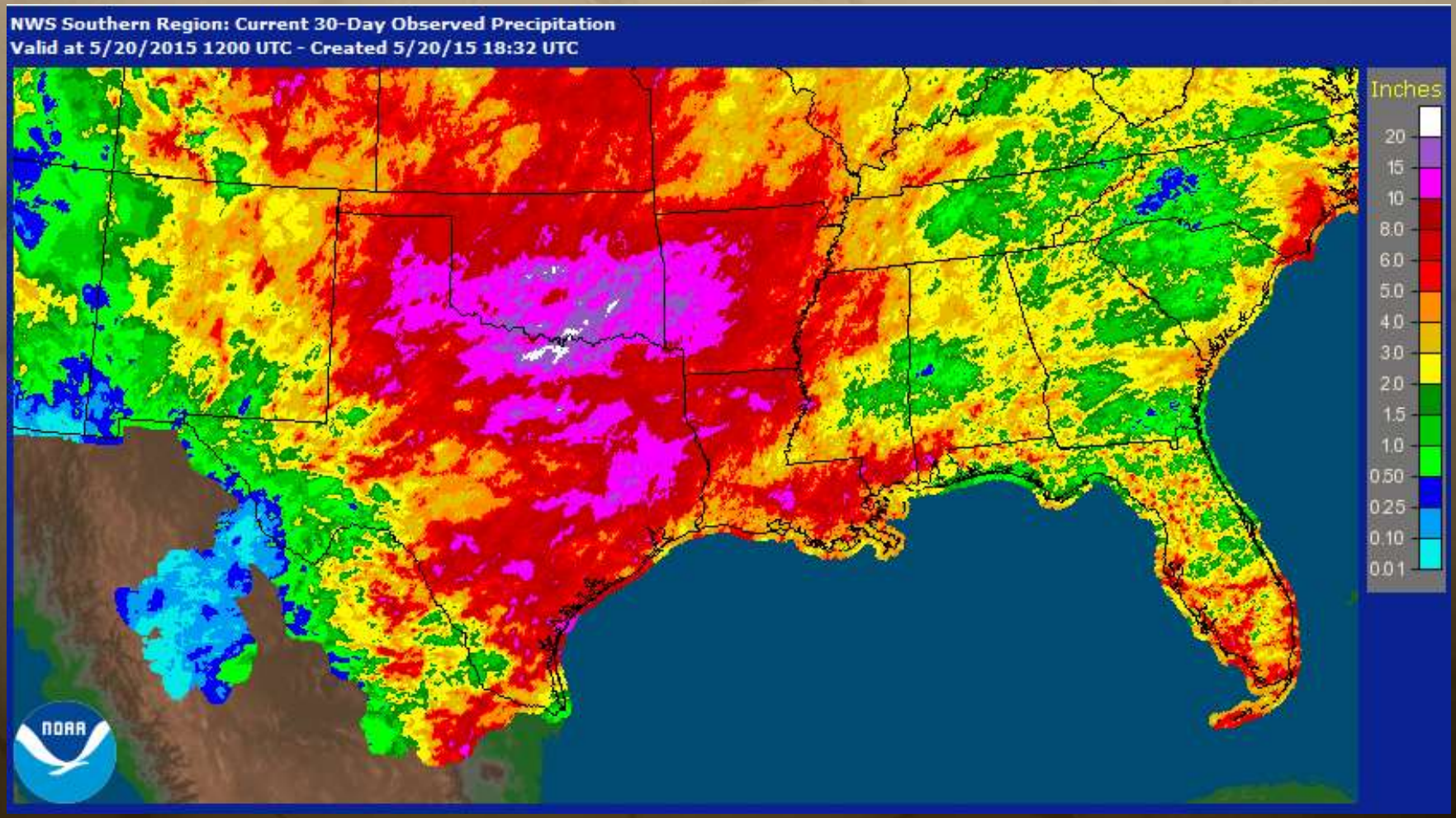
70% of OK and 88% of TX in D4 drought

No picnic early 2013 either



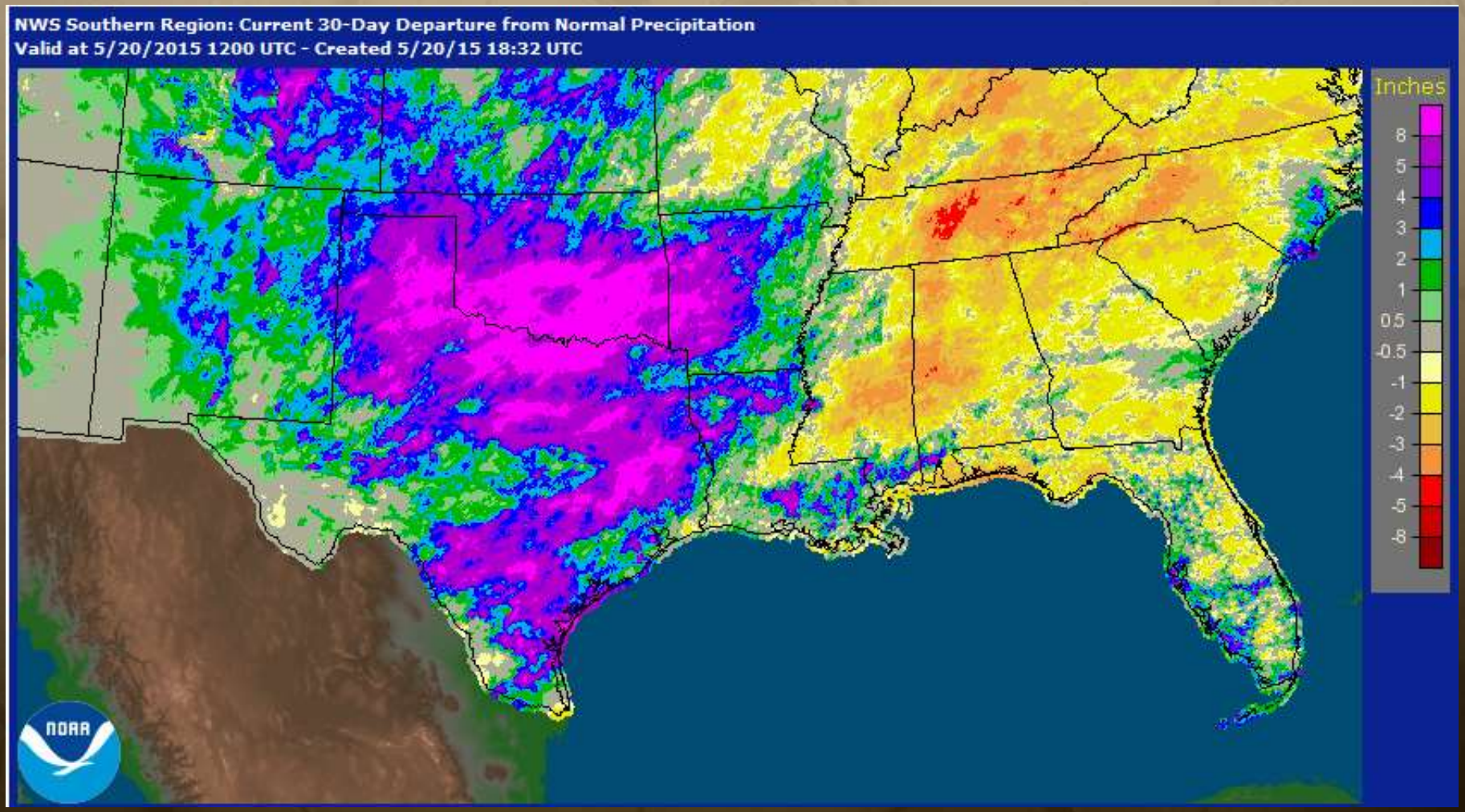
Fast Forward:
Where are we now?

Last 30 days: Glub Glub!



5-15 inches across High Plains

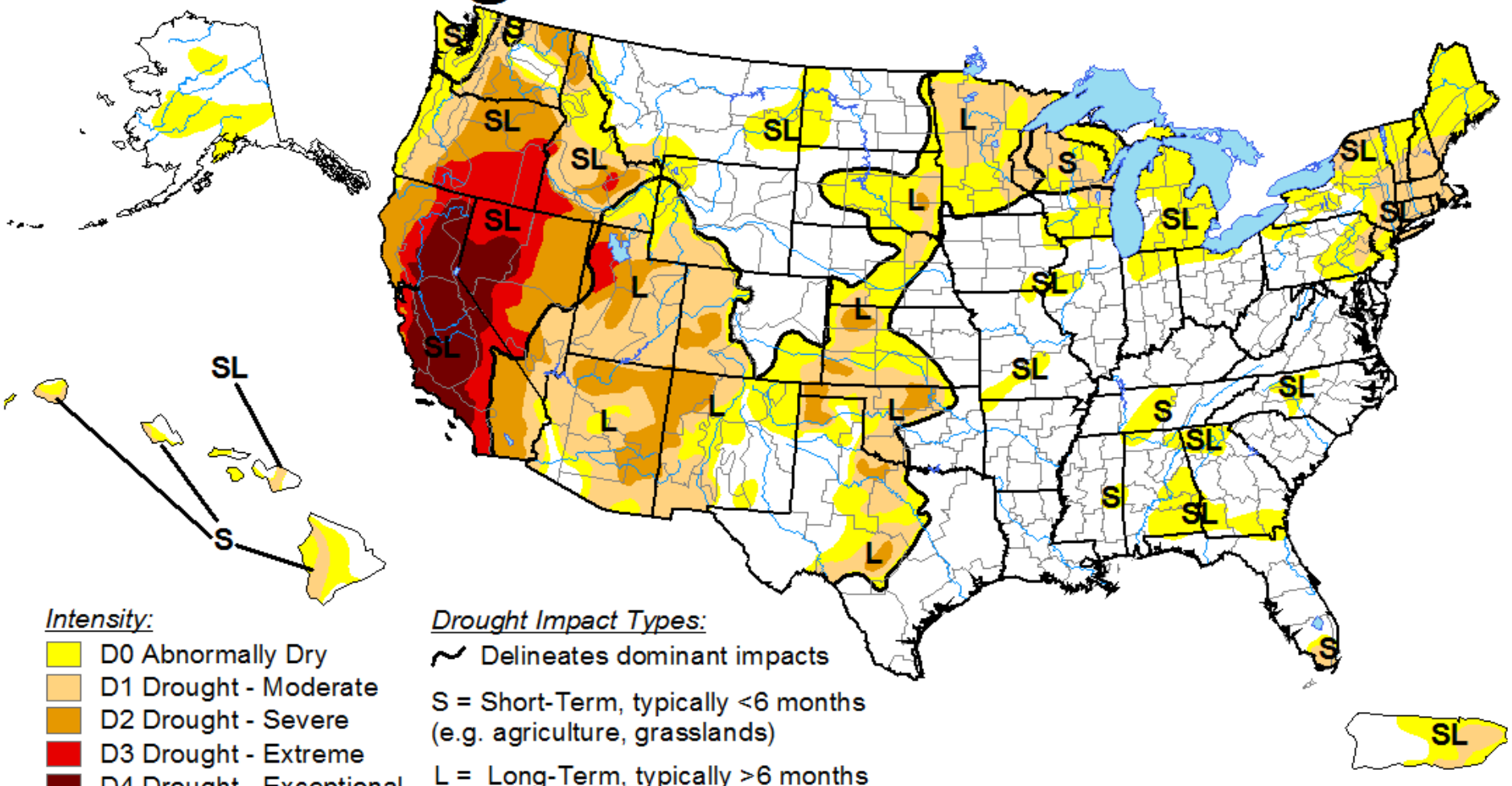
Departure from Normal Rainfall



2-8 inches above normal

U.S. Drought Monitor

May 19, 2015
Valid 8 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

~ Delineates dominant impacts

S = Short-Term, typically <6 months
(e.g. agriculture, grasslands)

L = Long-Term, typically >6 months
(e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu/

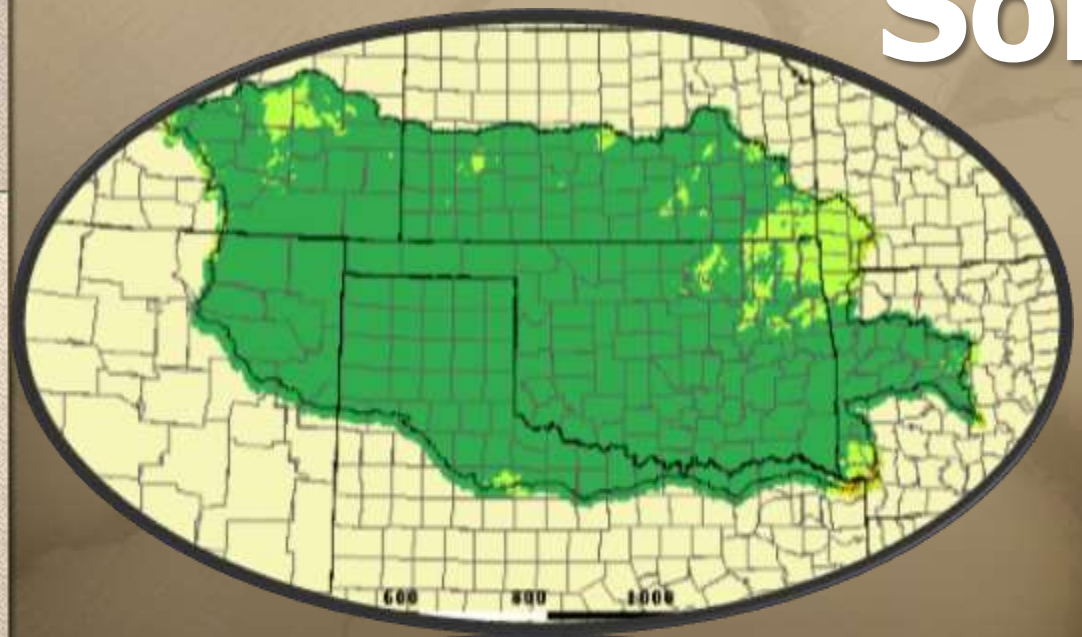
USDA National Drought Mitigation Center

Released Thursday, May 21, 2015

Author: Brad Rippey, U.S. Department of Agriculture

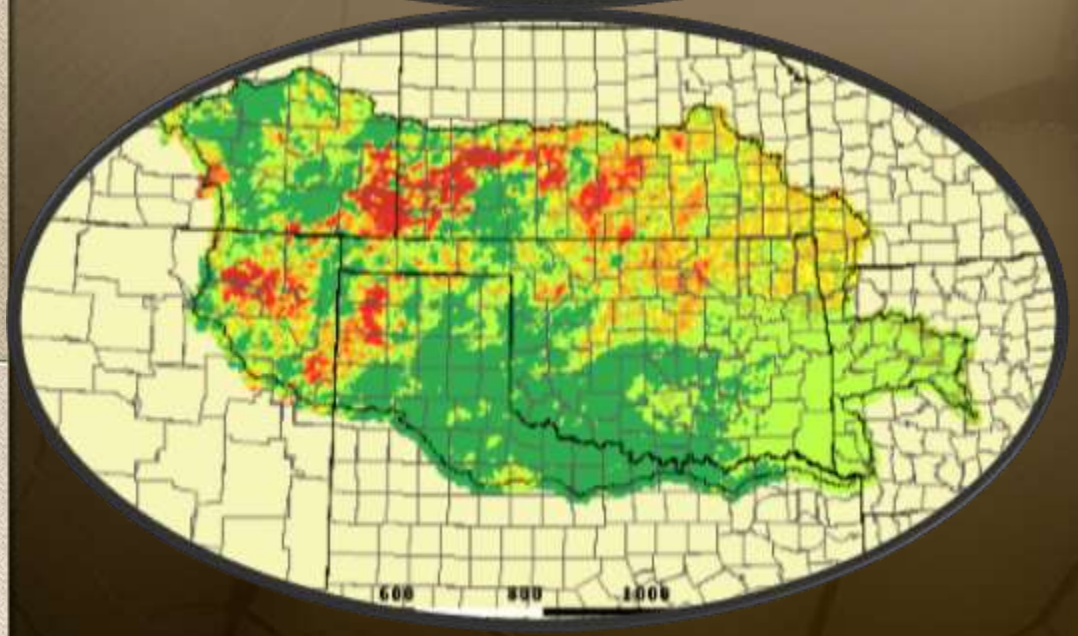
Soil Moisture

Upper Zone



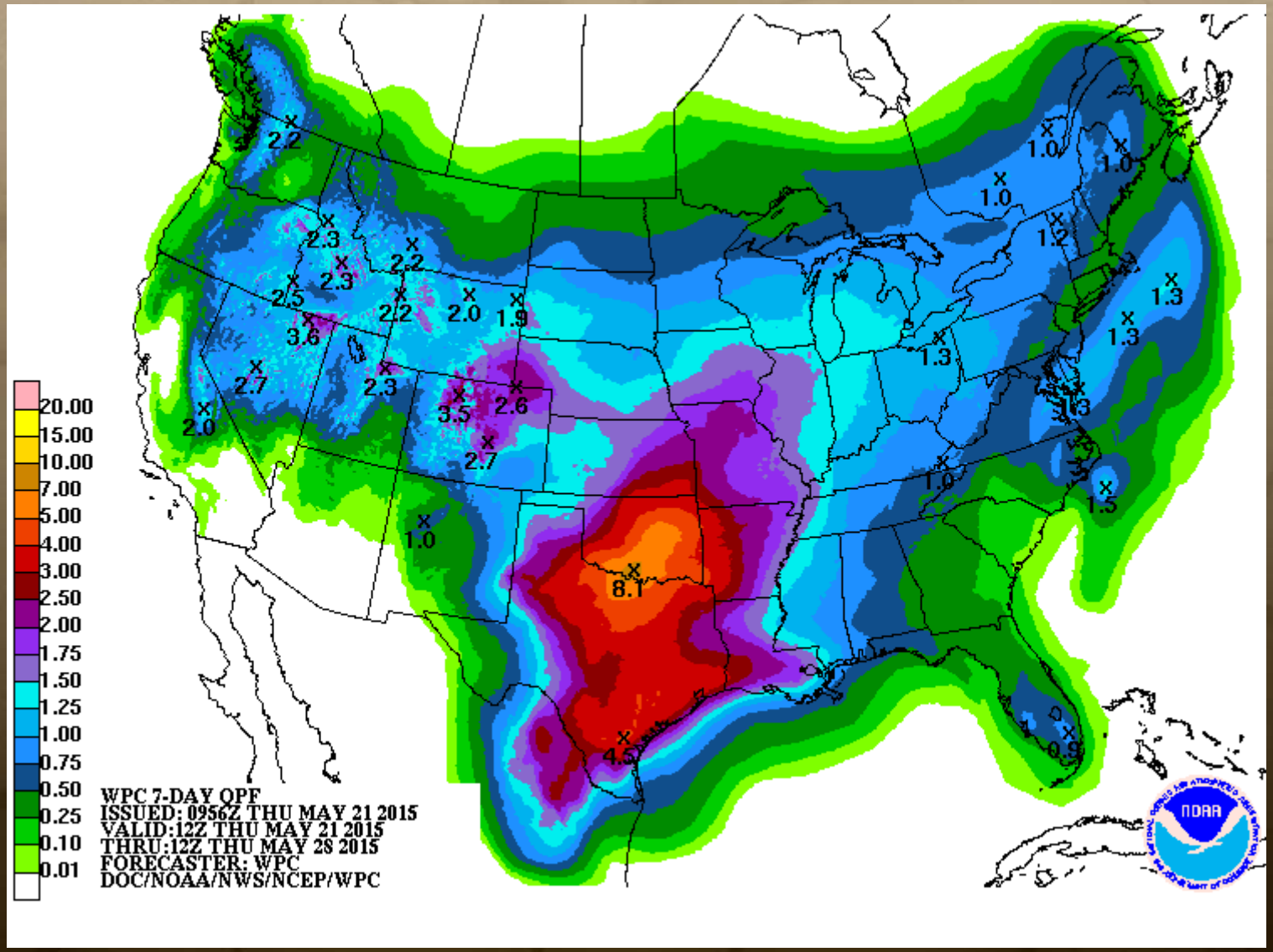
	Less than 30 Percent of Normal
	30 to 50 Percent of Normal
	50 to 70 Percent of Normal
	70 to 90 Percent of Normal
	90 to 100 Percent of Normal
	100 to 110 Percent of Normal
	110 to 150 Percent of Normal
	Greater than 150 Percent of Normal

Lower Zone



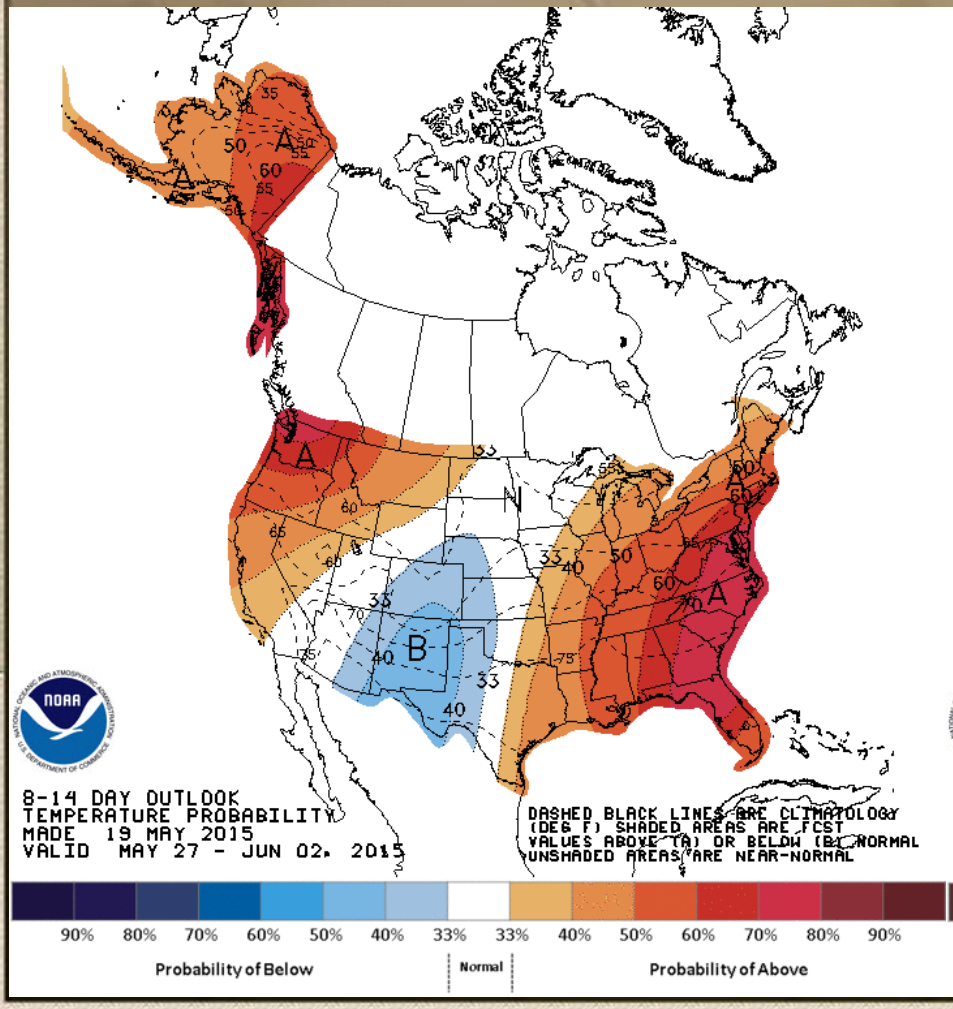
Forecasts and Outlooks

Next Seven Days (thru Thur., May 28)

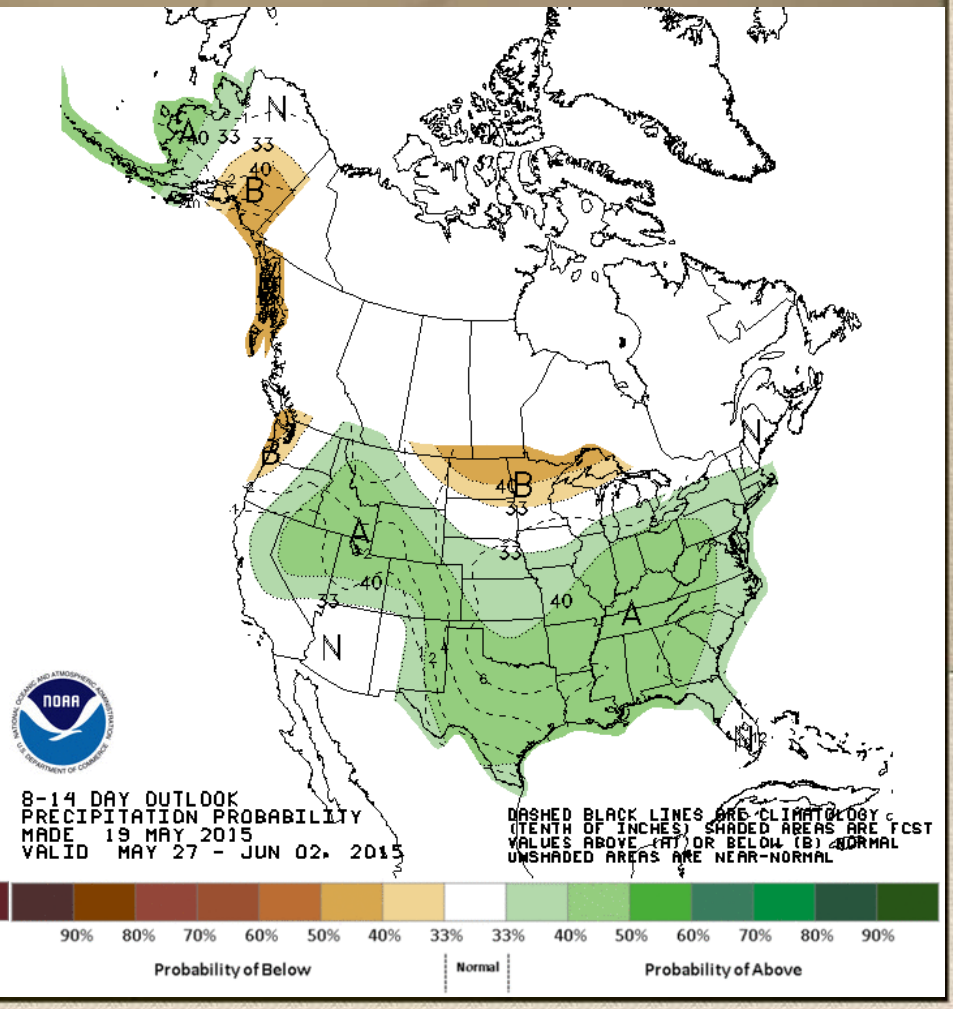


Medium-term Outlooks: May 27-June 2

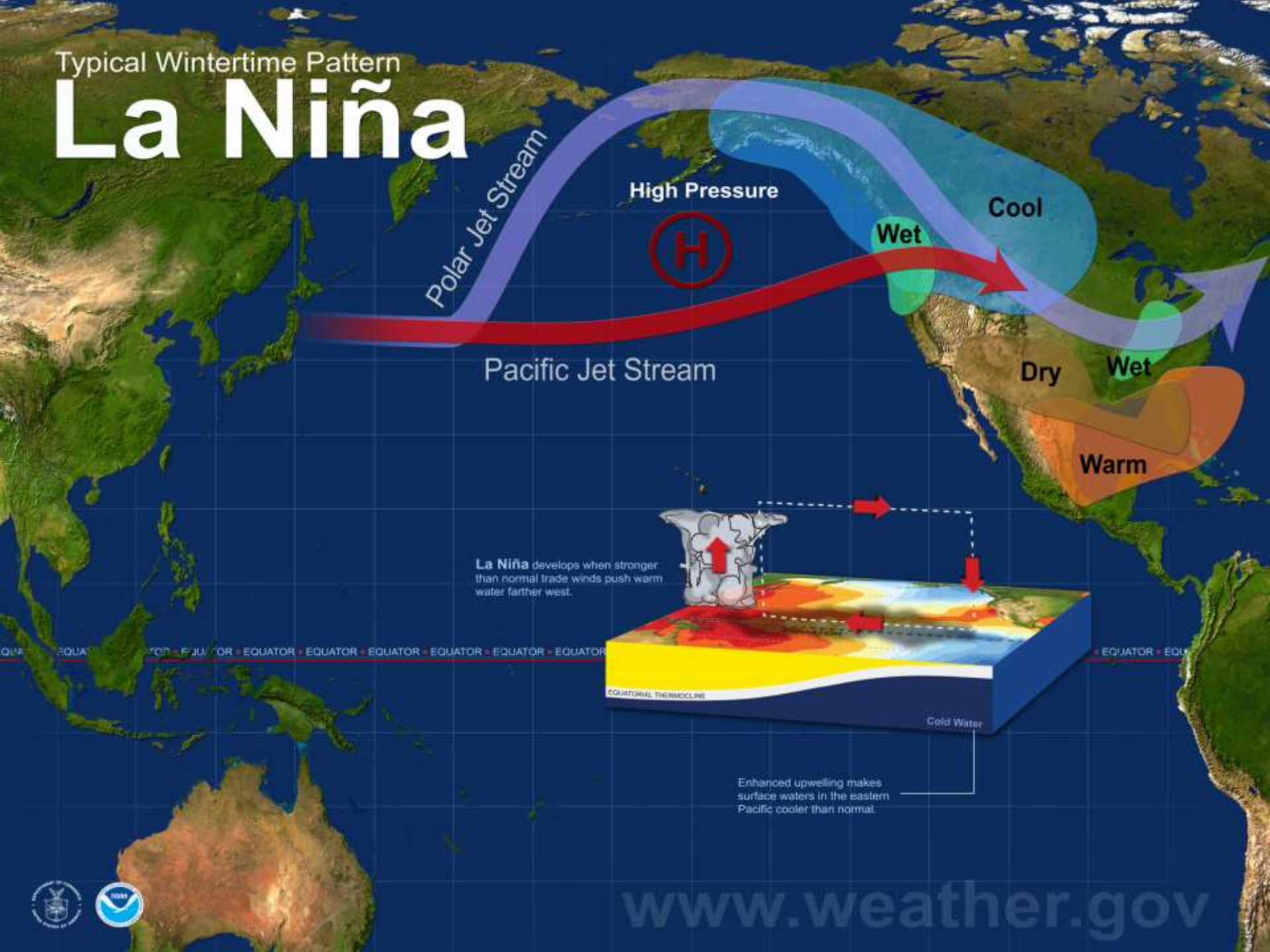
Temperature



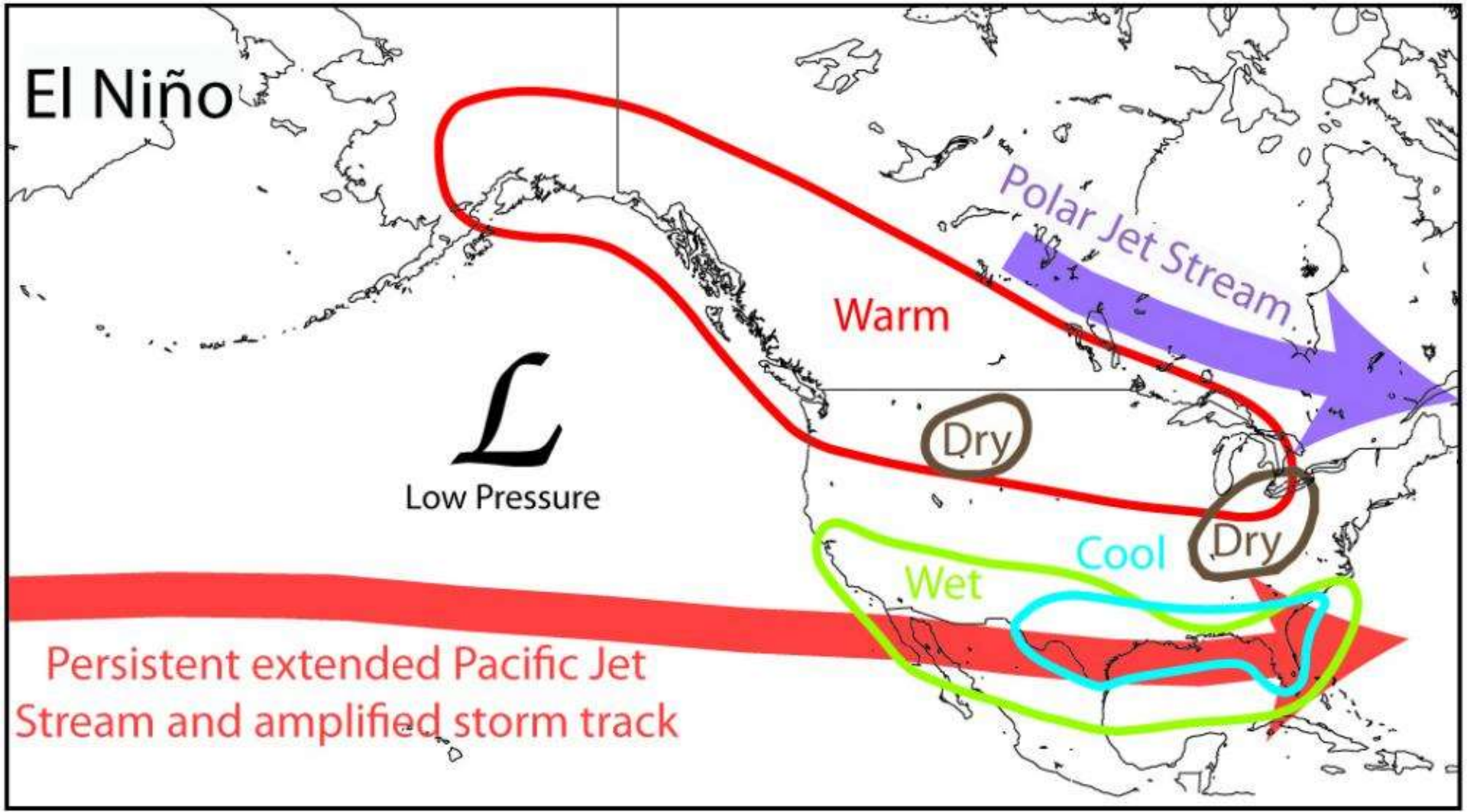
Precipitation



Oceanic Influences


Typical Wintertime Pattern
La Niña
Polar Jet Stream
High Pressure
H
Cool
Wet
Pacific Jet Stream
Dry
Wet
Warm
La Niña develops when stronger than normal trade winds push warm water farther west.
EQUATOR
EQUATORIAL THERMOCLINE
Cold Water
Enhanced upwelling makes surface waters in the eastern Pacific cooler than normal.
www.weather.gov

El Nino


El Niño
Polar Jet Stream
Warm
L
Low Pressure
Dry
Dry
Cool
Wet
Persistent extended Pacific Jet
Stream and amplified storm track

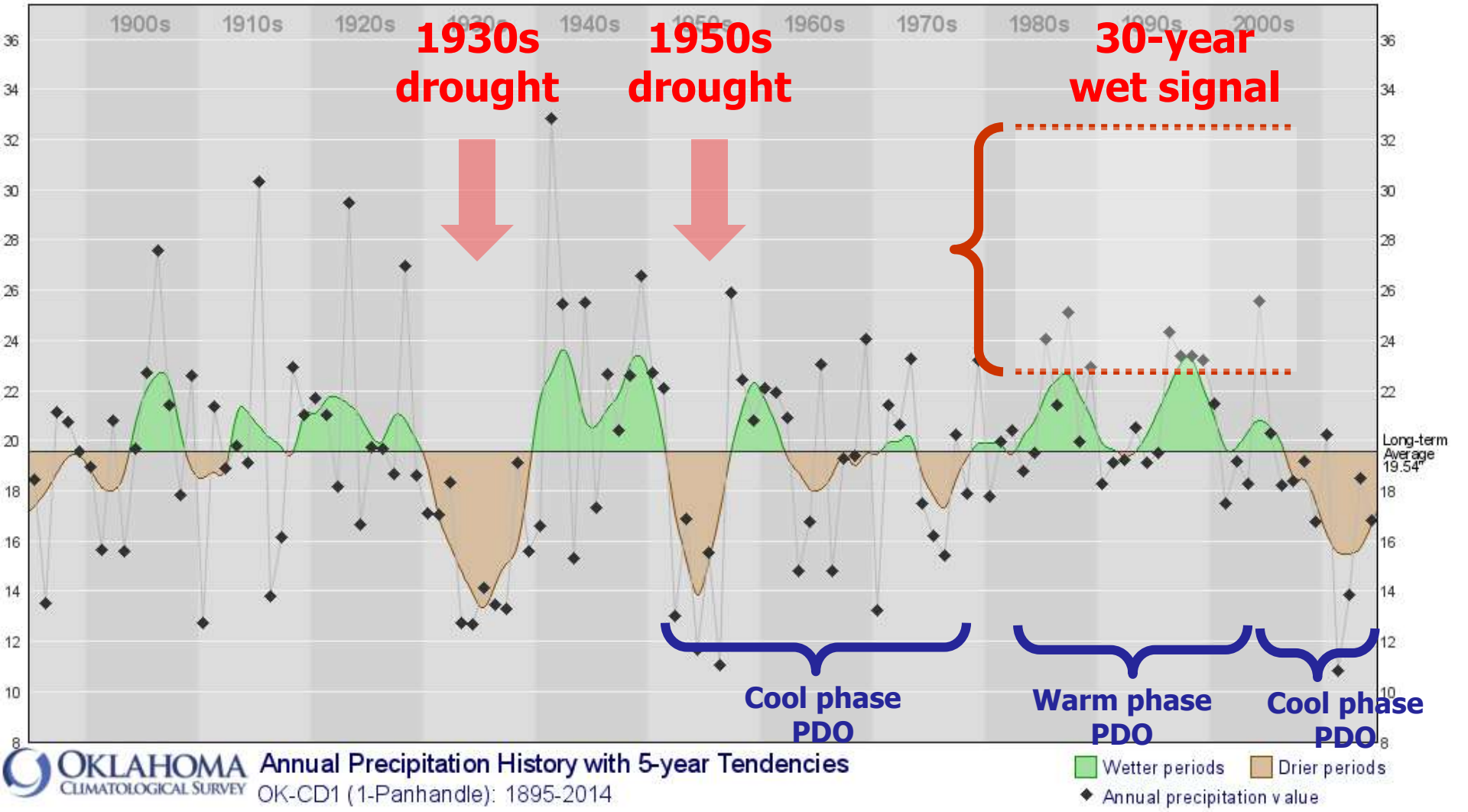
Oceanic influences on our weather

- ENSO (El Nino-Southern Oscillation)
  - Varies every 1-3 years
  - El Nino (cool and wet)
  - La Nina (warm and dry)
- Pacific Decadal Oscillation (PDO)
  - Varies every 20-30 years
  - Cool phase (more La Ninas, drier)
  - Warm phase (more El Ninos, wetter)
- Atlantic Decadal Oscillation (AMO)
  - Varies every 20-40 years
  - Warm phase (dry)
  - Cool Phase (wet)

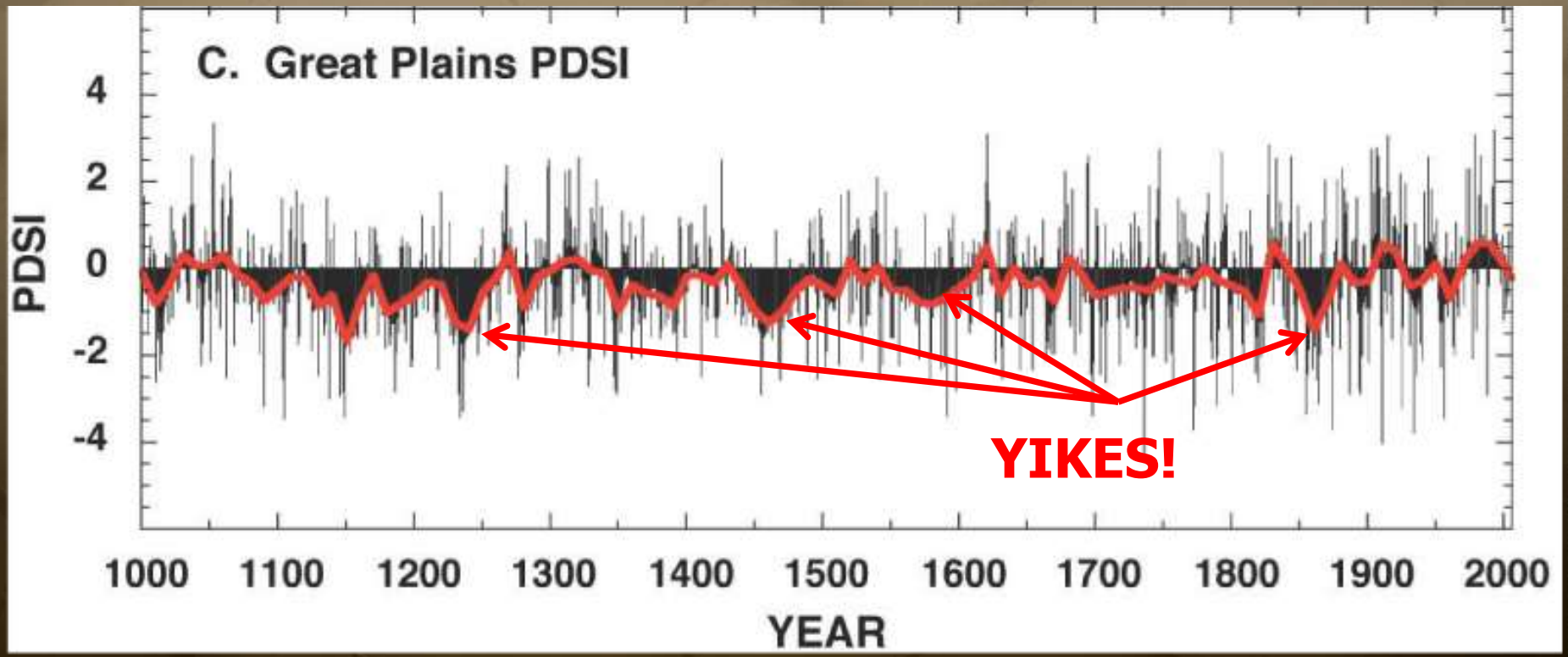
A Brief History of Drought

Big droughts are always lurking

Statewide avg. rainfall (1895-2014)



Recent droughts are infants!



2010-15 Drought: Final points

- Drought has taken a big hit
- Wettest part of year still to come for High Plains
- El Nino is "probably" helping, getting stronger for next fall/winter as well
- As with other droughts, we've been through periods of relief and intensification
- Ocean patterns are uncertain in long term
- We could very well be seeing the final nail in the coffin for the 2010-15 drought
- Have to remain vigilant for quick return

Thank You!

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