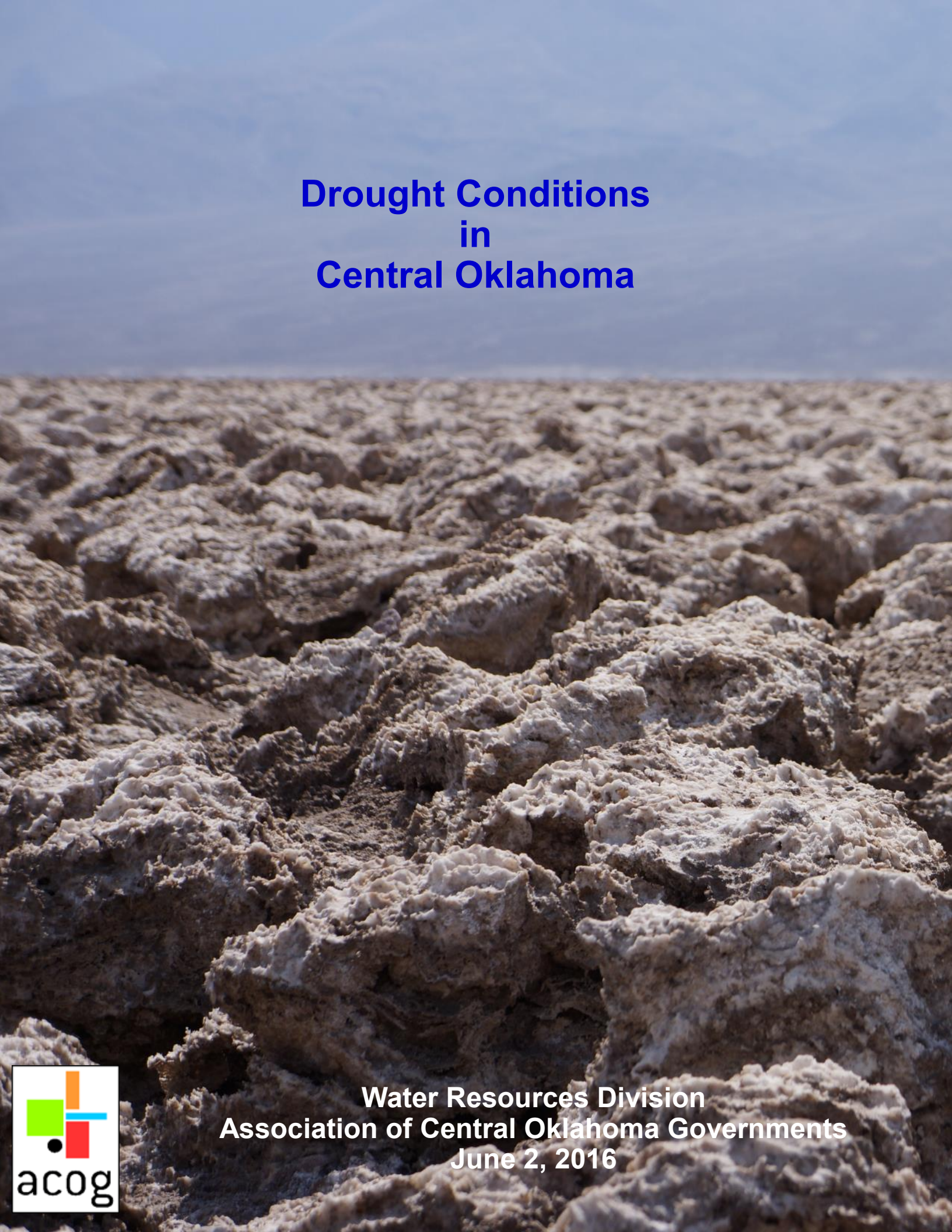
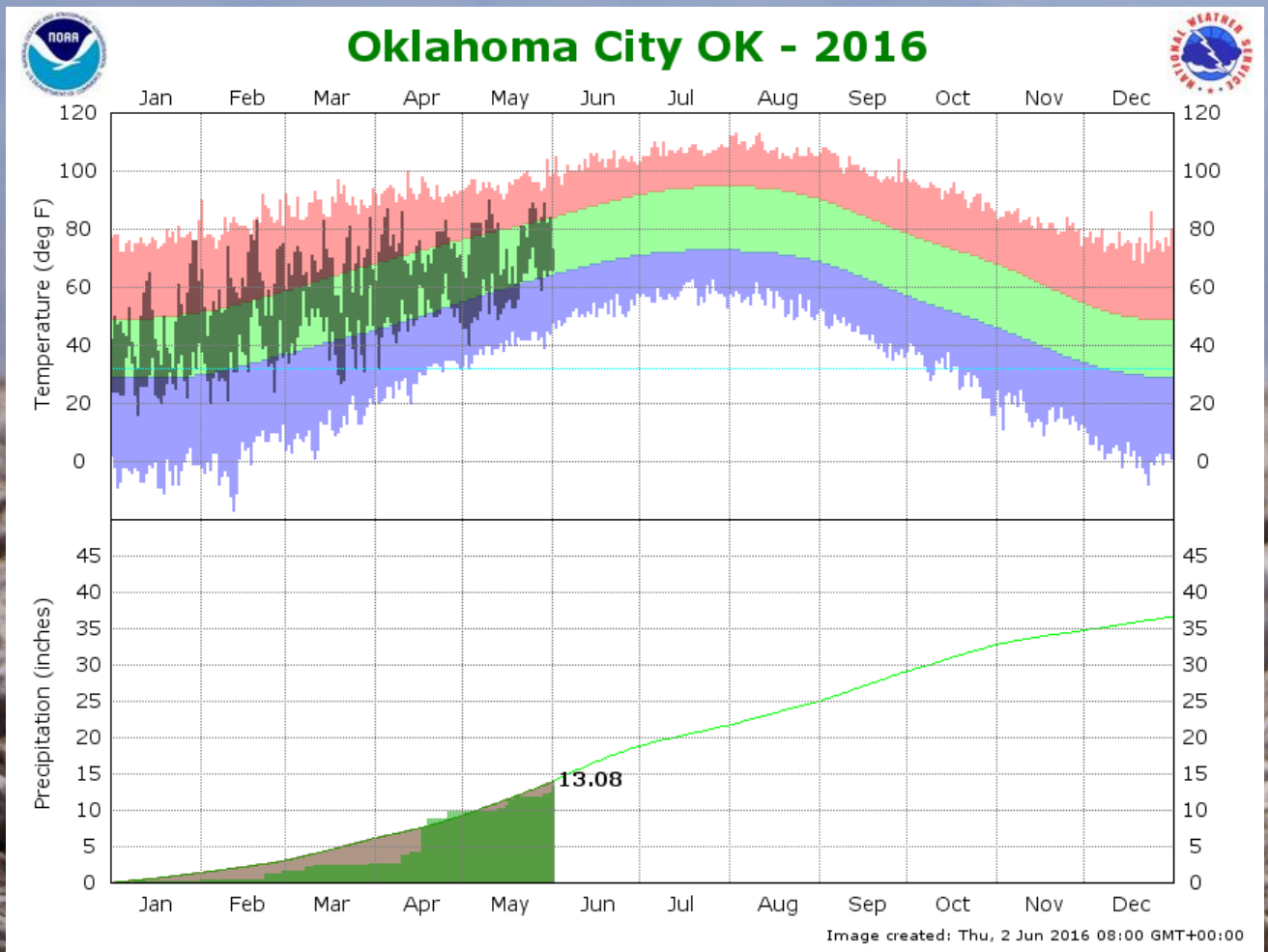
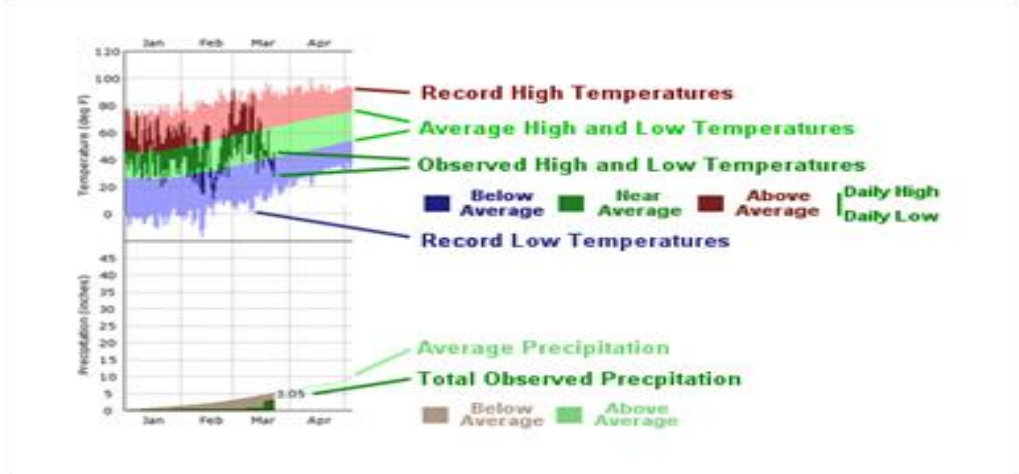


Drought Conditions in Central Oklahoma

Water Resources Division
Association of Central Oklahoma Governments
June 2, 2016

Temperature and Precipitation Plot for Oklahoma City, Oklahoma for 2016





http://www.srh.noaa.gov/oun/climate/graphdisplay.php?city=okc&year=2016

Rainfall Summaries by Oklahoma Climate Division

Calendar Year 01-Jan-2016 though 01-Jun-2016

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	10.33"	-0.64"	94%	48th driest	3.66" (2011)	21.20" (1957)
Central	13.99"	-0.99"	93%	44th wettest	5.45" (2014)	27.12" (1990)
S. Central	20.07"	+3.01"	118%	17th wettest	8.65" (1963)	36.05" (1990)
Statewide	14.78"	+0.12"	101%	37th wettest	7.07" (1936)	26.10" (1957)

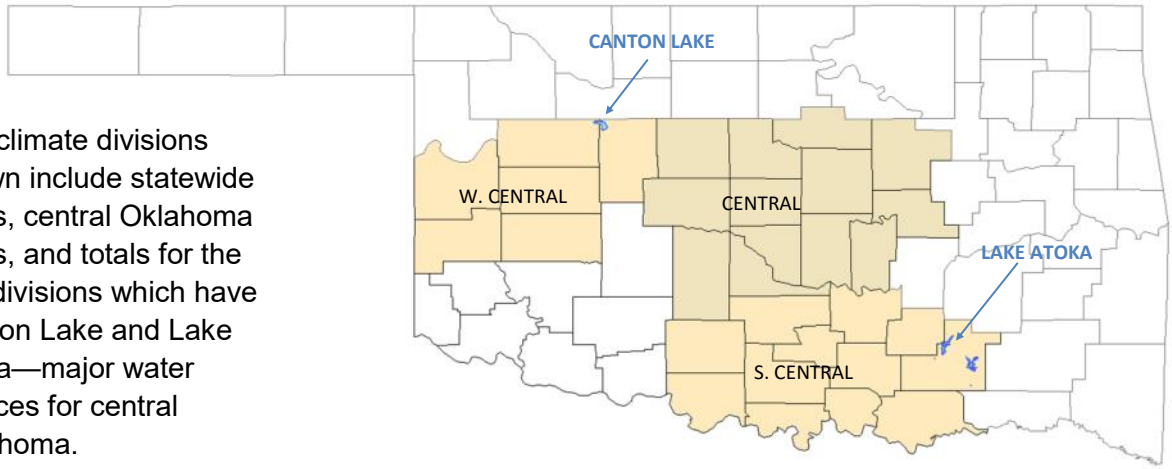
Water Year: 01-Oct-2015 through 01-Jun-2016

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	18.32"	+1.81"	111%	24th wettest	5.89" (1970-71)	26.49" (1986-87)
Central	27.24"	+4.15"	118%	19th wettest	11.00" (2013-14)	36.04" (1984-85)
S. Central	41.08"	+14.33"	154%	3rd wettest	12.43" (1955-56)	41.74" (1956-57)
Statewide	30.06"	+7.32"	132%	7th wettest	12.35" (1995-96)	32.04" (1956-57)

Spring: 01-Mar-2016 through 01-Jun-2016

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	8.70"	-0.14"	98%	44th wettest	2.25" (1971)	19.31" (1957)
Central	11.86"	+0.20"	102%	39th wettest	3.98" (2005)	22.74" (1957)
S. Central	17.60"	+4.98"	139%	9th wettest	4.90" (2005)	29.14" (2015)
Statewide	12.94"	+1.75"	116%	21st wettest	5.51" (2005)	22.89" (1957)

The climate divisions shown include statewide totals, central Oklahoma totals, and totals for the two divisions which have Canton Lake and Lake Atoka—major water sources for central Oklahoma.

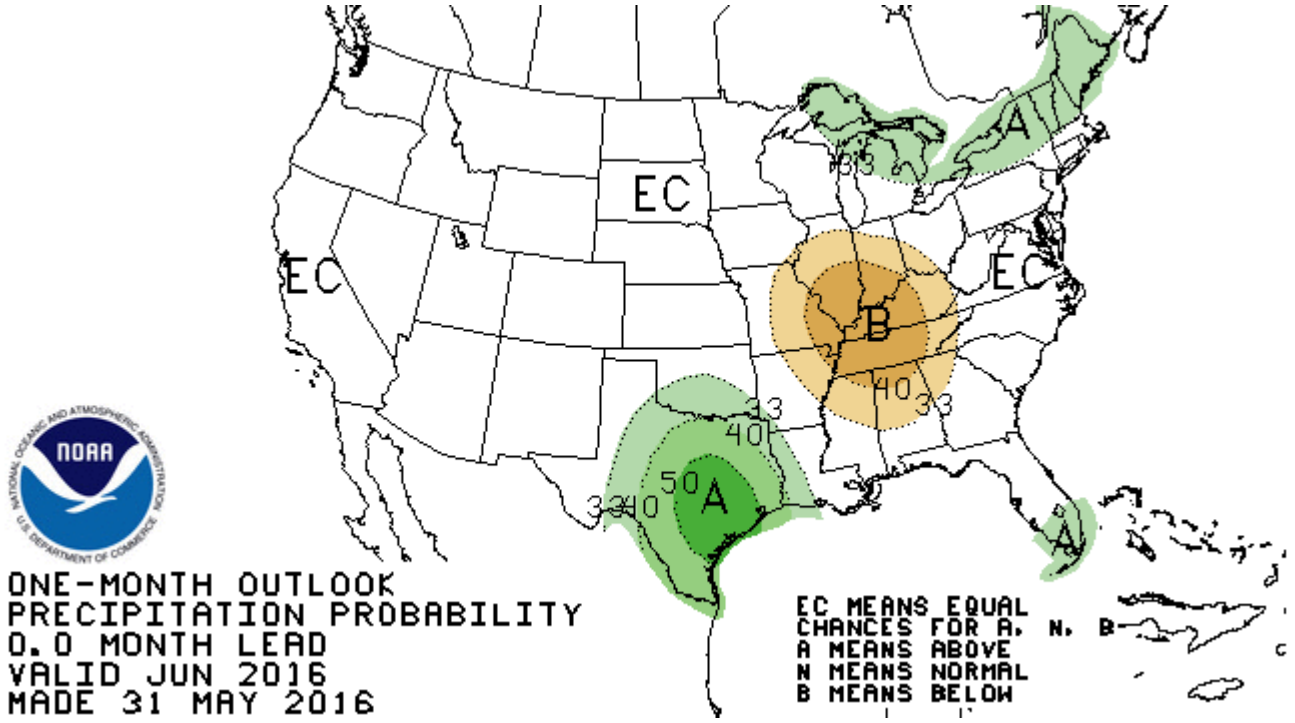


http://climate.ok.gov/index.php/drought/last_30_days/

OKLAHOMA CLIMATOLOGICAL SURVEY

acog

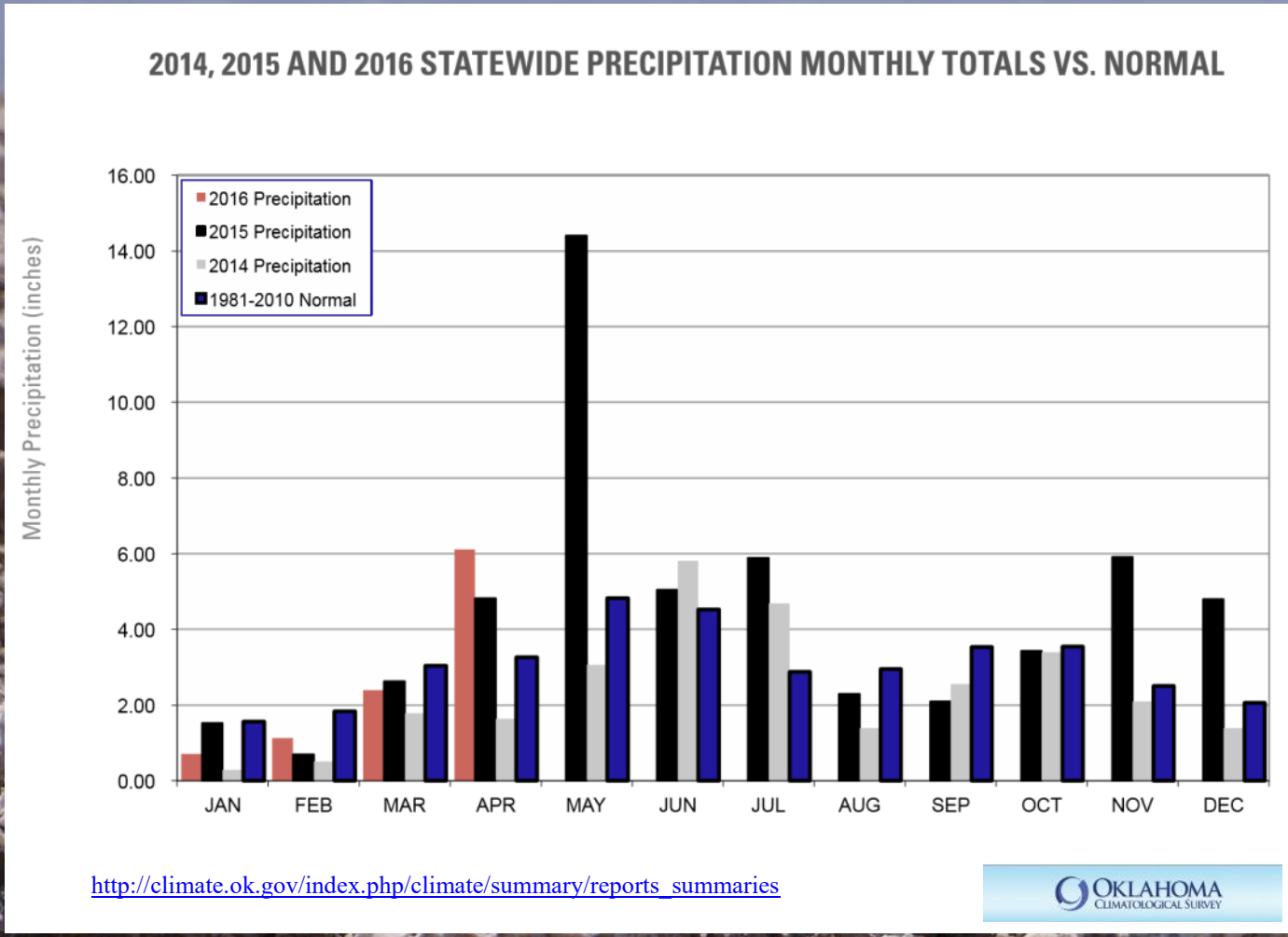
NOAA One-Month Outlook



http://www.cpc.ncep.noaa.gov/products/predictions/30-day/

White areas are shown as EC (Equal Chance) on these maps represent areas where there are no strong climate signals from the climate tools to have skill in preferring one category over another. That doesn't mean that there are equal chances of each of the categories occurring – it means that currently there is no skill in identifying the most likely category. In these areas, it is best to be prepared for all possibilities.

Statewide Precipitation Monthly Totals vs. Normal

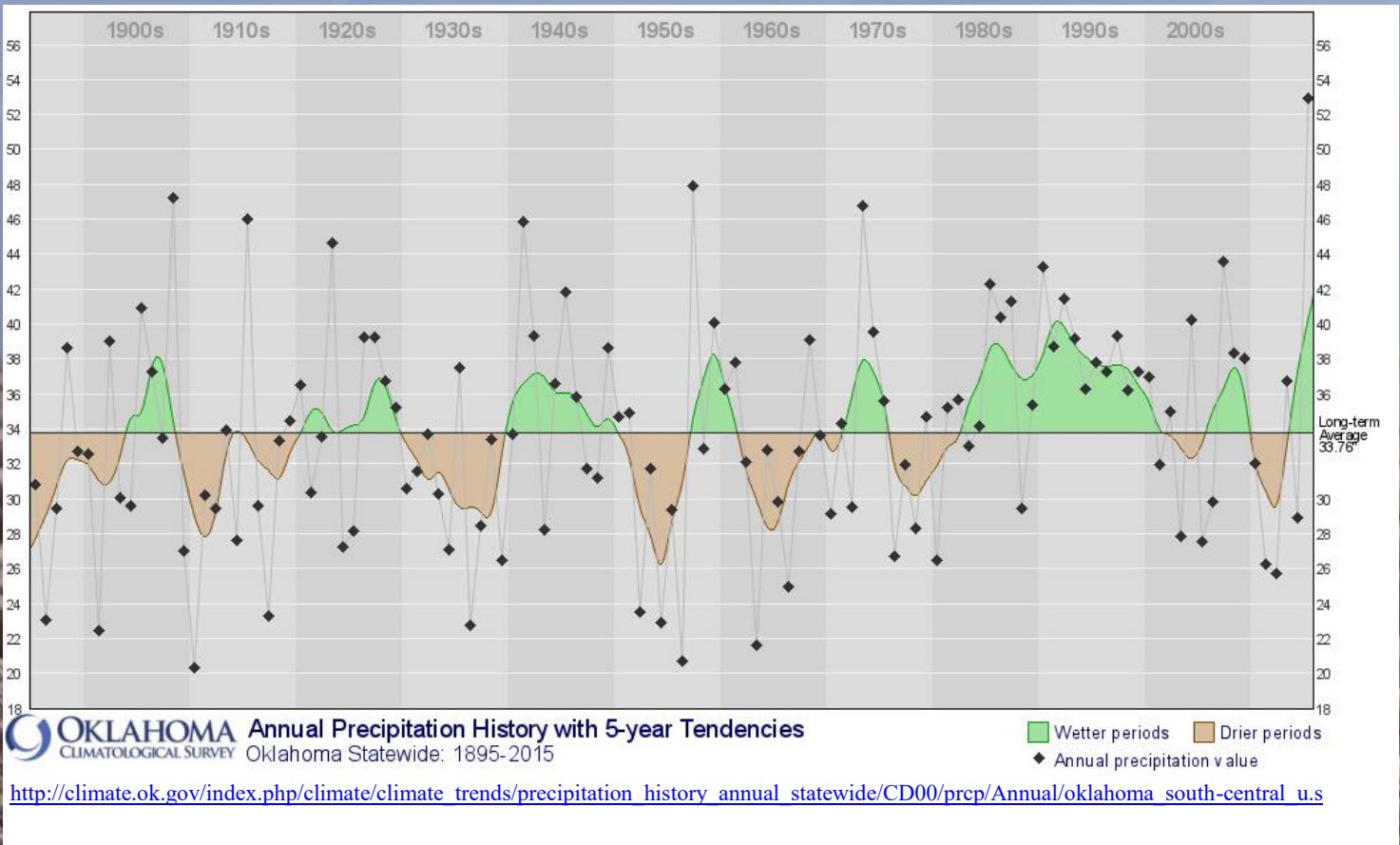


http://climate.ok.gov/index.php/climate/summary/reports_summaries

OKLAHOMA CLIMATOLOGICAL SURVEY

acog

Annual Precipitation History with 5-Year Tendencies

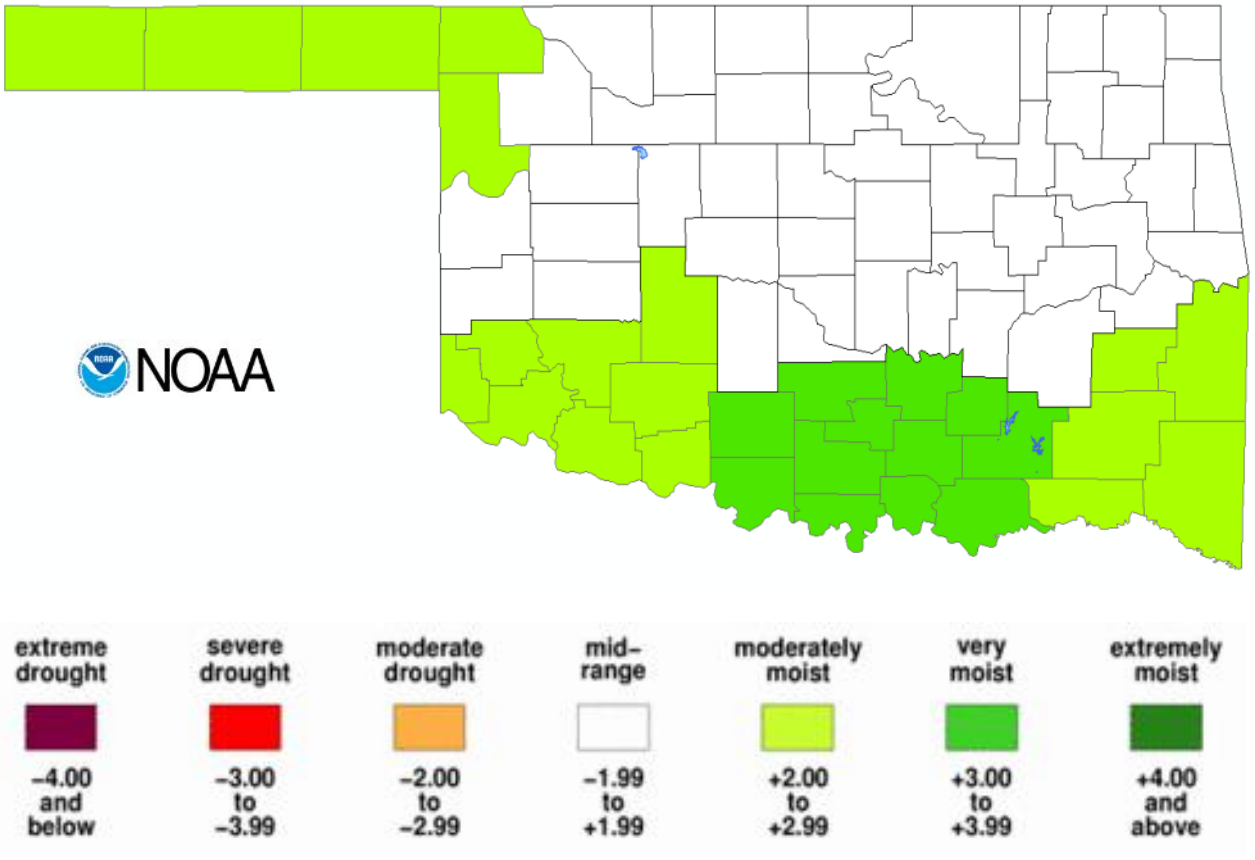


http://climate.ok.gov/index.php/climate/climate_trends/precipitation_history_annual_statewide/CD00/prcp/Annual/oklahoma_south-central_u.s

This graph shows the cyclical nature of wet and drought periods in Oklahoma. The black dots represent the annual precipitation for that particular year. The line represents the annual precipitation data smoothed over five years. This smoothed line shows well the wet periods (shaded green) and the drought periods (shaded brown). The drought cycles appear to average about five to eight years in length.

Drought Severity Index by Climate Division

Palmer Weekly Value for Period MAY 28 2016



http://www.ncdc.noaa.gov/temp-and-precip/drought/weekly-palmers.php?year=2014&month=04&day=12

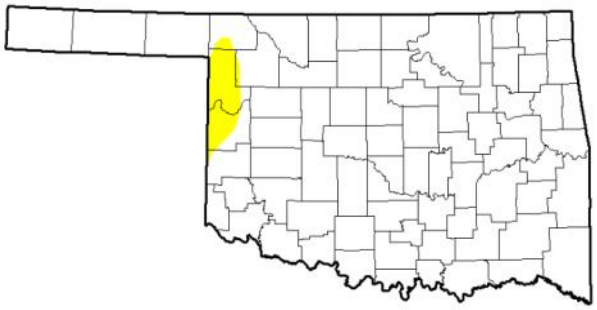
The Palmer Drought Index (PDI) maps show long-term (cumulative) meteorological drought and wet conditions. The maps show how the geographical pattern of the long-term (meteorological) moisture conditions has changed over the last 12 months. On these maps, the red shading denotes drought conditions while the green shading indicates wet conditions.

For an animated gif of the long term PDI see http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/pdiimage.html.

U.S. Drought Monitor

Regional Map Week of 31 MAY 2016

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current 2016-05-24	97.16	2.84	0.00	0.00	0.00	0.00
Last Week 2016-05-17	97.16	2.84	1.50	0.00	0.00	0.00
3 Months Ago 2016-02-23	98.99	1.01	0.00	0.00	0.00	0.00
Start of Calendar Year 2015-12-29	100.00	0.00	0.00	0.00	0.00	0.00
Start of Water Year 2015-09-29	52.60	47.40	16.79	6.37	0.97	0.00
One Year Ago 2015-05-26	77.31	22.69	2.74	0.00	0.00	0.00



U.S. Drought Monitor

Oklahoma

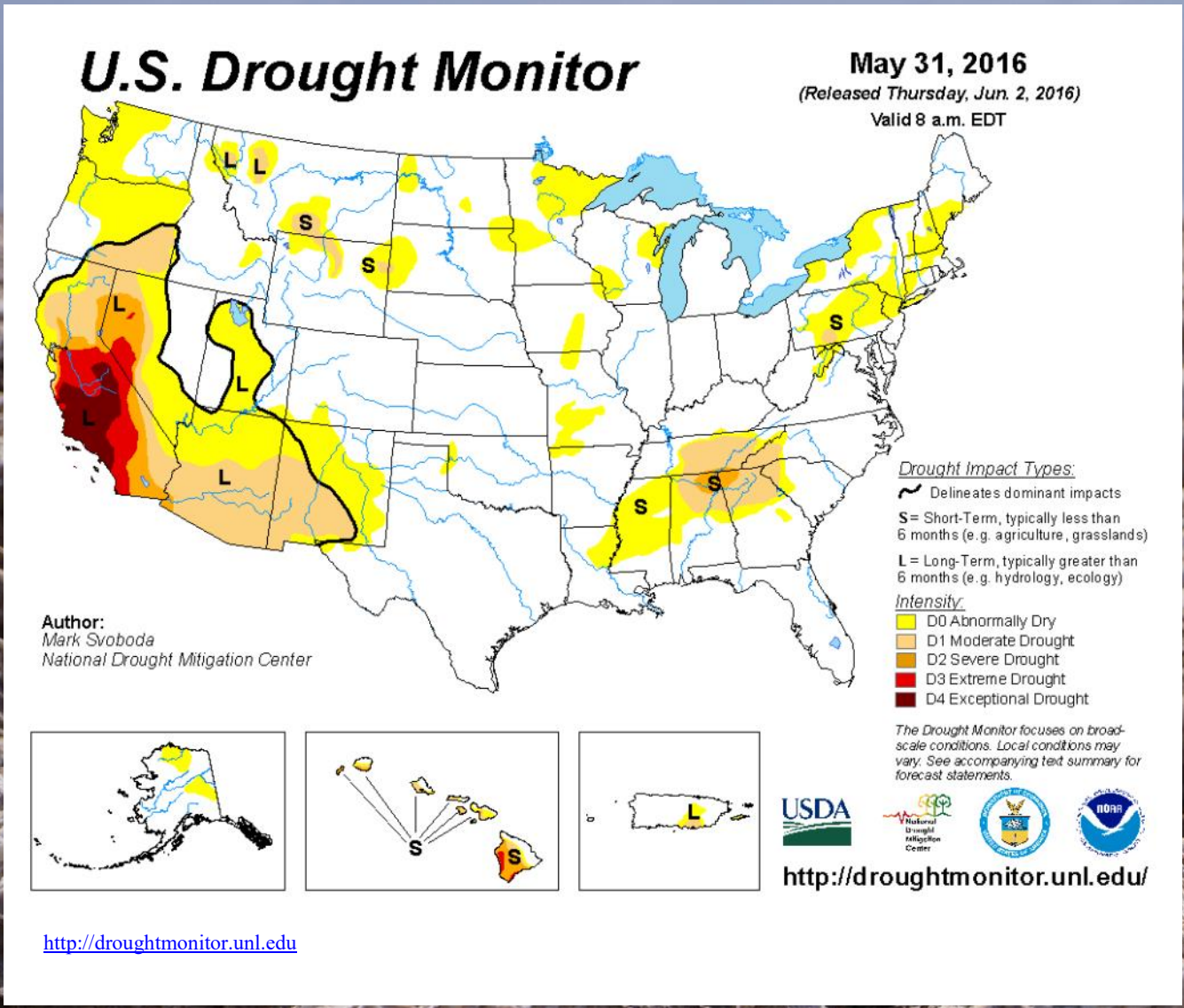
Estimated Population in Drought Areas: **0**

Intensity:

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

http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?OK

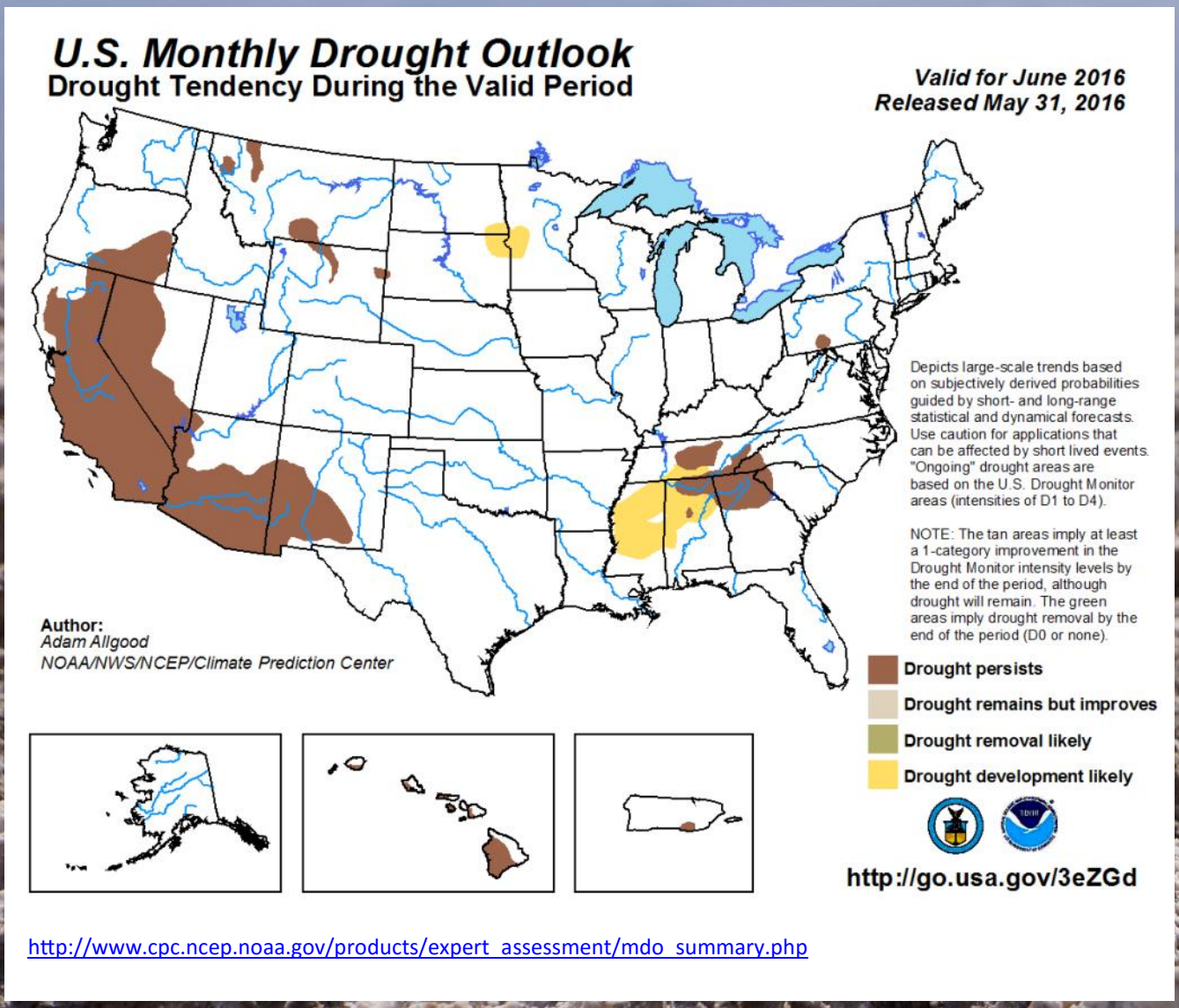
U.S. Drought Monitor Nationwide Map



http://droughtmonitor.unl.edu

U.S. Drought Monitor

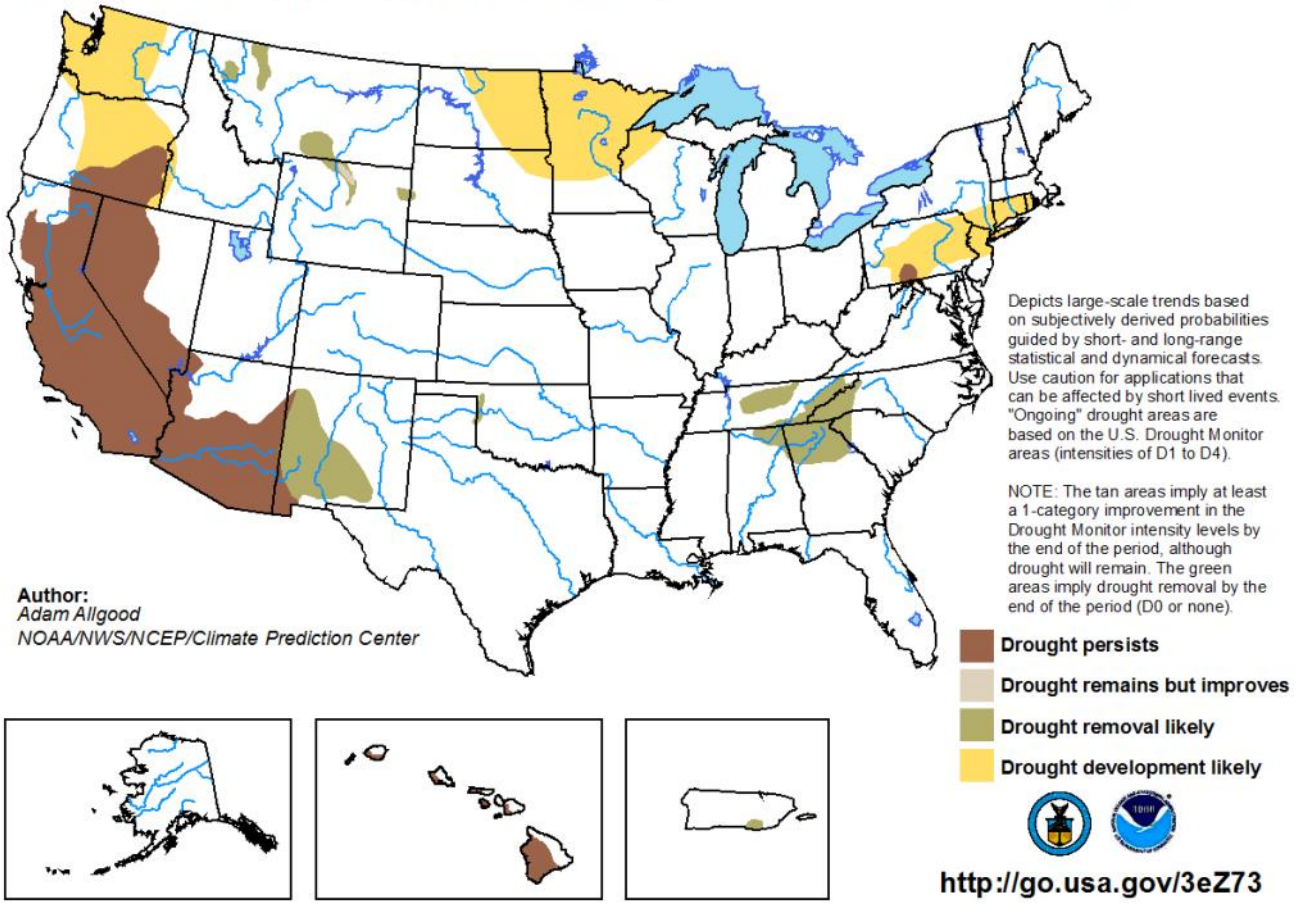
Monthly Drought Outlook Map



http://www.cpc.ncep.noaa.gov/products/expert_assessment/mdo_summary.php

U.S. Drought Monitor

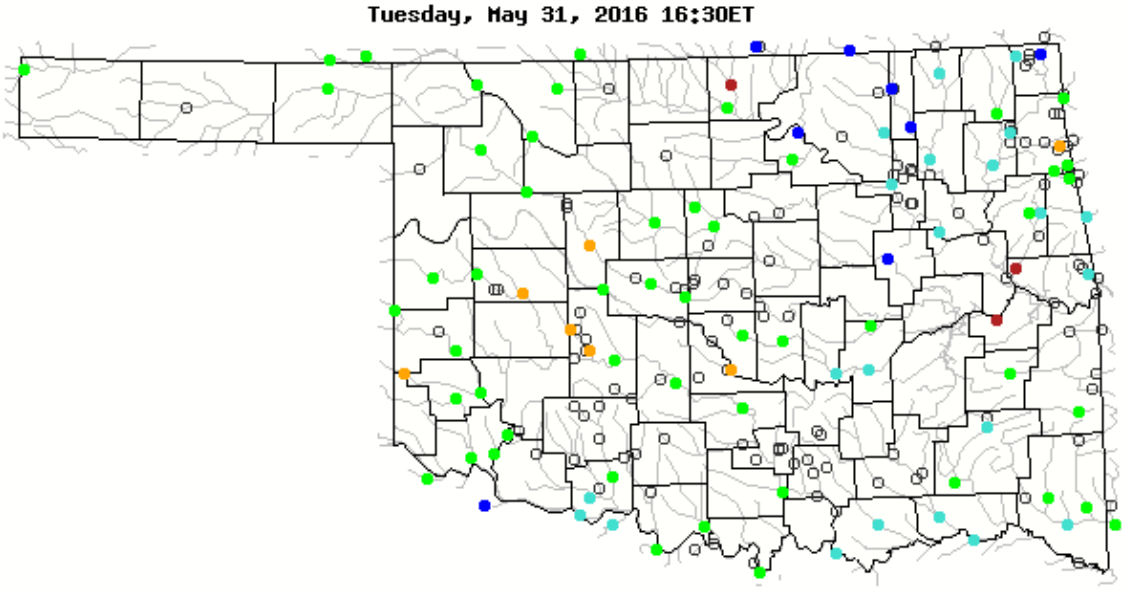
Seasonal Drought Outlook Map



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

USGS Streamflow Data

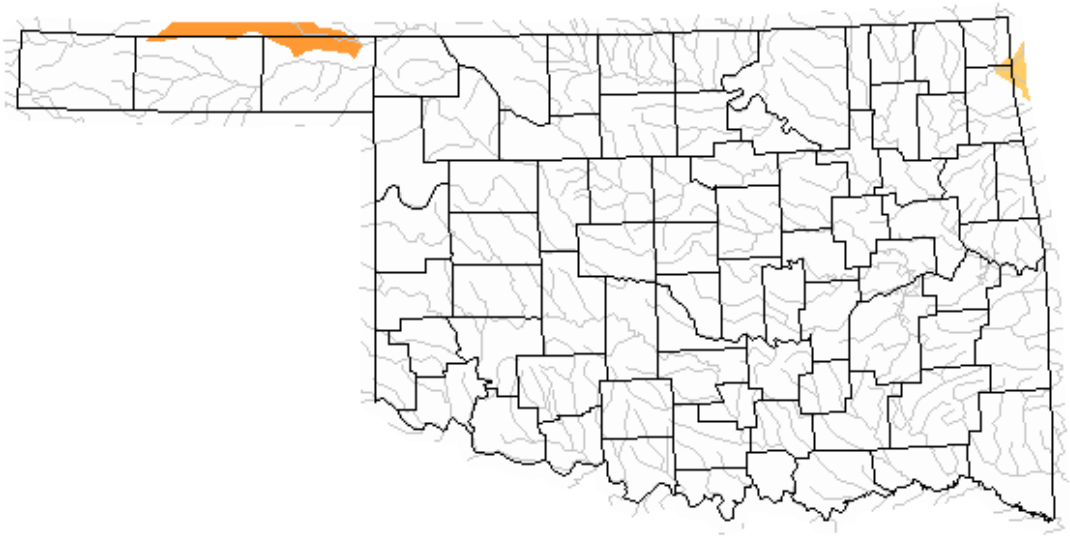
Tuesday, May 31, 2016 16:30ET



USGS

Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

Monday, May 30, 2016



USGS

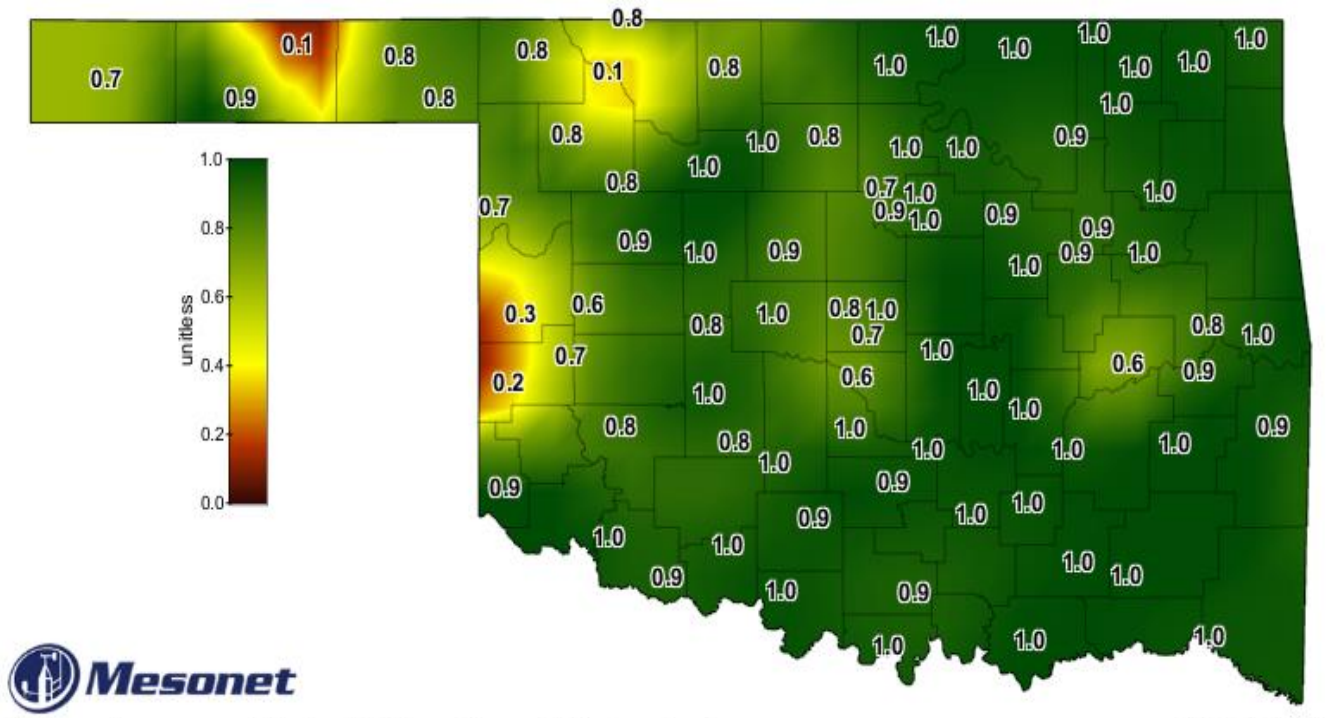
Below normal 28-day average streamflow

Explanation - Percentile classes				
Low	<=5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

http://waterwatch.usgs.gov/new/?m=real&r=ok&w=map

http://waterwatch.usgs.gov/new/index.php?m=dryw&r=ok

SOIL MOISTURE MAP



1.0 - 0.8 Enhanced Growth

0.8 – 0.5 Limited Growth

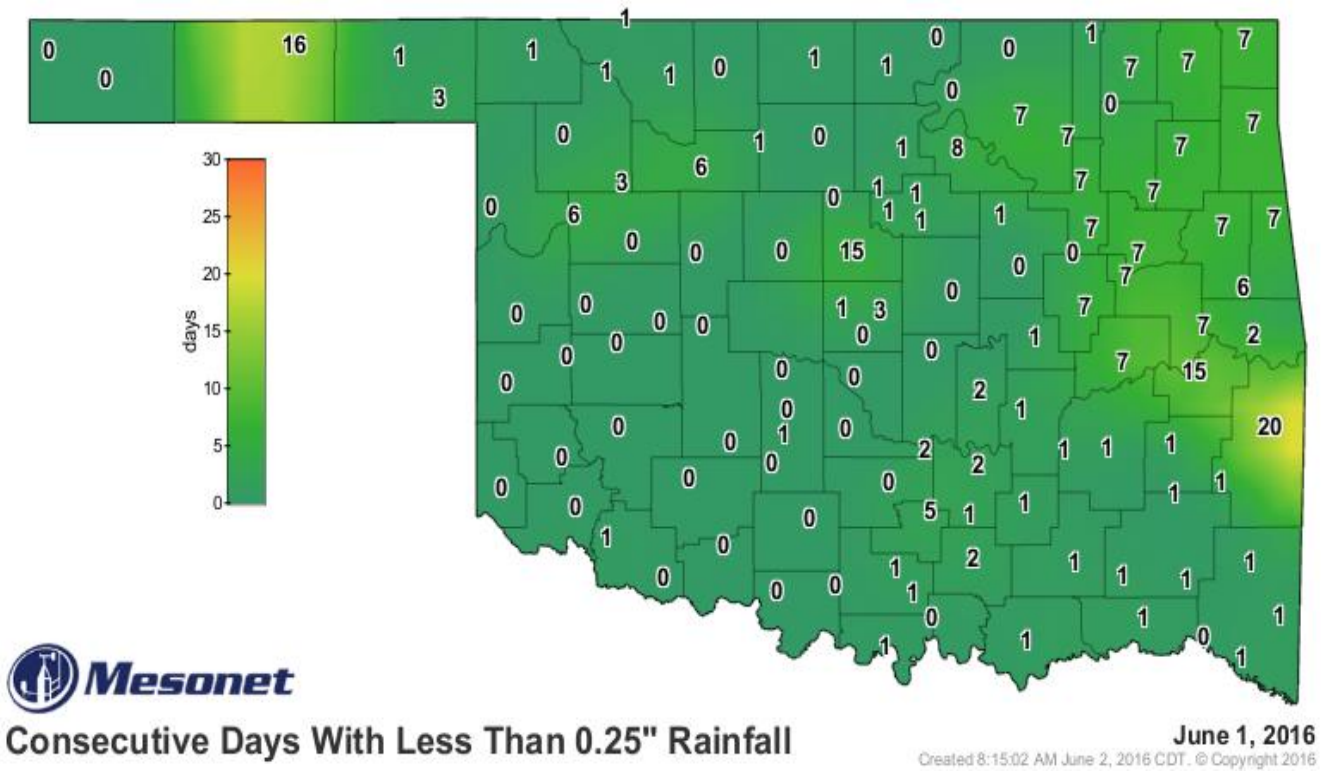
0.5 – 0.3 Plants Wilting

0.3 - 0.1 Plants Dying

< 0.1 Barren Soil

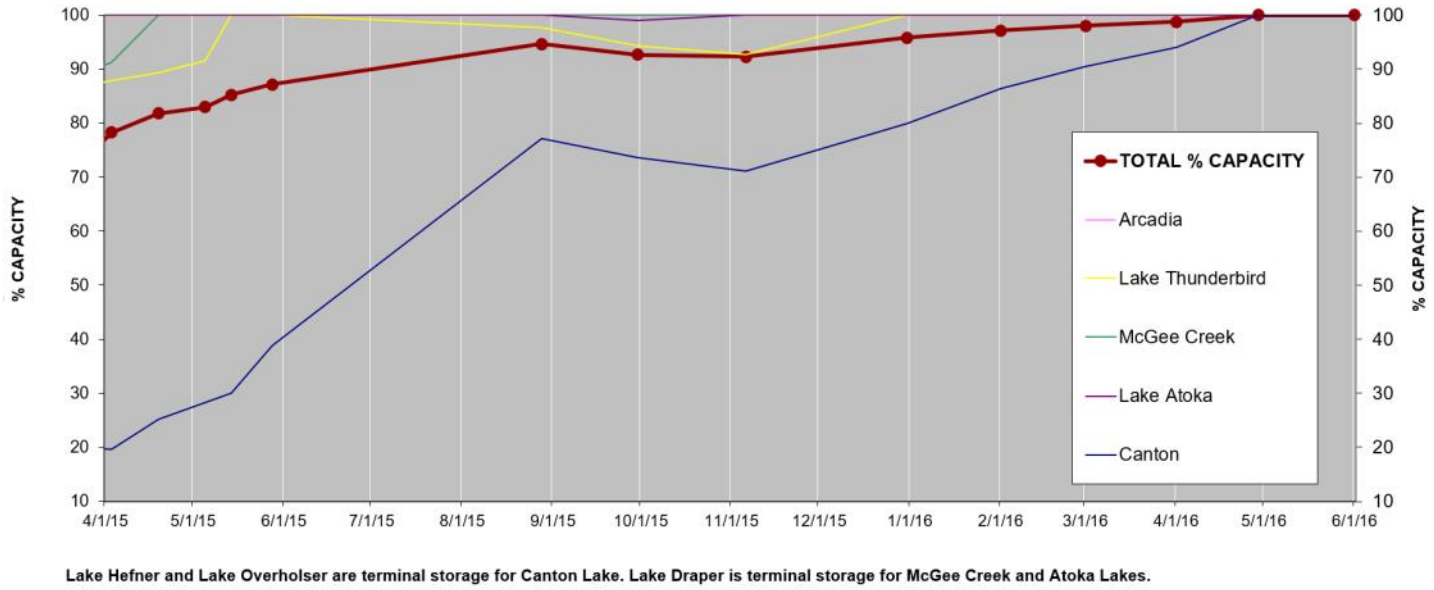
http://www.mesonet.org/index.php/weather/map/24-inch_fractional_water_index/soil_moisture

CONSECUTIVE DAYS WITHOUT RAINFALL MAP



http://www.mesonet.org/index.php/weather/map/consecutive_days_with_less_than_0.25_inches_Rainfall/rainfall

Percent of Surface Water Conservation Storage
Central OK Reservoirs



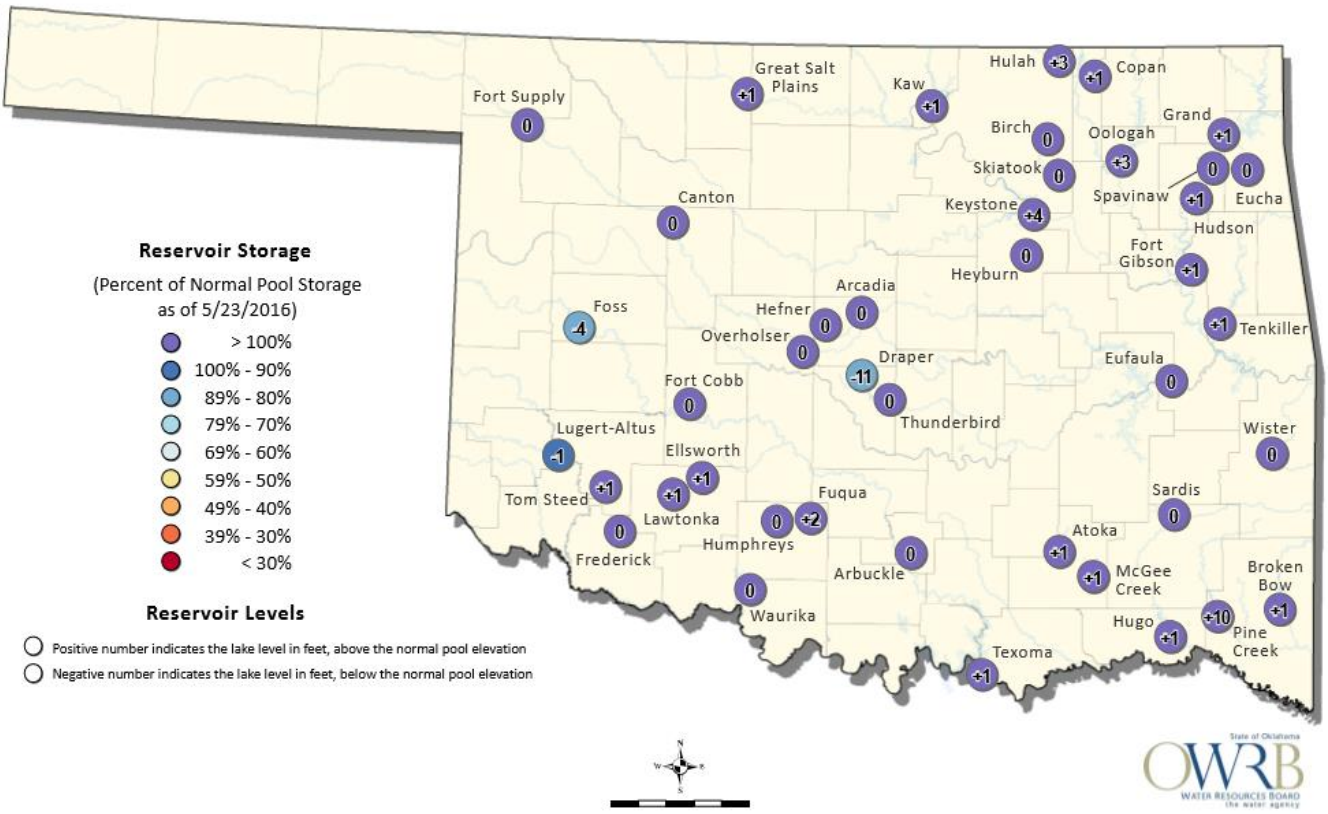
Lake Hefner and Lake Overholser are terminal storage for Canton Lake. Lake Draper is terminal storage for McGee Creek and Atoka Lakes.

LAKE	% CAPACITY	% CHANGE FROM 4/29/2016
Canton	100.0	0.0
Arcadia	100.0	0.0
Lake Thunderbird	100.0	0.0
McGee Creek	100.0	0.0
Lake Atoka	100.0	0.0
TOTAL % CAPACITY	100.0	0.0

http://www.swt-wc.usace.army.mil/old_resvrept.htm http://waterdata.usgs.gov/ok/nwis/dv/?site_no=07333010&agency_cd=USGS&referred_module=sw

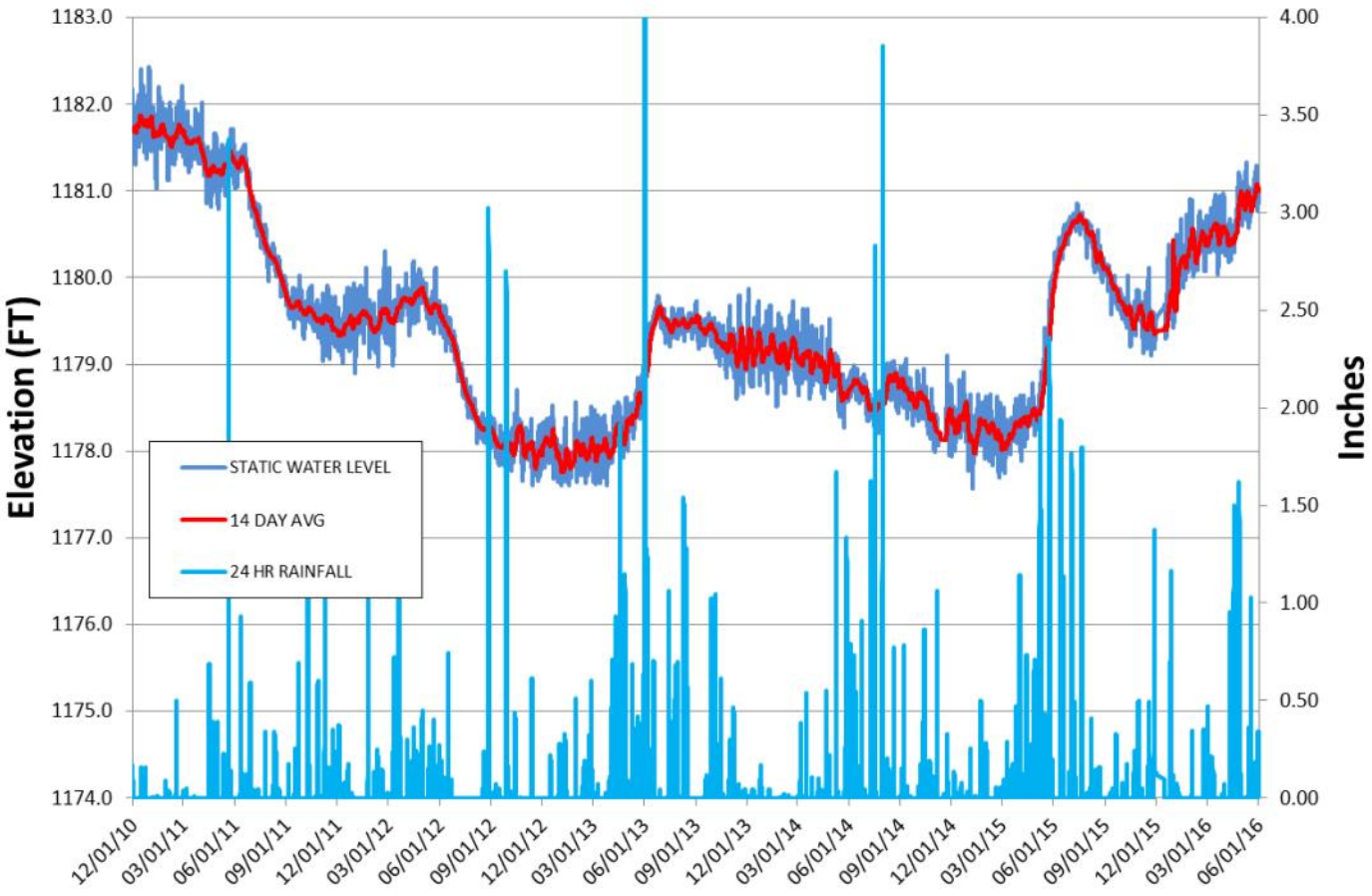
The graph is the amount of water stored in five major lakes that supply water to central Oklahoma as a percent of capacity over the past year.

Oklahoma Surface Water Resources



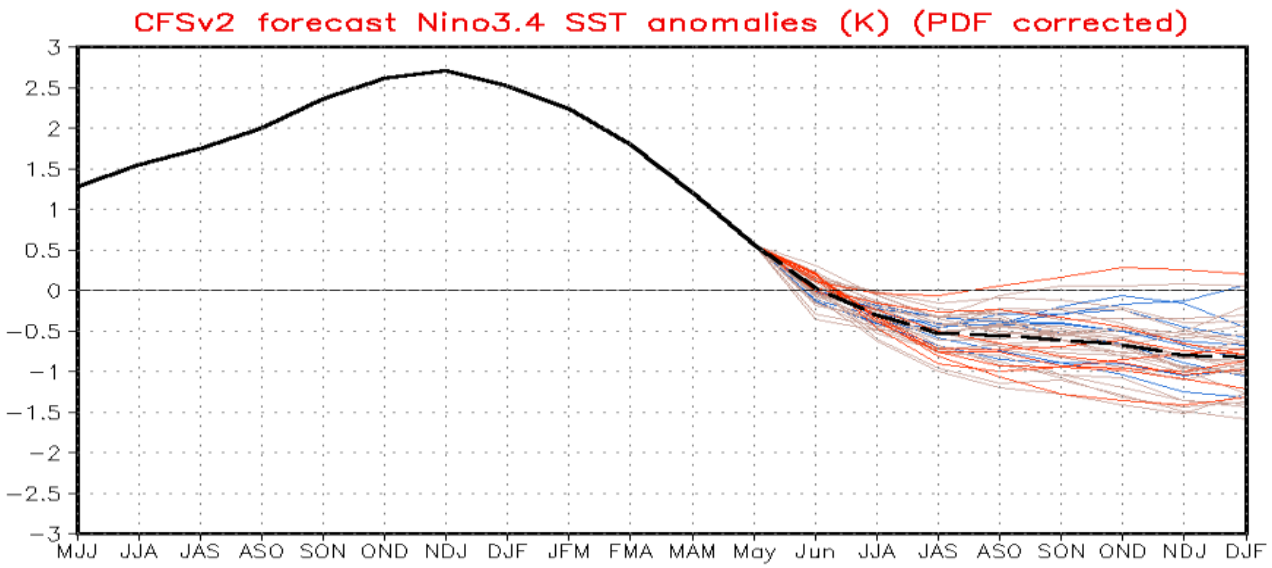
http://www.owrb.ok.gov/maps/pdf_map/Monthly%20Reservoir%20Storage.pdf

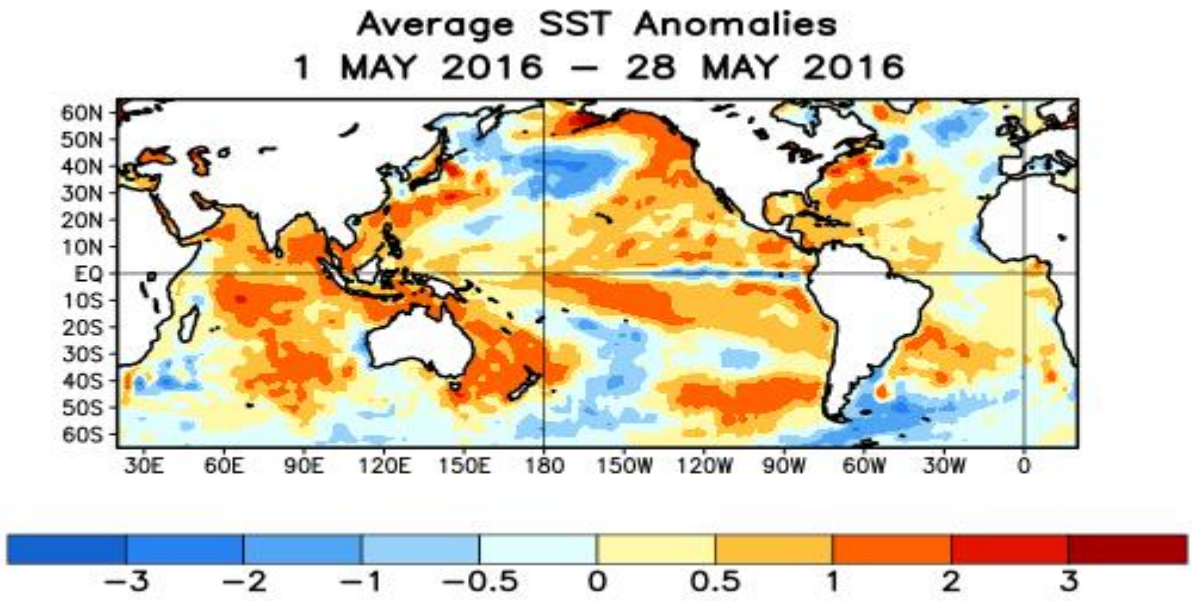
Groundwater Levels
Spencer Mesonet Station



http://www.mesonet.org/index.php/weather/groundwater

ENSO Cycle
Recent Evolution, Current Status and Predictions





Summary

ENSO Alert System Status: El Niño Advisory/ La Niña Watch

- El Niño is weakening.
- Positive equatorial sea surface temperature (SST) anomalies are diminishing across the equatorial Pacific Ocean.
- La Niña is favored to develop during the Northern Hemisphere summer 2016, with about a 75% chance of La Niña during the fall and winter 2016-17.

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf