

**The 2010-14 Drought:
Past and Present
October 22, 2014**

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Oklahoma Climatological Survey**

The background of the slide is a close-up photograph of parched, cracked earth. The cracks are irregular and deep, creating a network of polygonal shapes across the entire surface. The color is a range of browns, from light tan to dark chocolate, with a slight gradient from top to bottom.

Drought in pictures

**Texas County:
Spring 2011**



**Cimarron County:
January 2014**



**OK Panhandle:
May 2014**



Buffalo, OK:
May 9, 2009



UNDENIABLE PROOF!



May 14, 2011



July 2014



Synopsis of our 2010-14 drought

- Drought “begins” October 2010
- Intensified through summer 2011
 - Spread west to east
 - Hottest summer for any state on record
- Relief October 2011 through March 2012
- Spring 2012 – drought intensifies again
- Driest May-December on record
- 2012 - Warmest year on record

2010-14 Drought Cycle (cont.)

- Our climate pattern changed mid-Feb. 2013
- Active weather pattern for most part through summer 2013
- January 1-May 20, 2014: Drought intensifies
 - 1st or 2nd driest start to the year for some areas
- May 21-July 31.: Wet! Drought on the run
- Since then...eastern OK good, western OK bad

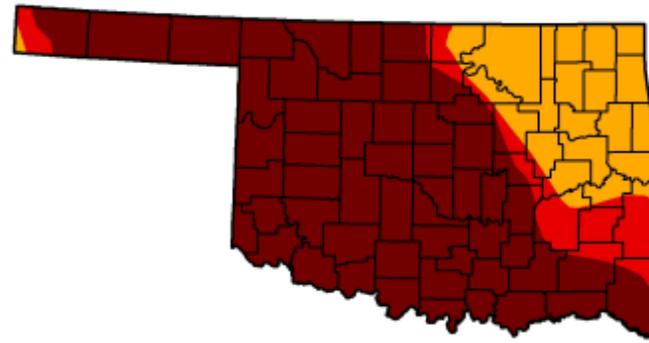
The drought at its worst

U.S. Drought Monitor Oklahoma

October 4, 2011
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	100.00	78.97	69.82
Last Week (09/27/2011 map)	0.00	100.00	100.00	100.00	78.97	66.42
3 Months Ago (07/05/2011 map)	0.00	100.00	93.77	60.75	44.18	32.78
Start of Calendar Year (12/28/2010 map)	13.82	86.18	47.90	1.50	0.00	0.00
Start of Water Year (09/27/2011 map)	0.00	100.00	100.00	100.00	78.97	66.42
One Year Ago (09/28/2010 map)	66.28	33.72	4.21	0.00	0.00	0.00



Intensity:

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

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

<http://droughtmonitor.unl.edu>



Released Thursday, October 6, 2011

70% of the state in D4 drought

Before the rain: May 20, 2014

U.S. Drought Monitor Oklahoma

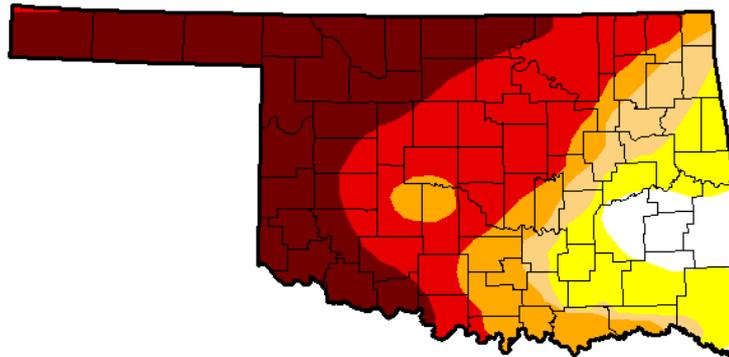
May 20, 2014

(Released Thursday, May 22, 2014)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	5.78	94.22	81.06	73.26	61.24	34.25
Last Week 5/13/2014	8.54	91.46	75.09	64.46	50.06	30.43
3 Months Ago 2/18/2014	19.84	80.16	47.40	28.40	12.53	2.40
Start of Calendar Year 12/31/2013	50.84	49.16	38.17	18.99	4.84	2.40
Start of Water Year 10/1/2013	21.74	78.26	43.00	17.62	4.42	1.45
One Year Ago 5/21/2013	25.21	74.79	61.60	50.91	26.73	10.60



Intensity:



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

Author:

Michael Brewer
NCDC/NOAA



<http://droughtmonitor.unl.edu/>

61% in D3-D4 Drought

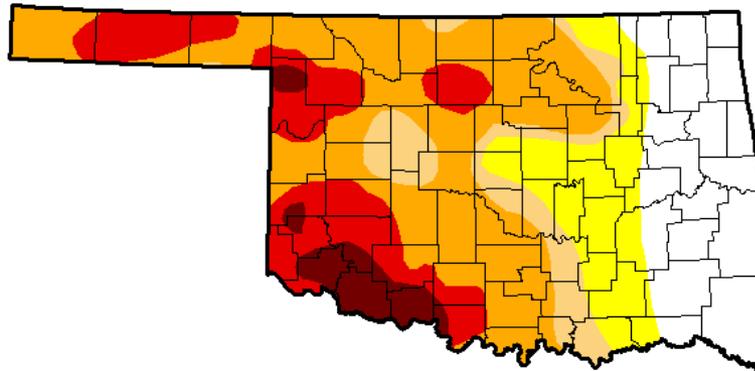
Where we're at now

U.S. Drought Monitor Oklahoma

October 14, 2014
(Released Thursday, Oct. 16, 2014)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	22.08	77.92	64.49	55.44	20.87	4.84
Last Week <i>10/7/2014</i>	8.55	91.45	73.44	58.20	21.00	4.84
3 Months Ago <i>7/15/2014</i>	9.86	90.14	79.57	62.93	29.37	6.43
Start of Calendar Year <i>12/31/2013</i>	50.84	49.16	38.17	18.99	4.84	2.40
Start of Water Year <i>9/30/2014</i>	8.55	91.45	73.31	58.13	20.92	4.64
One Year Ago <i>10/15/2013</i>	41.83	58.17	36.85	14.90	4.42	1.45



Intensity:



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

Author:

Mark Svoboda
National Drought Mitigation Center



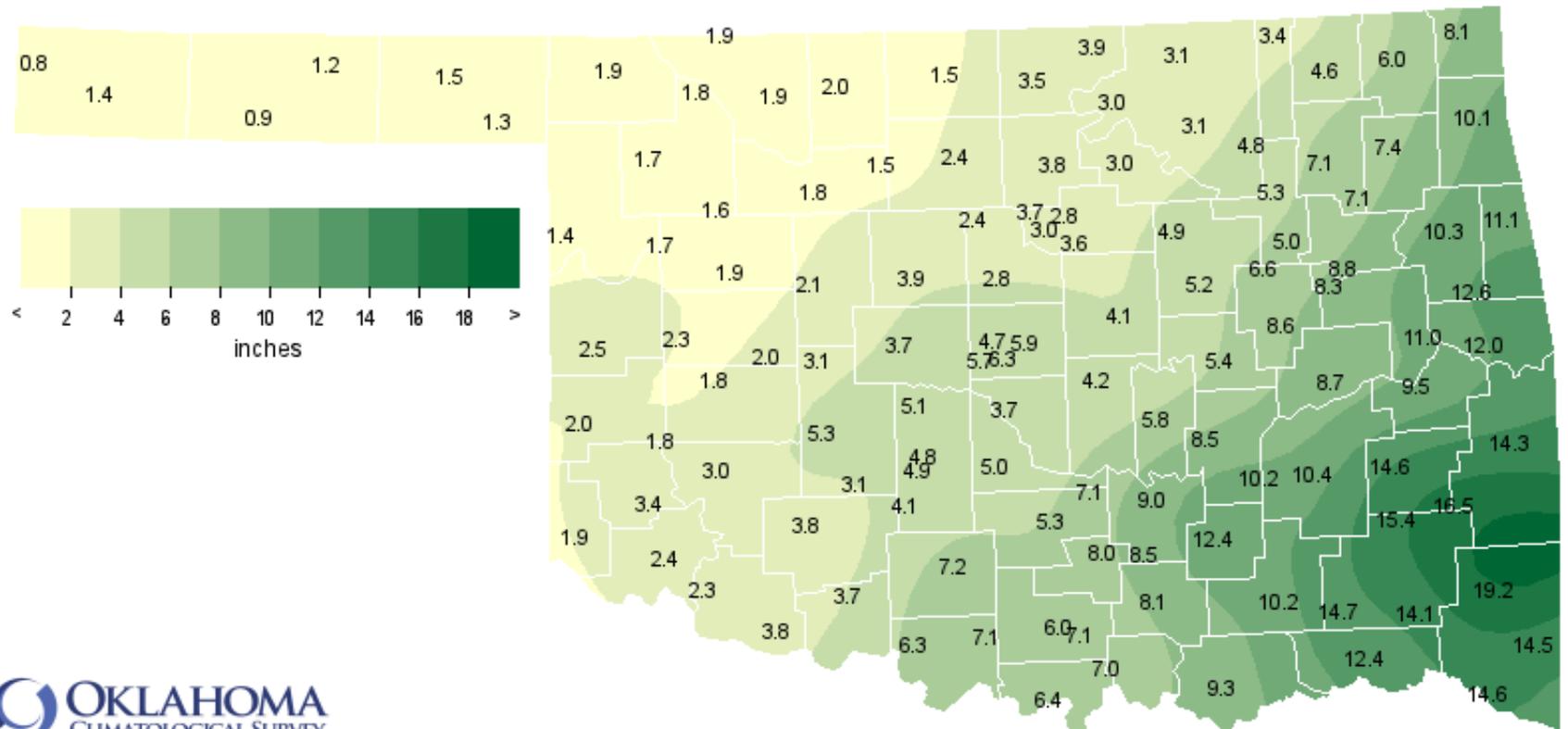
<http://droughtmonitor.unl.edu/>

55% of state in at least Severe drought

The background of the slide is a textured, brownish-gold color with a pattern of irregular, cracked lines, resembling aged paper or stone. The text is centered horizontally and vertically.

The ~~two~~ **three** faces of 2014

January 1-May 20



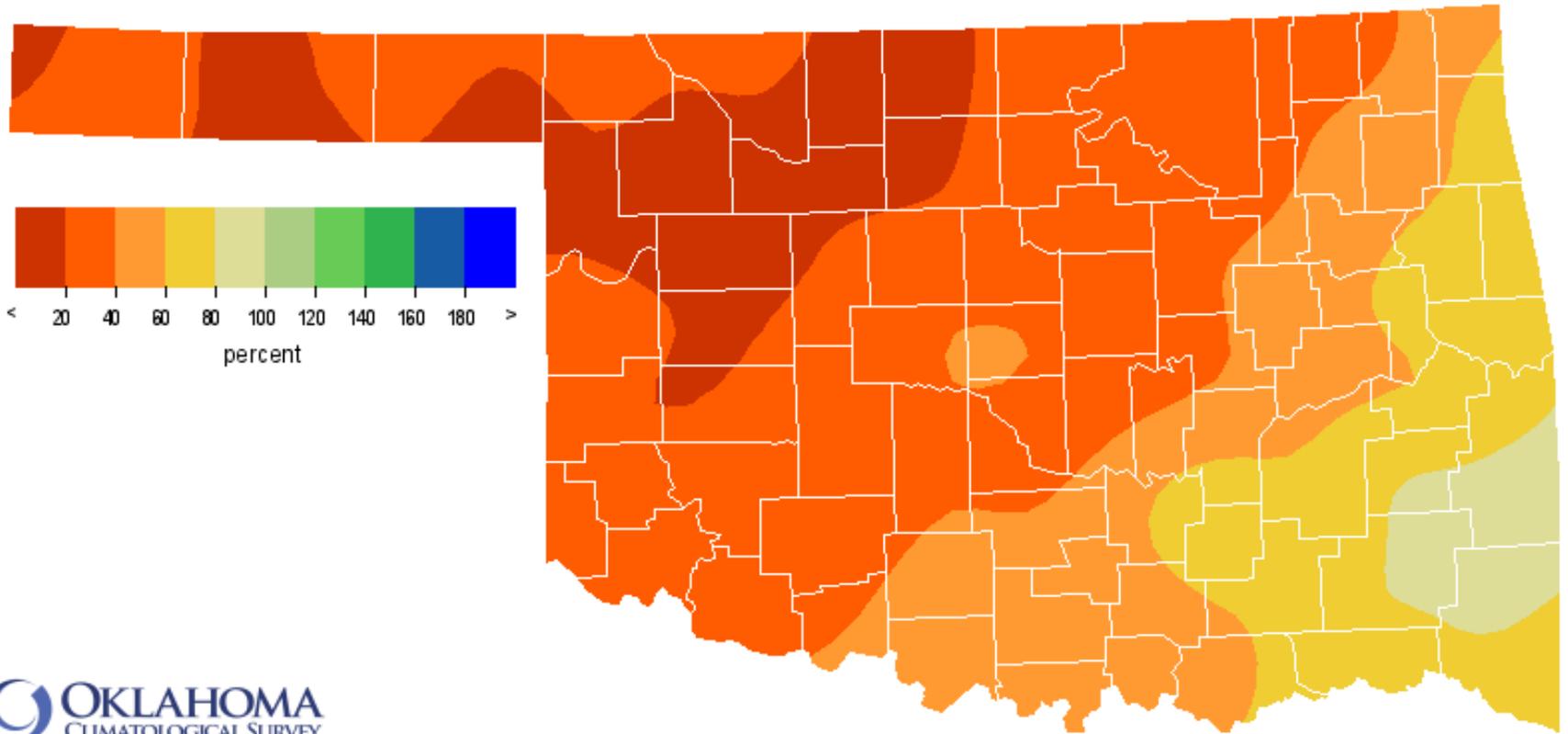
 **OKLAHOMA**
CLIMATOLOGICAL SURVEY

Observed Rainfall
Calendar Year

Jan 1, 2014 through May 20, 2014

Created 2014-05-21 10:00:27 UTC. Copyright © 2014

Everybody was dry



 **OKLAHOMA**
CLIMATOLOGICAL SURVEY

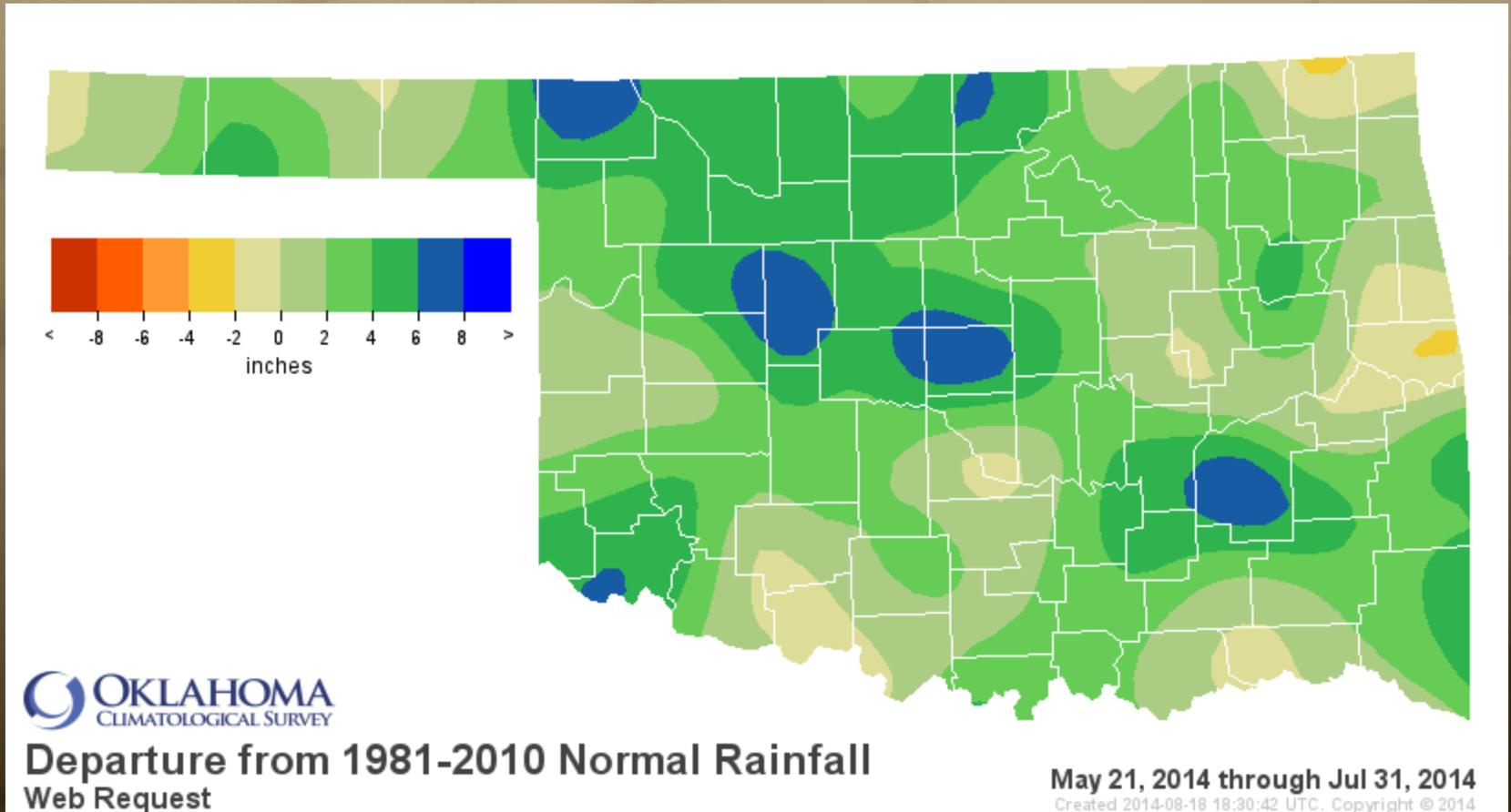
Percentage of 1971-2000 Normal Rainfall
Calendar Year

Jan 1, 2014 through May 20, 2014

Created 2014-05-21 10:00:32 UTC. Copyright © 2014

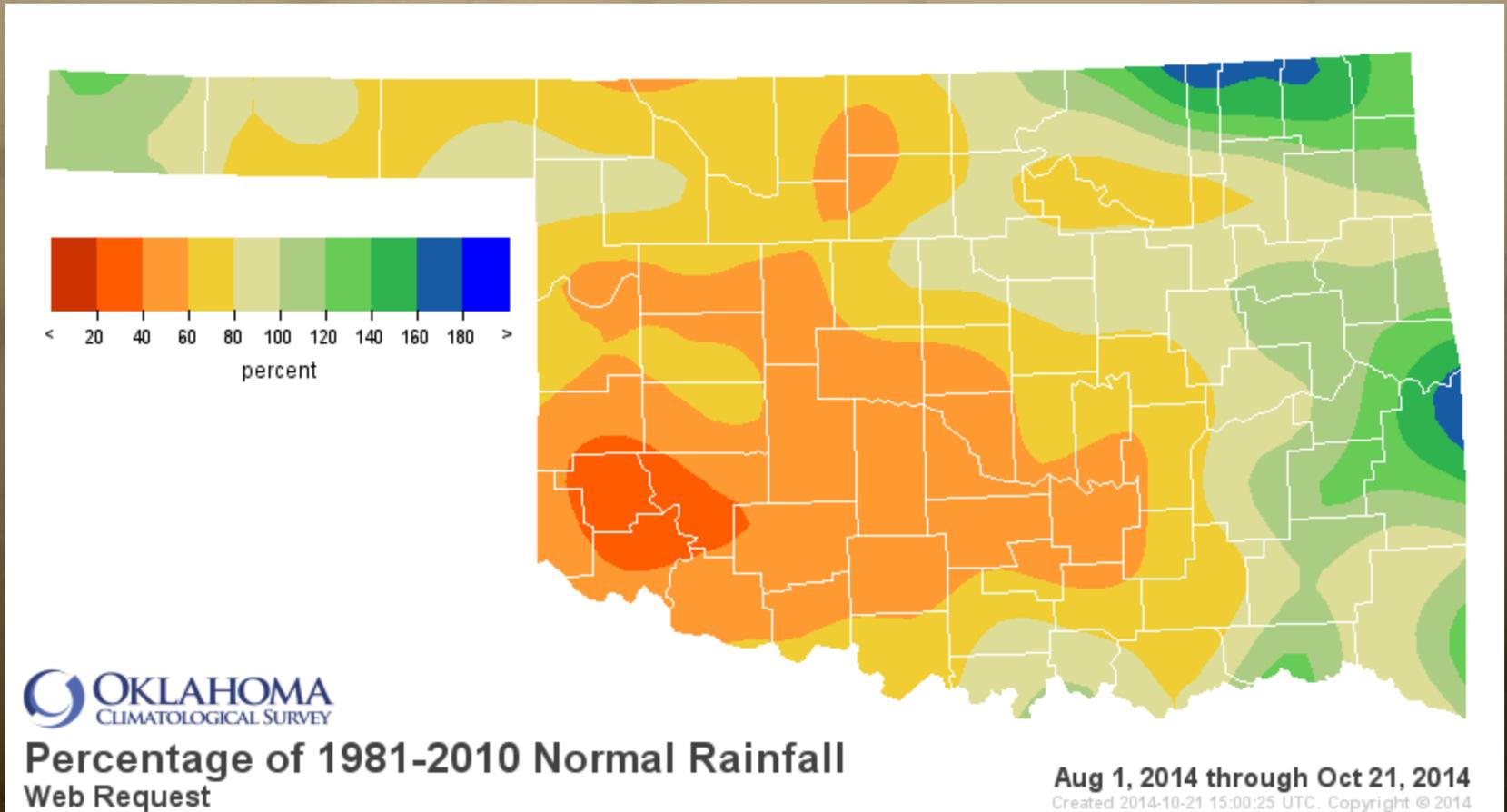
2nd driest on record

Most areas 4-8" above normal



8th wettest May 21-July 31 since at least 1921

Since August 1

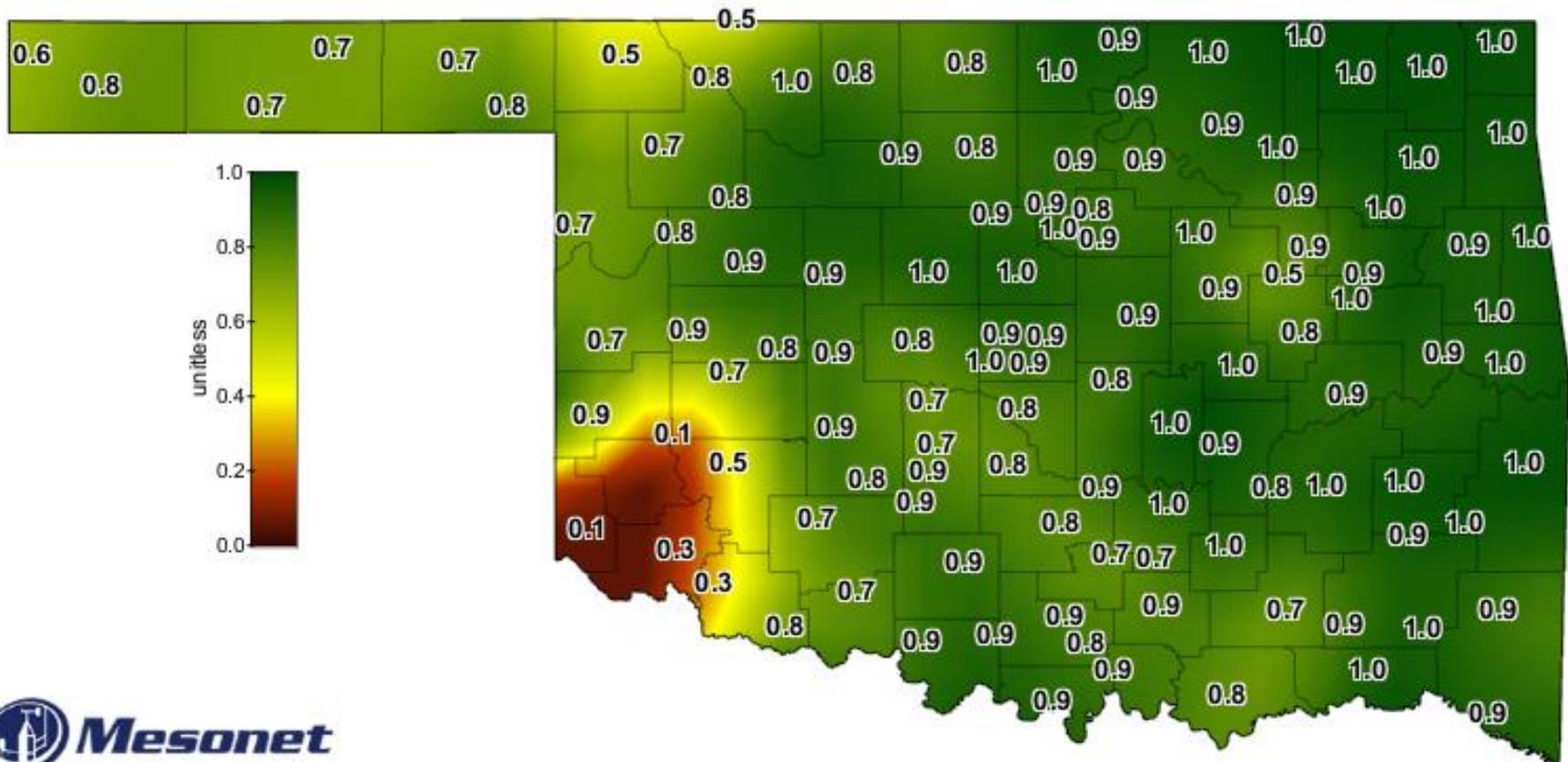


33rd driest Aug. 1-Oct. 21 since at least 1921



Short-term impacts...
Mixed bag

Topsoil Moisture



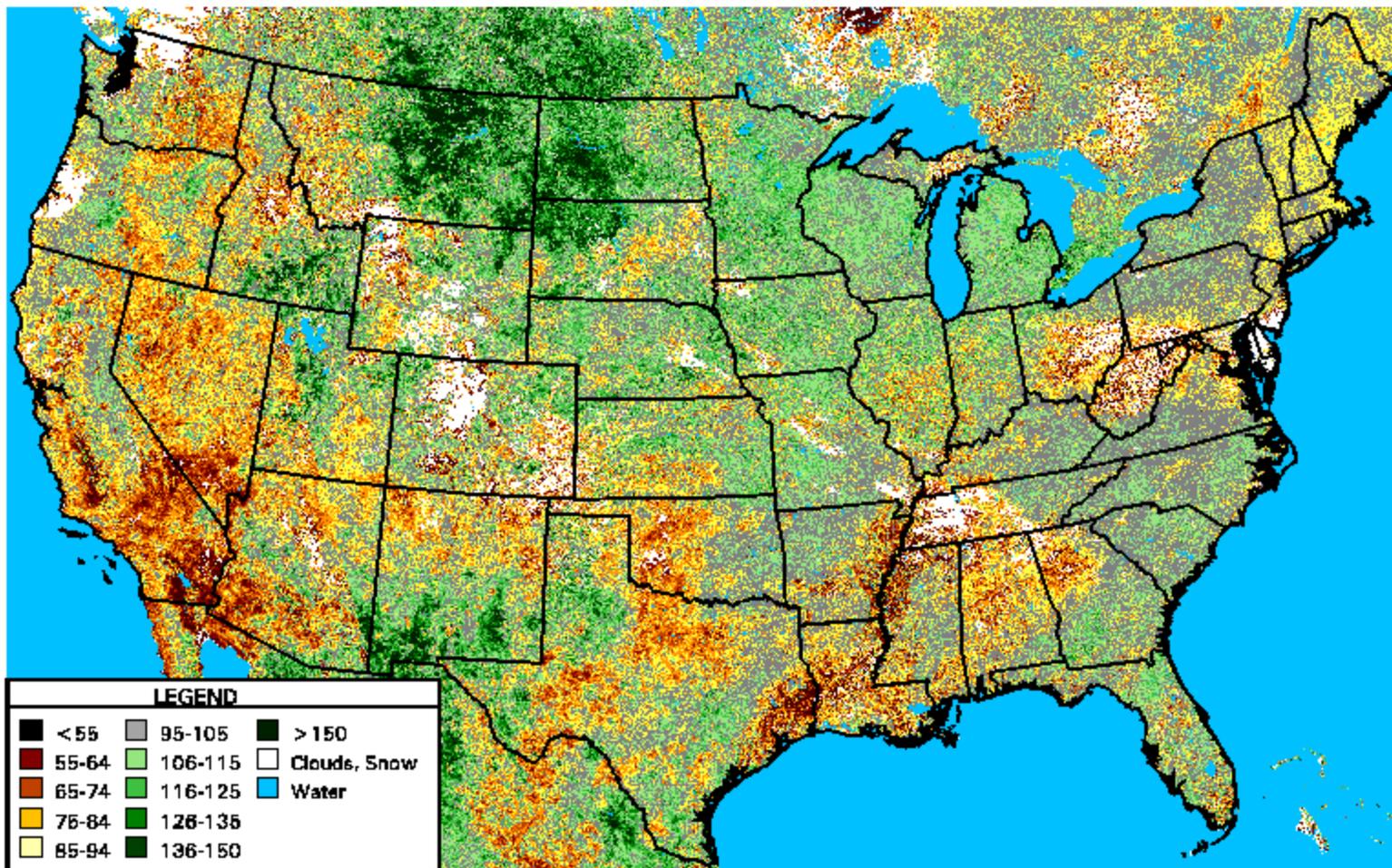
Daily Averaged Fractional Water Index at 4 inches

October 20, 2014

Created 7:30:11 AM October 21, 2014 CDT. © Copyright 2014

Greenness

Departure from Average Greenness: Oct 07 - Oct 13 2014



WFAS-MAPS Graphics National Interagency Fire Center

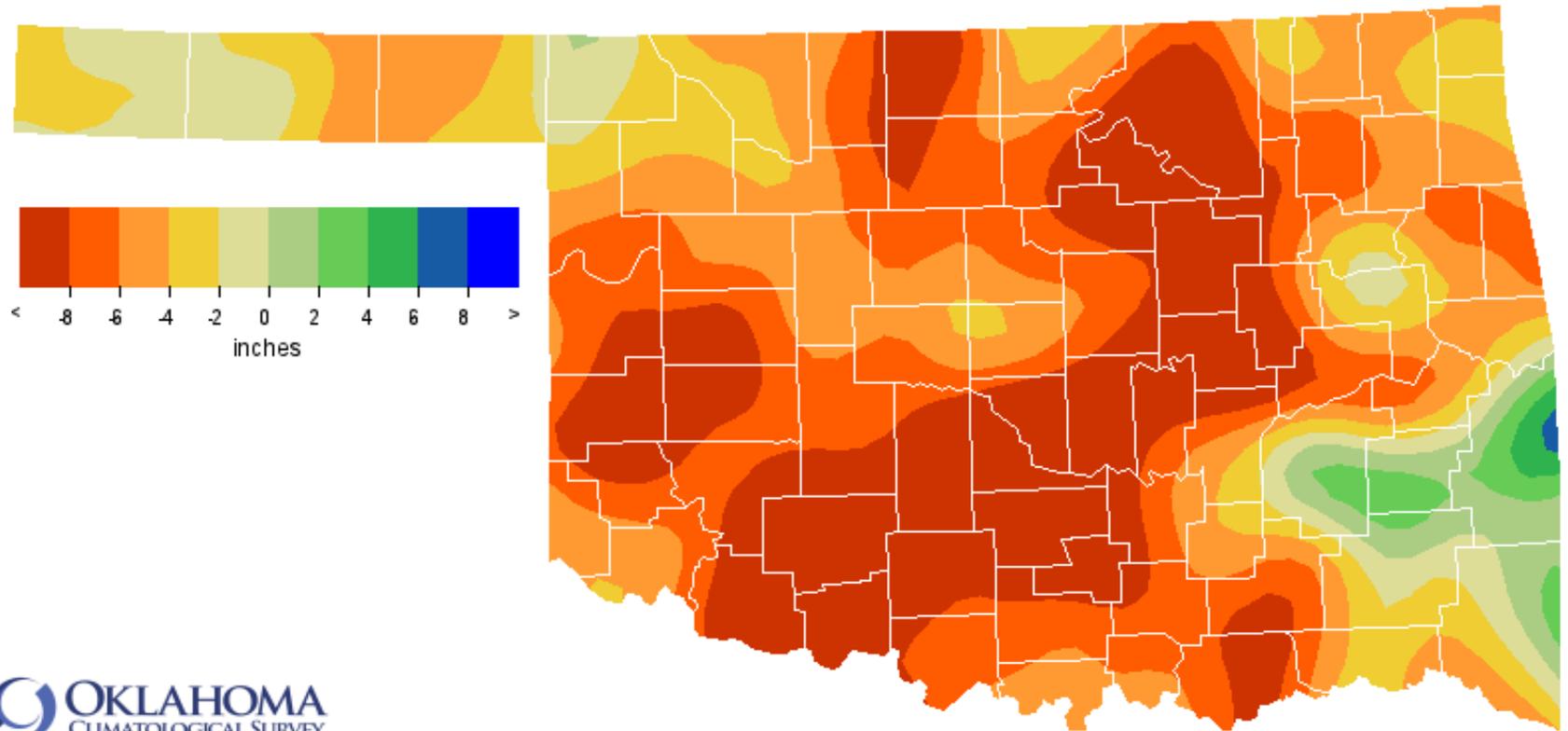




**Why we're still in significant
drought...**

Long-term impacts!

Year-to-date



 **OKLAHOMA**
CLIMATOLOGICAL SURVEY

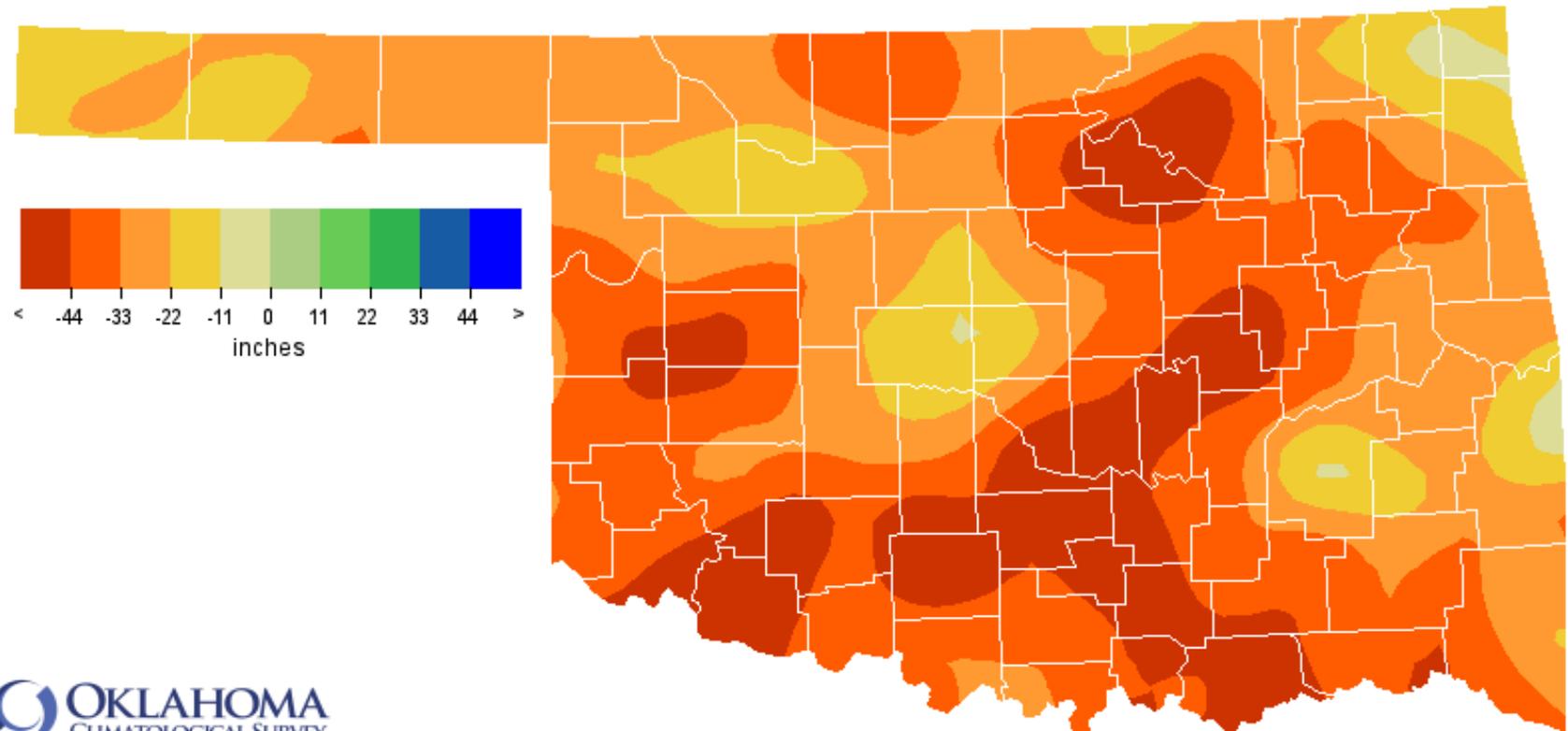
Departure from 1981-2010 Normal Rainfall
Calendar Year

Jan 1, 2014 through Oct 20, 2014

Created 2014-10-21 10:00:33 UTC. Copyright © 2014

20th driest on record

Since Oct. 1, 2010



 **OKLAHOMA**
CLIMATOLOGICAL SURVEY

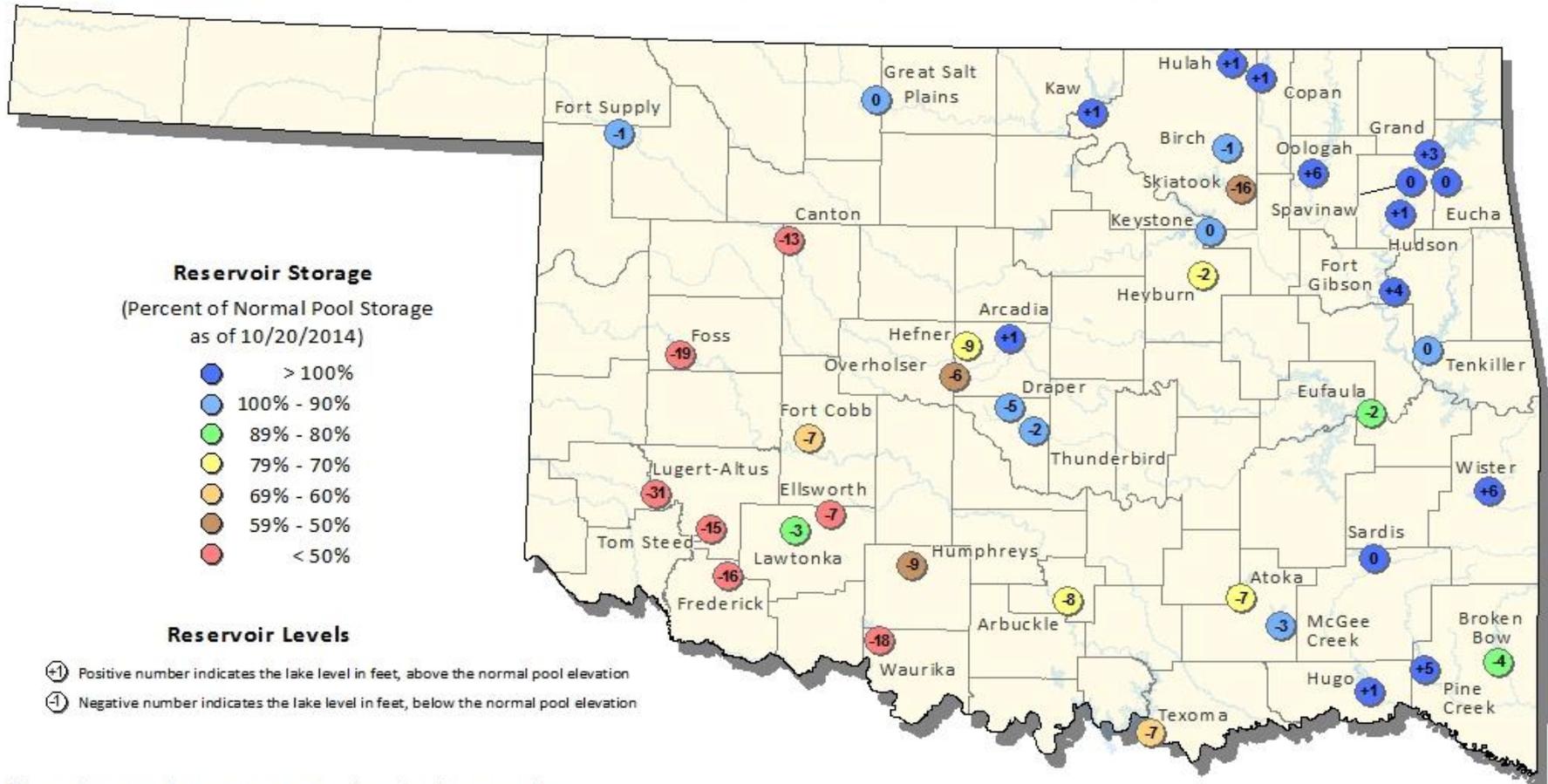
Departure from 1981-2010 Normal Rainfall
Web Request

Oct 1, 2010 through Oct 21, 2014
Created 2014-10-21 15:10:14 UTC. Copyright © 2014

Deficits of 20-40+ inches remain

Oklahoma Surface Water Resources

Reservoir Levels and Storage as of 10/20/2014



This map shows reservoir storage as a percentage of normal pool storage capacity. The source information was collected from real-time lake gages monitored by the U.S. Army Corps of Engineers (http://www.swt-wc.usace.army.mil/old_resv rept.htm), and the U.S. Geological Survey (http://waterdata.usgs.gov/volok/hwis/current/?type=lake&group_key=basin_od). For more information please visit the OWRB's website at: (<http://www.owrb.ok.gov>)

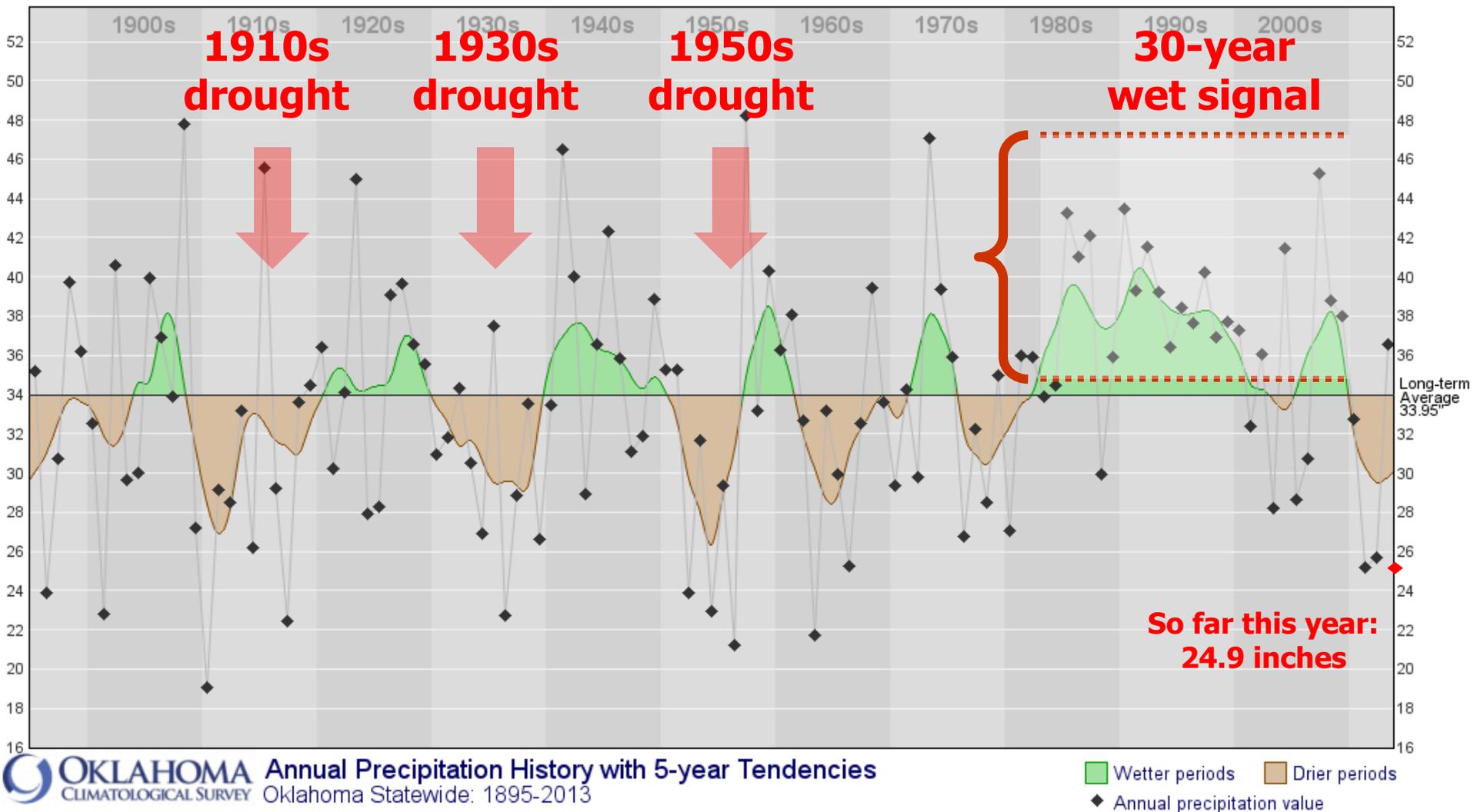




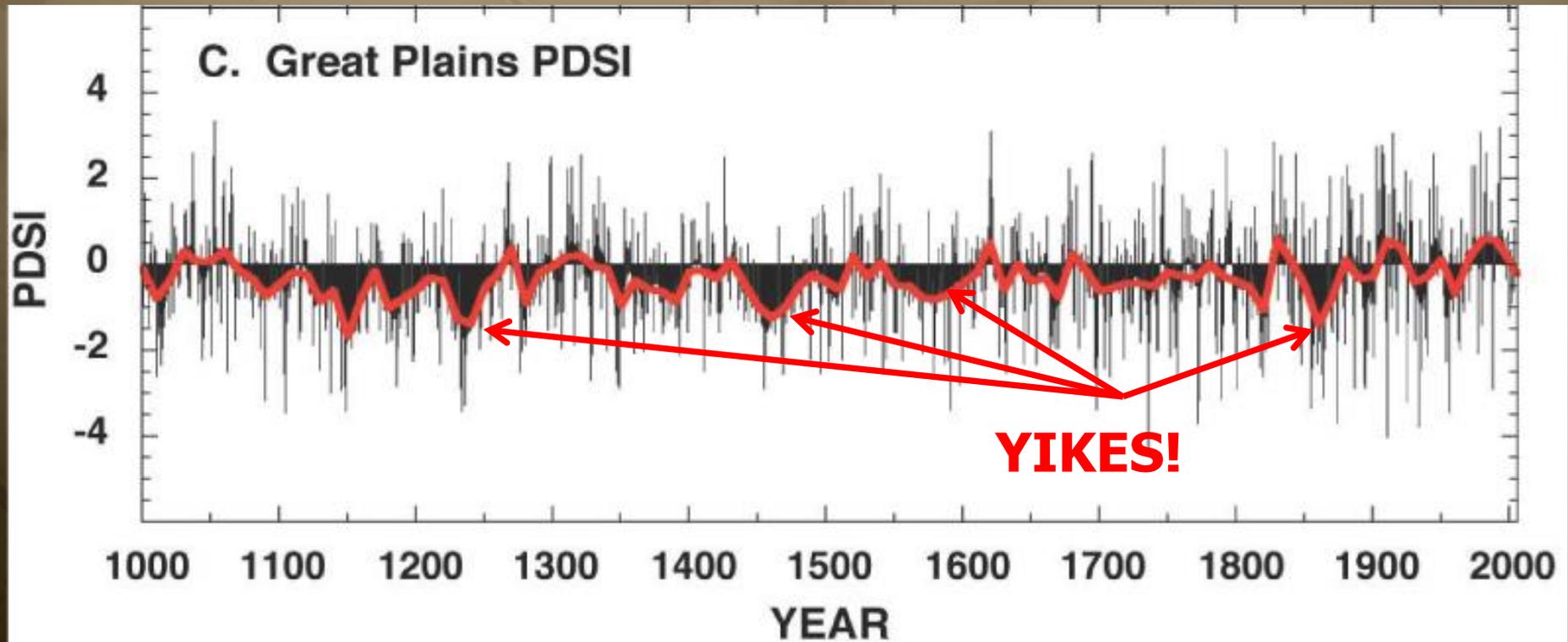
A Brief History of Drought

Big droughts are always lurking

Statewide avg. rainfall (1895-2013)



Recent droughts are infants!



Thank You!

Visit us at: <http://climate.ok.gov/>