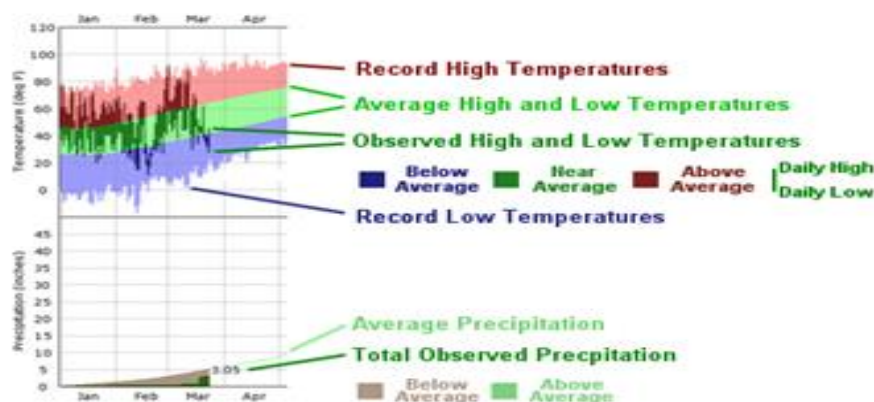
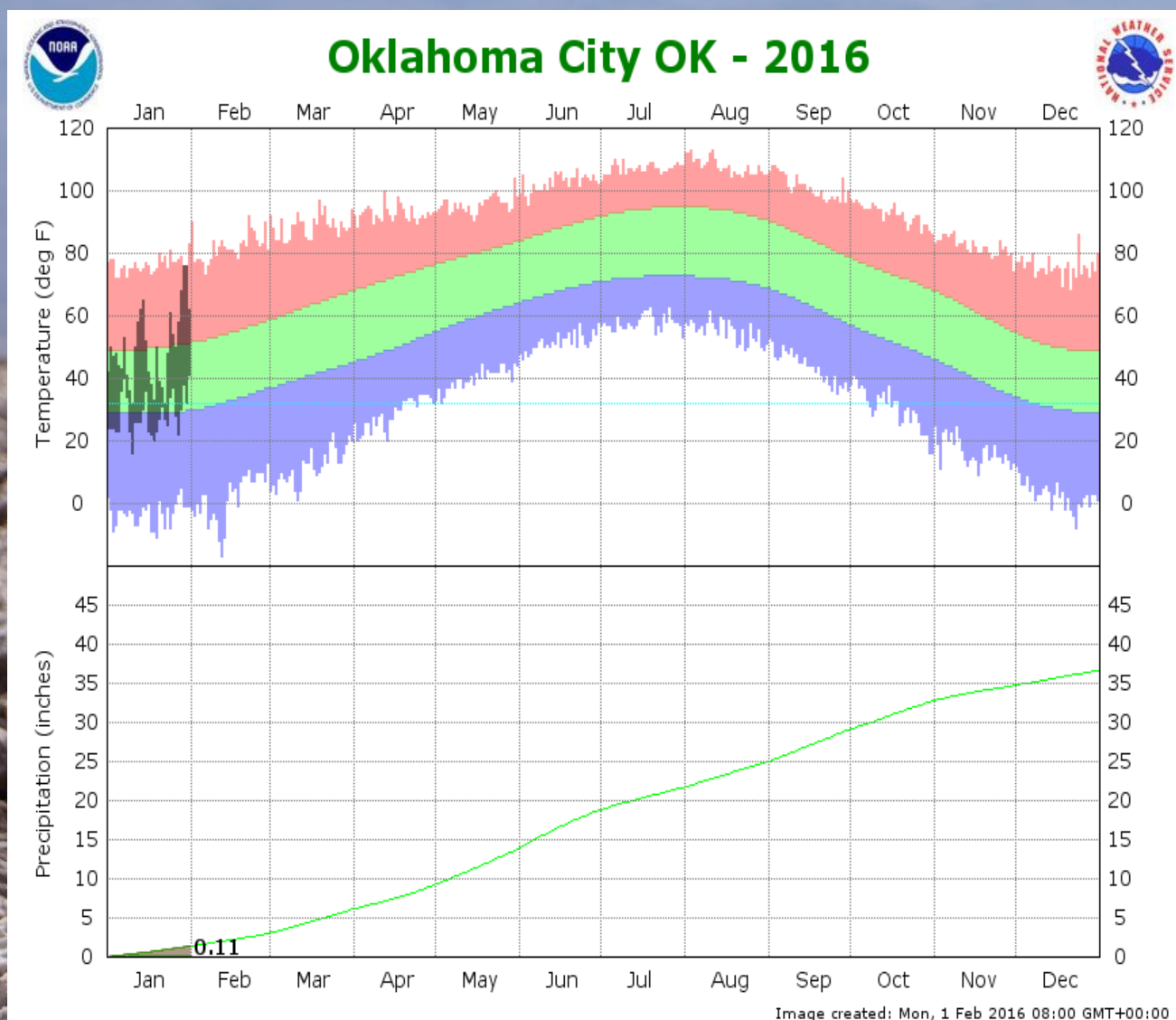


Drought Conditions in Central Oklahoma



**Water Resources Division
Association of Central Oklahoma Governments
February 1, 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 through

31-Jan-2016

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	1.27"	+0.32"	134%	23rd wettest	0.00" (1986)	3.92" (1949)
Central	0.49"	-0.94"	34%	21st driest	0.00" (1986)	5.73" (1949)
S. Central	0.67"	-1.35"	33%	22nd driest	0.02" (2003)	6.86" (1932)
Statewide	0.71"	-0.86"	45%	22nd driest	0.04" (1986)	5.30" (1949)

Water Year: 01-Oct-2015 through

31-Jan-2016

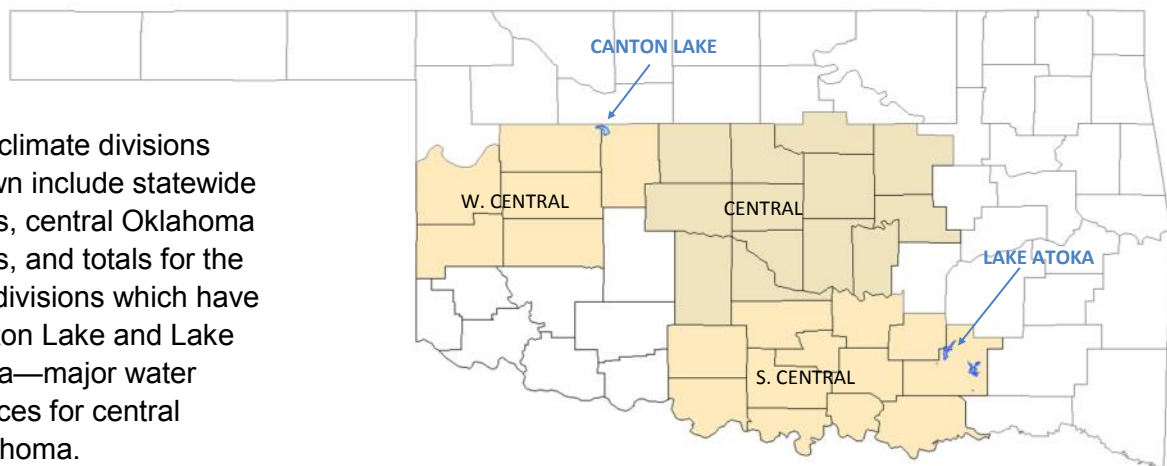
Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	9.26"	+2.77"	143%	11th wettest	1.11" (1950-51)	13.41" (1986-87)
Central	13.74"	+4.20"	144%	11th wettest	2.41" (1921-22)	17.26" (1984-85)
S. Central	21.67"	+9.96"	185%	2nd wettest	2.14" (1950-51)	22.27" (1981-82)
Statewide	16.01"	+6.36"	166%	1st wettest	2.48" (1950-51)	15.59" (2004-05)

Winter: 01-Dec-2015 through

31-Jan-2016

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	3.74"	+1.57"	172%	11th wettest	0.26" (1976-77)	5.26" (1984-85)
Central	5.14"	+1.72"	150%	9th wettest	0.50" (2010-11)	9.20" (1984-85)
S. Central	7.09"	+2.48"	154%	6th wettest	0.93" (1951-52)	11.10" (1997-98)
Statewide	6.65"	+3.01"	183%	3rd wettest	1.00" (1955-56)	7.61" (1997-98)

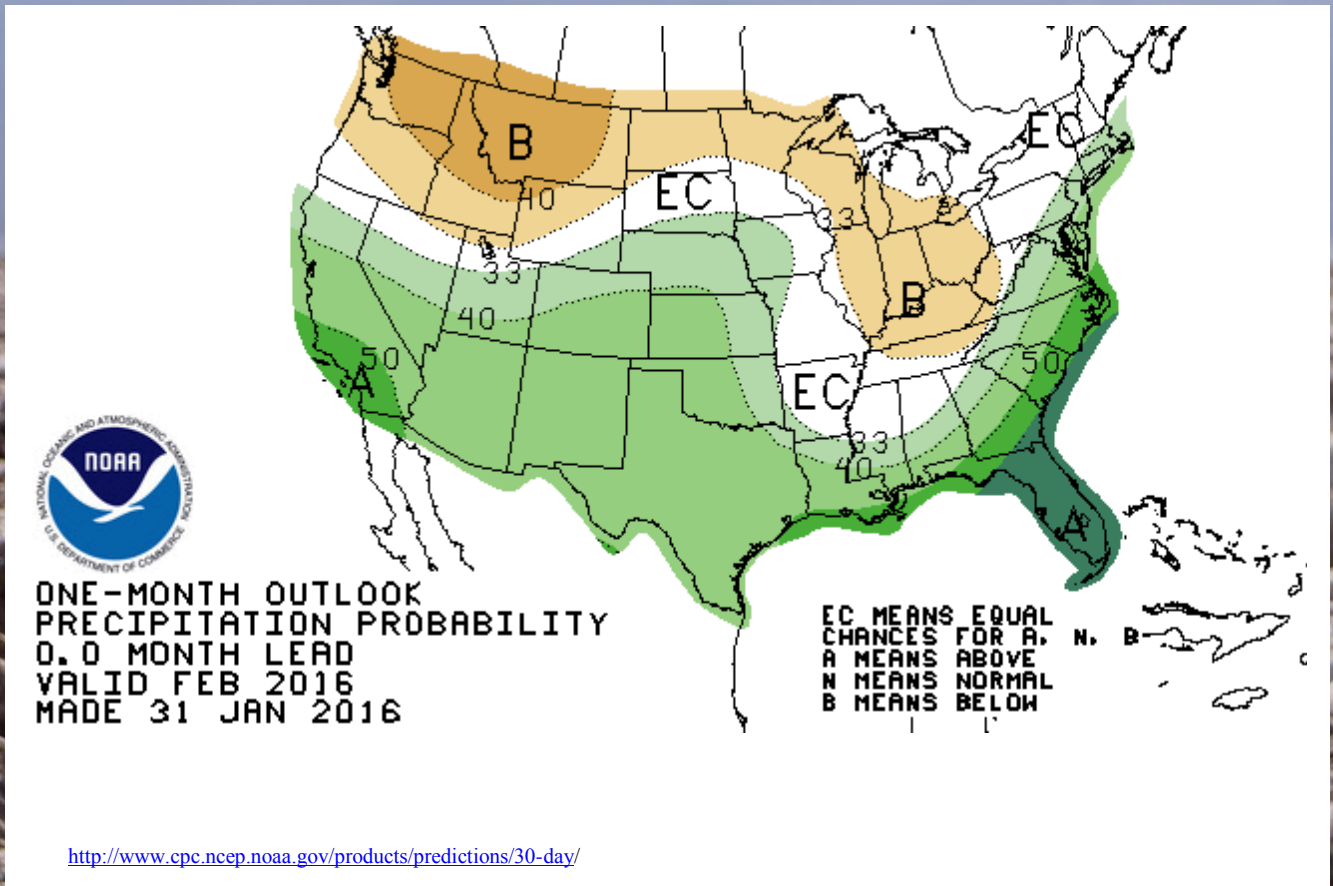
The climate divisions shown include statewide totals, central Oklahoma totals, and totals for the two divisions which have Canton Lake and Lake Atoka—major water sources for central Oklahoma.



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

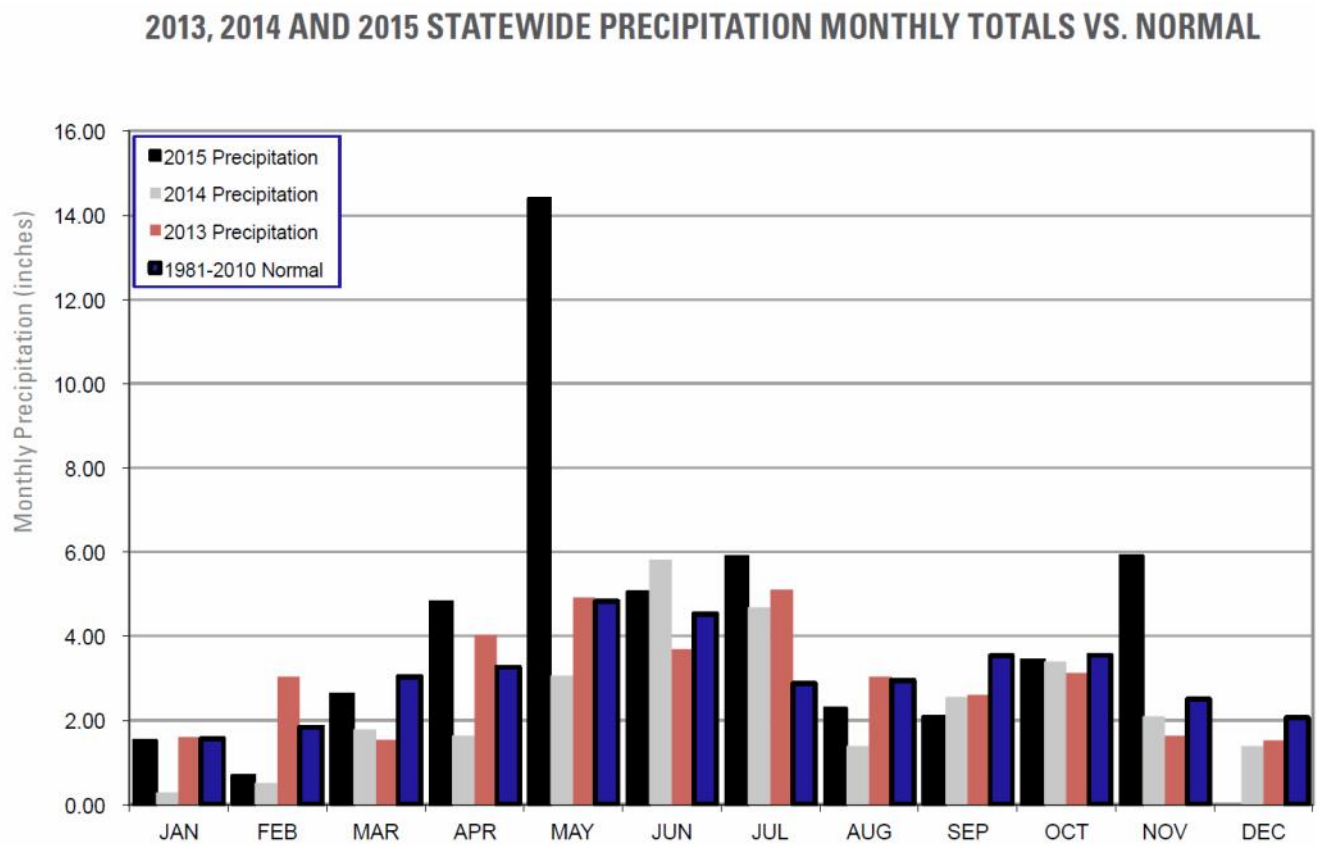
OKLAHOMA
CLIMATOLOGICAL SURVEY

NOAA One-Month Outlook



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.

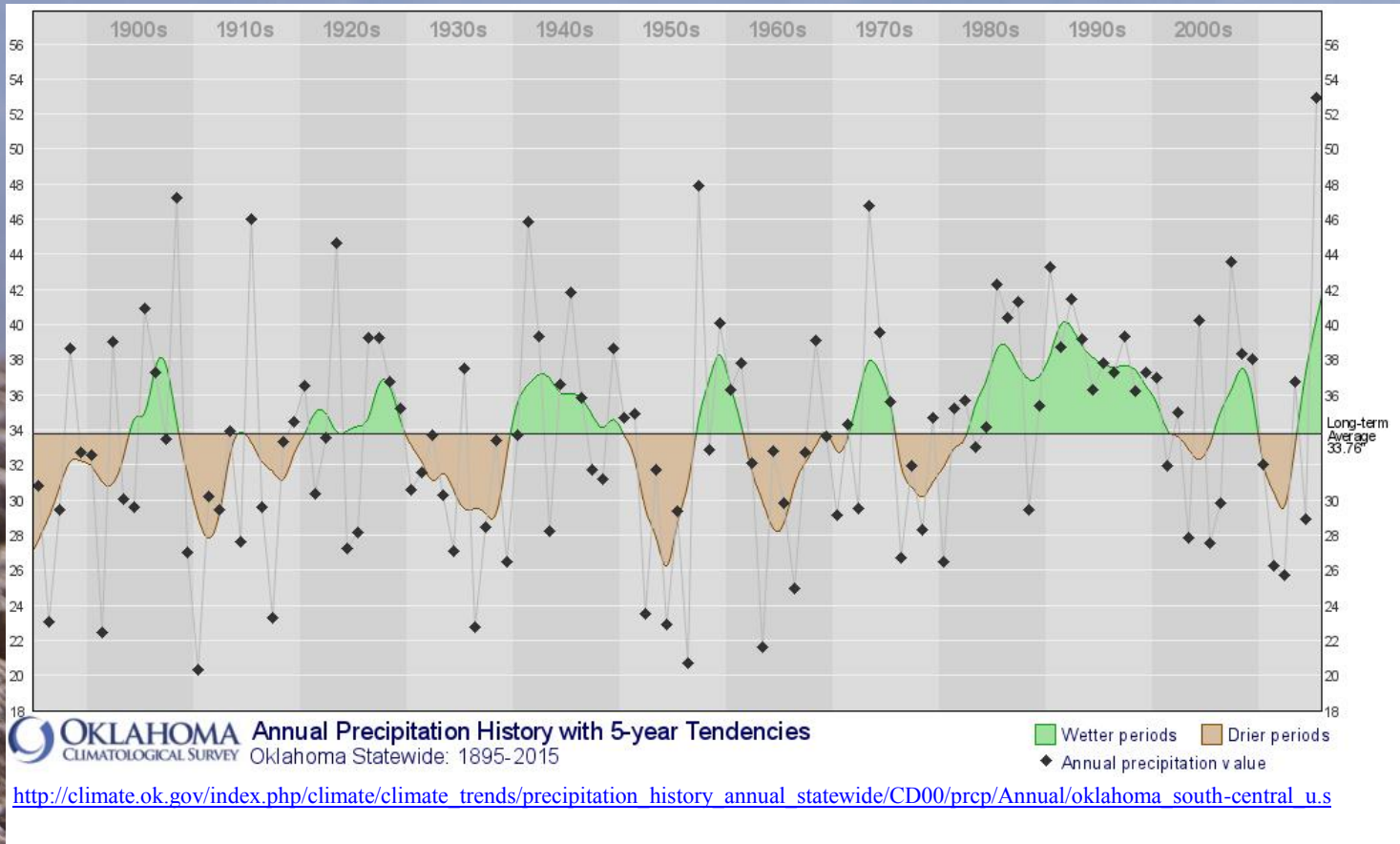
Statewide Precipitation Monthly Totals vs. Normal



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

OKLAHOMA
CLIMATOLOGICAL SURVEY

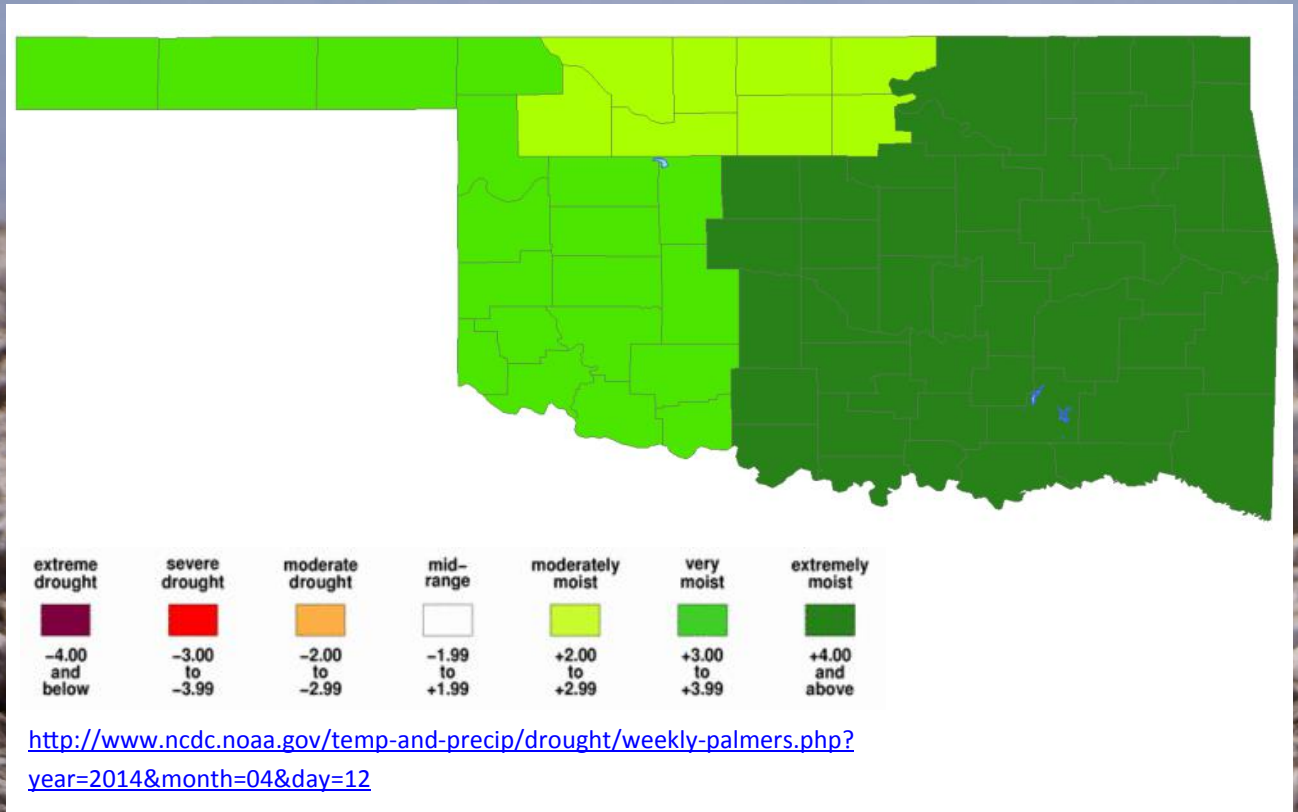
Annual Precipitation History with 5-Year Tendencies



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 JAN 23 2016



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 26 JAN 2016

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current 2016-01-26	100.00	0.00	0.00	0.00	0.00	0.00
Last Week 2016-01-19	100.00	0.00	0.00	0.00	0.00	0.00
3 Months Ago 2015-10-27	33.36	66.64	17.68	2.79	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 2015-01-27	5.03	94.97	60.60	45.34	22.58	5.69

U.S. Drought Monitor Oklahoma



Estimated Population in Drought Areas: **0**

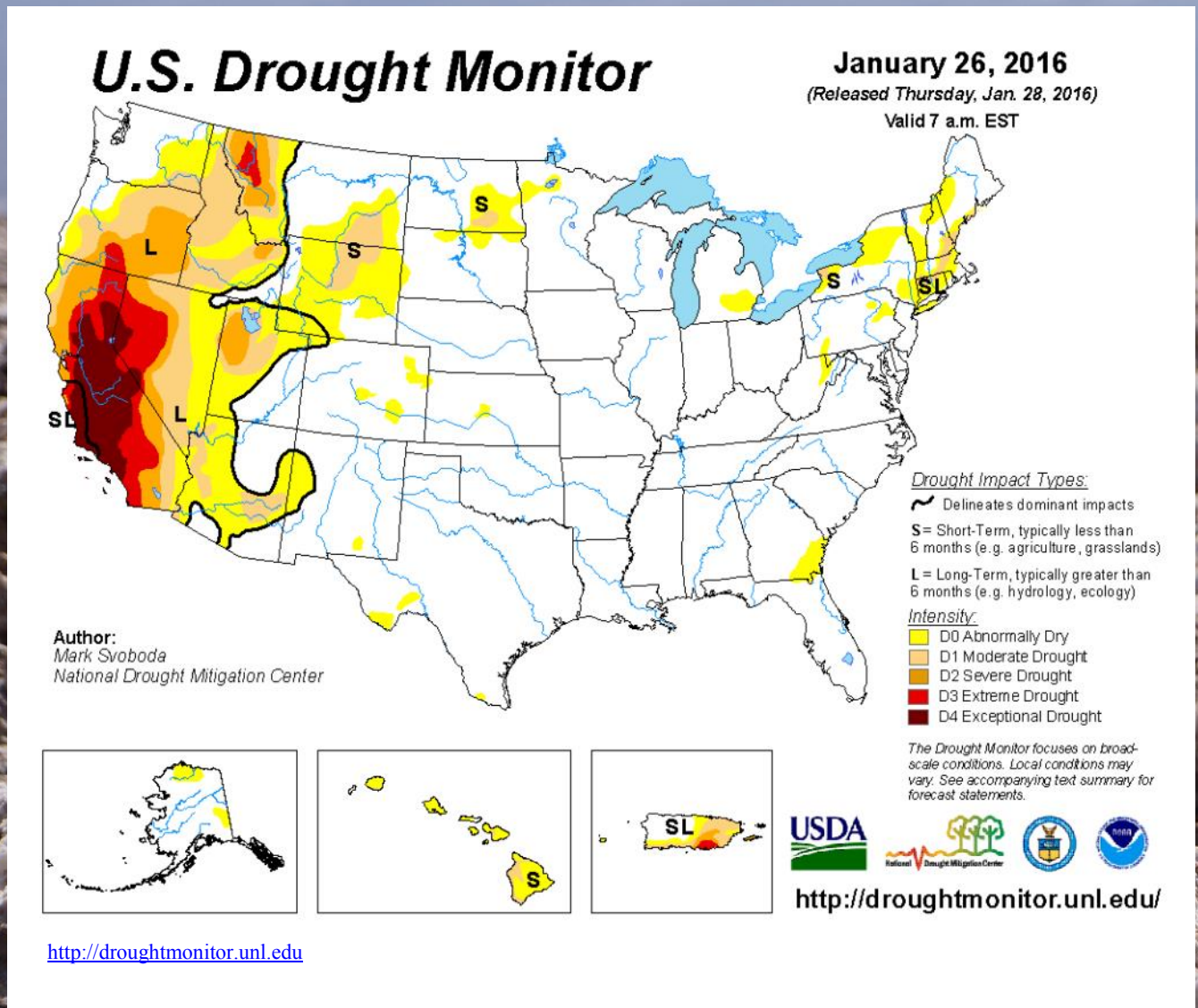
Intensity:

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

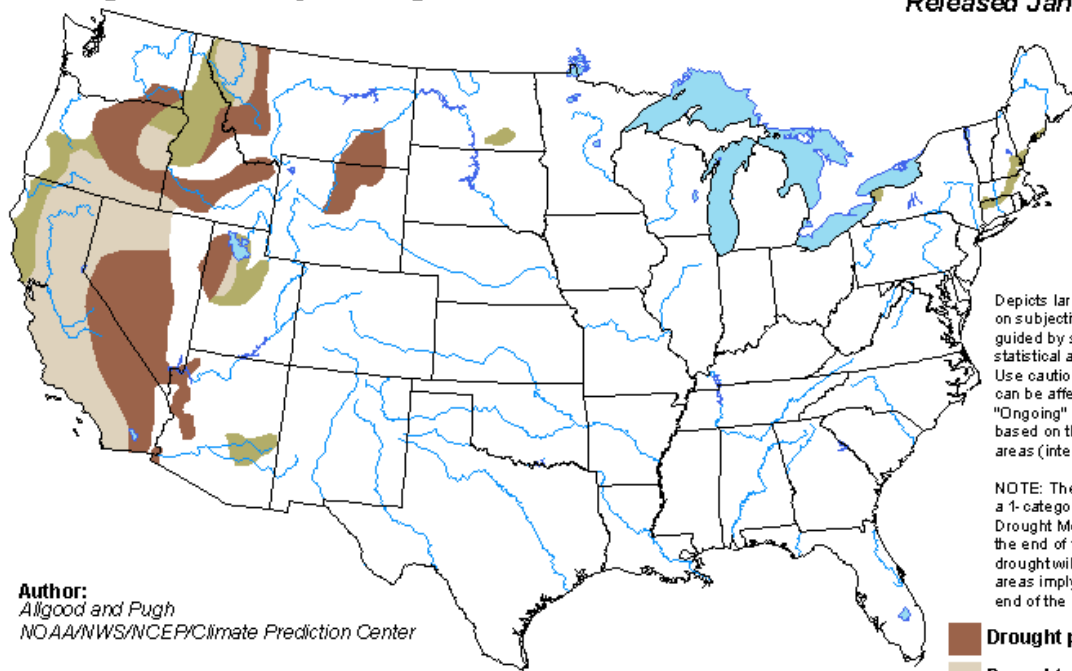


U.S. Drought Monitor

Monthly Drought Outlook Map

U.S. Monthly Drought Outlook Drought Tendency During the Valid Period

Valid for February 2016
Released January 31, 2016

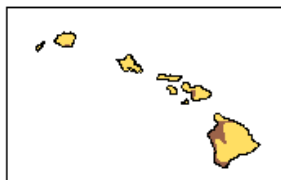
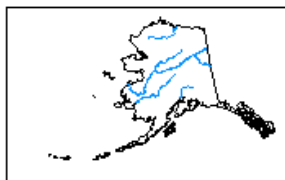


Author:
Allgood and Pugh
NOAA/NWS/NCEP/Climate Prediction Center

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan 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).

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



<http://go.usa.gov/3eZGd>

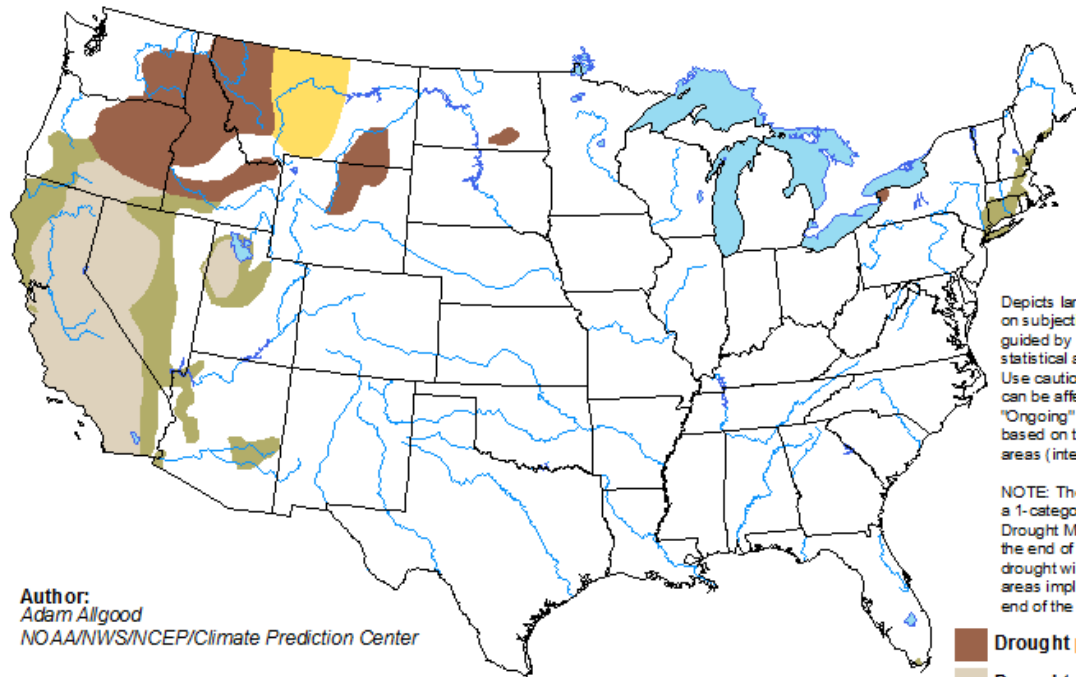
http://www.cpc.ncep.noaa.gov/products/expert_assessment/mdo_summary.php

U.S. Drought Monitor

Seasonal Drought Outlook Map

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for January 21 - April 30, 2016
Released January 21, 2016



Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center

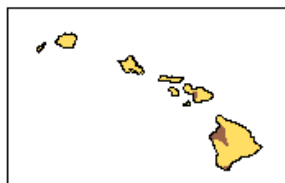
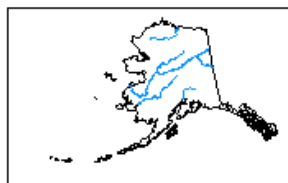
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan 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).

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



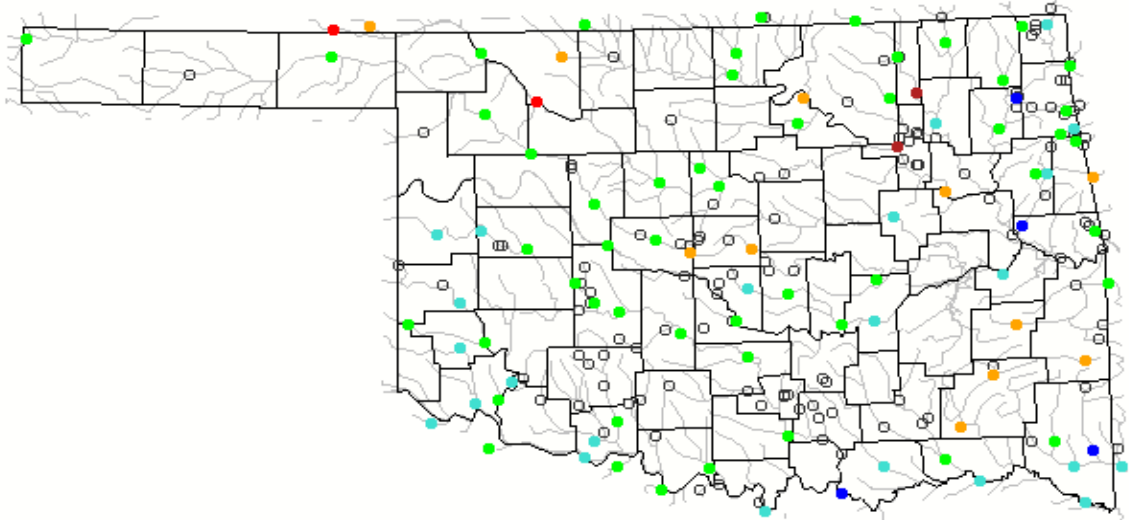
<http://go.usa.gov/3eZ73>



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

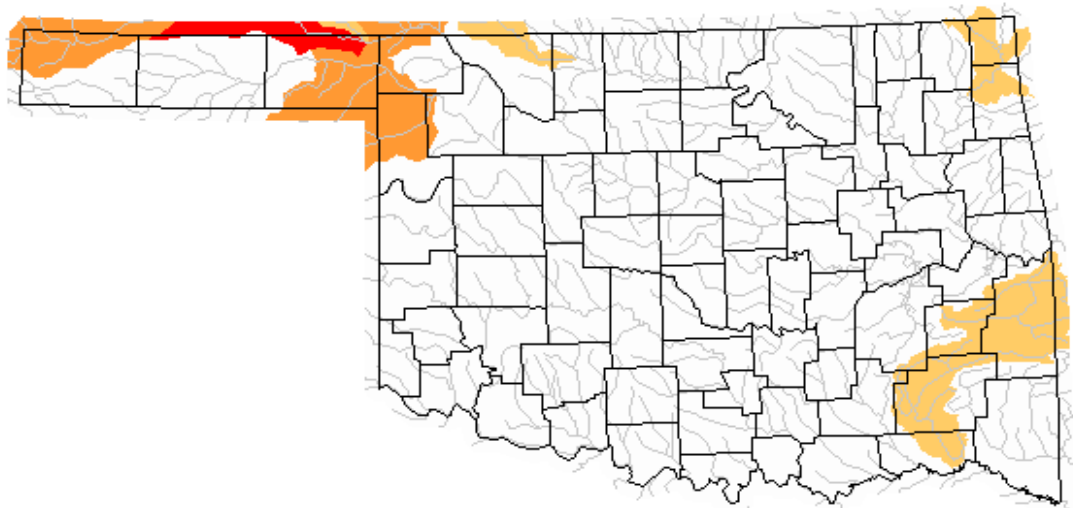
USGS Streamflow Data

Monday, February 01, 2016 14:30ET



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

Sunday, January 31, 2016



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>



A detailed background image showing a close-up of dry, cracked soil, emphasizing the theme of drought.

SOIL MOISTURE MAP

The figure displays a map of Oklahoma with county-level soil moisture data. A color scale legend on the left indicates the fractional water index from 0.0 (dark red) to 1.0 (dark green). The map shows most counties with values of 0.8 or higher, indicating enhanced growth. A few counties in the north-central part of the state show lower values between 0.4 and 0.7, indicating limited growth. The Mesonet logo is present in the bottom left corner of the map area. Below the map, a legend box defines five categories based on the fractional water index ranges.

Mesonet

Daily Averaged Fractional Water Index at 24 inches

January 31, 2016
Created 6:30:14 AM February 1, 2016 CST. © Copyright 2016

Dark Green	1.0 - 0.8 Enhanced Growth
Light Green	0.8 - 0.5 Limited Growth
Yellow	0.5 - 0.3 Plants Wilting
Orange	0.3 - 0.1 Plants Dying
Red	< 0.1 Barren Soil

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

The logo for acog, featuring a stylized cross made of four colored squares (green, orange, blue, red) and a black dot in the center, with the word "acog" below it.

PAGE 13



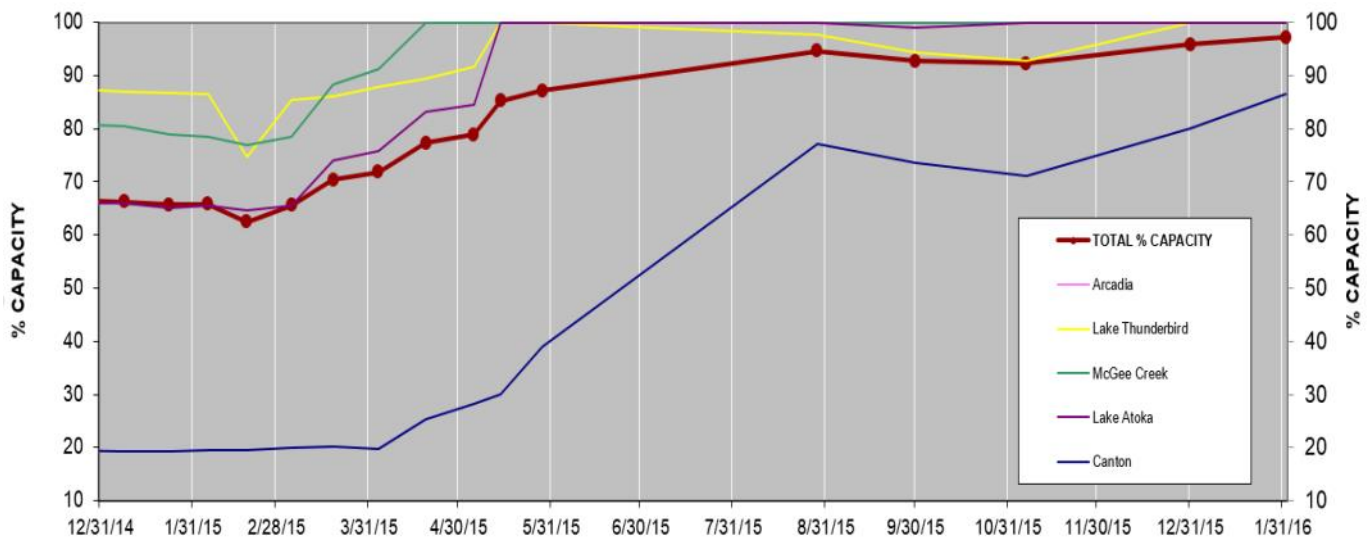
January 31, 2016

Created 6:30:14 AM February 1, 2016 CST. © Copyright 2016



[http://www.mesonet.org/index.php/weather/map/24-inch fractional water index/soil moisture](http://www.mesonet.org/index.php/weather/map/24-inch_fractional_water_index/soil_moisture)

Percent of Surface Water Conservation Storage Central OK Reservoirs



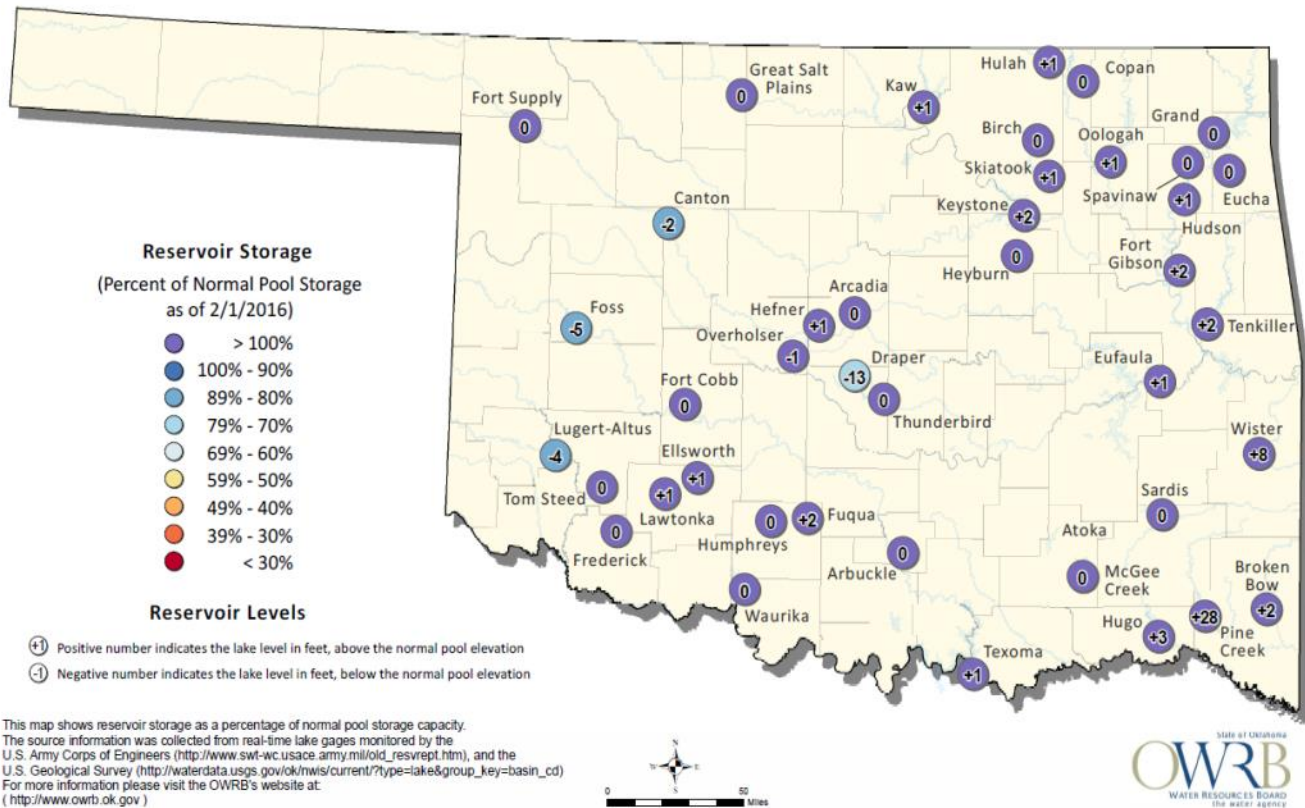
Lake Hefner and Lake Overholser are terminal storage for Canton Lake. Lake Draper is terminal storage for McGee Creek and Atoka Lakes.

LAKE	% CAPACITY	% CHANGE FROM 12/31/2015
Canton	86.4	6.4
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	97.1	1.4

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

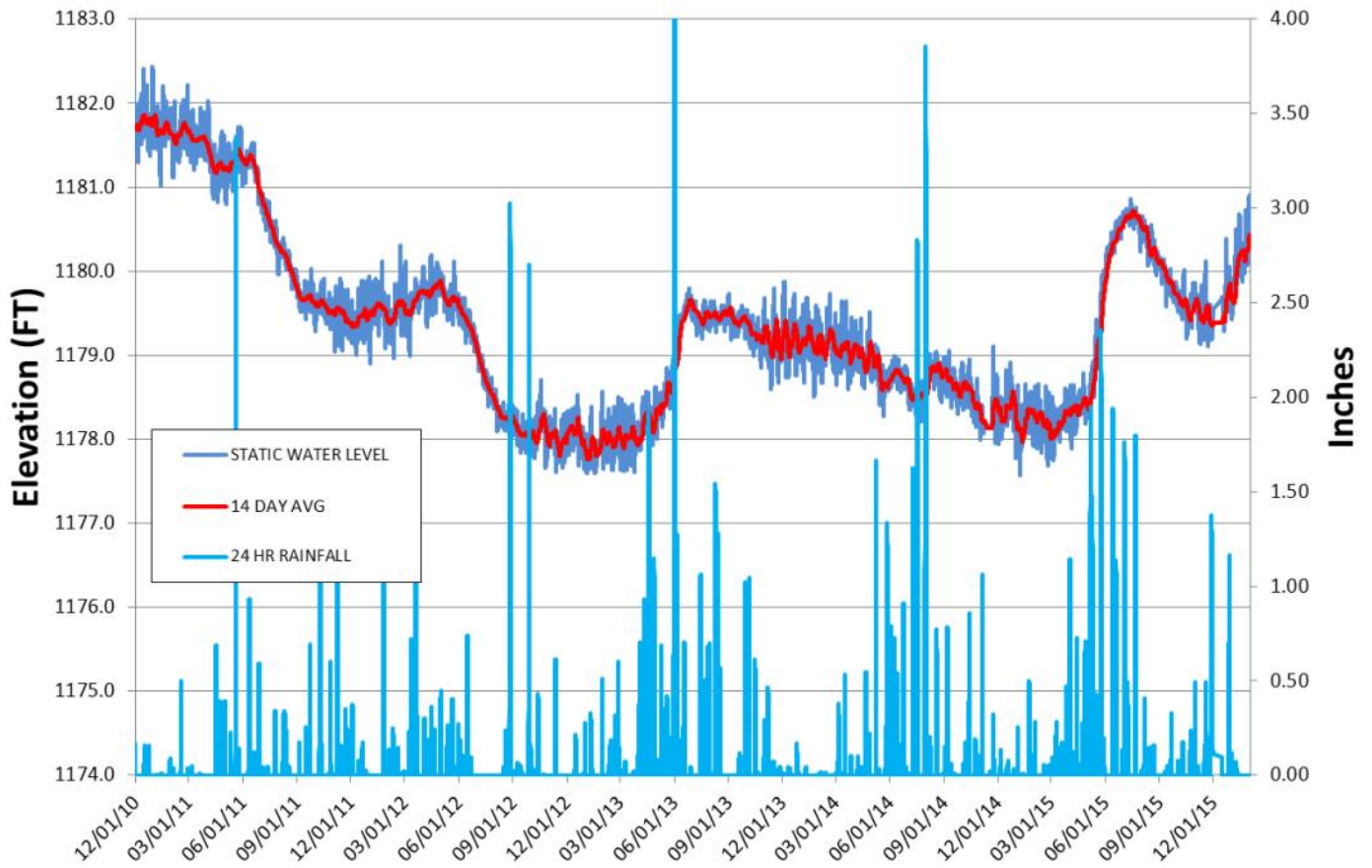
The graph is the amount of water stored in five major lakes that supply water to central Oklahoma as a percent of capacity over the past year.

Oklahoma Surface Water Resources Reservoir Levels and Storage as of 2/1/2016



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

Groundwater Levels Spencer Mesonet Station



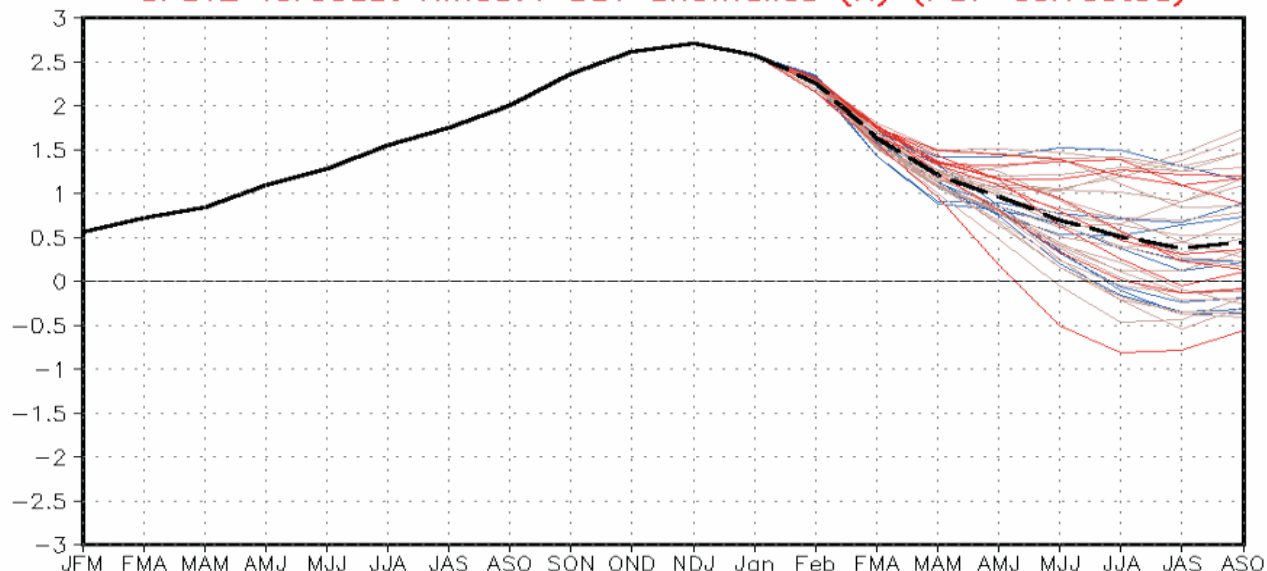
<http://www.mesonet.org/index.php/weather/groundwater>



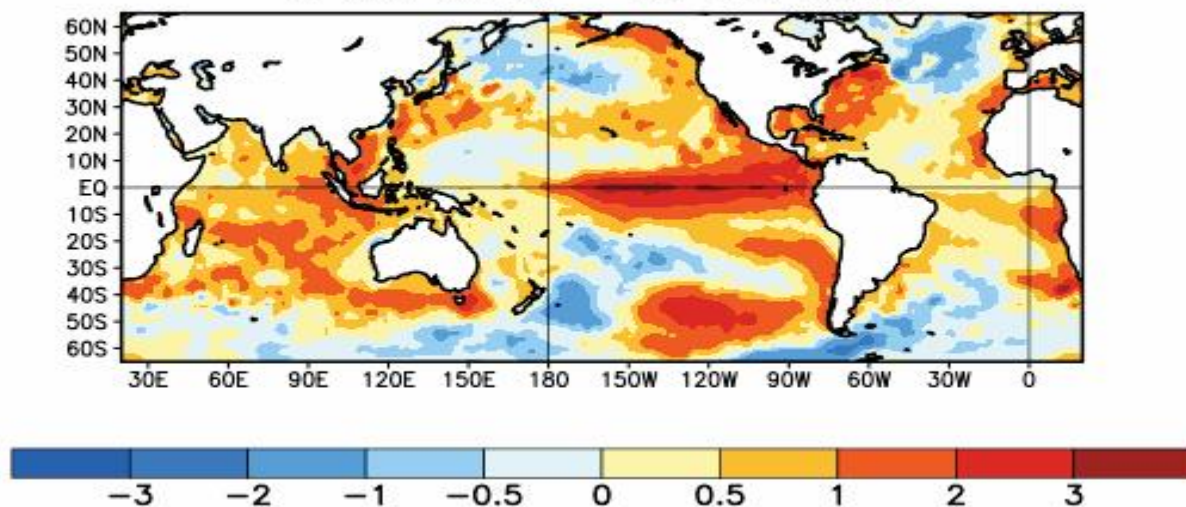
ENSO Cycle

Recent Evolution, Current Status and Predictions

CFSv2 forecast Nino3.4 SST anomalies (K) (PDF corrected)



Average SST Anomalies
3 JAN 2016 – 30 JAN 2016



Summary



ENSO Alert System Status: El Niño Advisory

- El Niño conditions are present.
- Positive equatorial sea surface temperature (SST) anomalies continue across most of the Pacific Ocean.
- A strong El Niño is expected to gradually weaken through spring 2016, and to transition to ENSO-neutral during late spring or early summer 2016.
- .