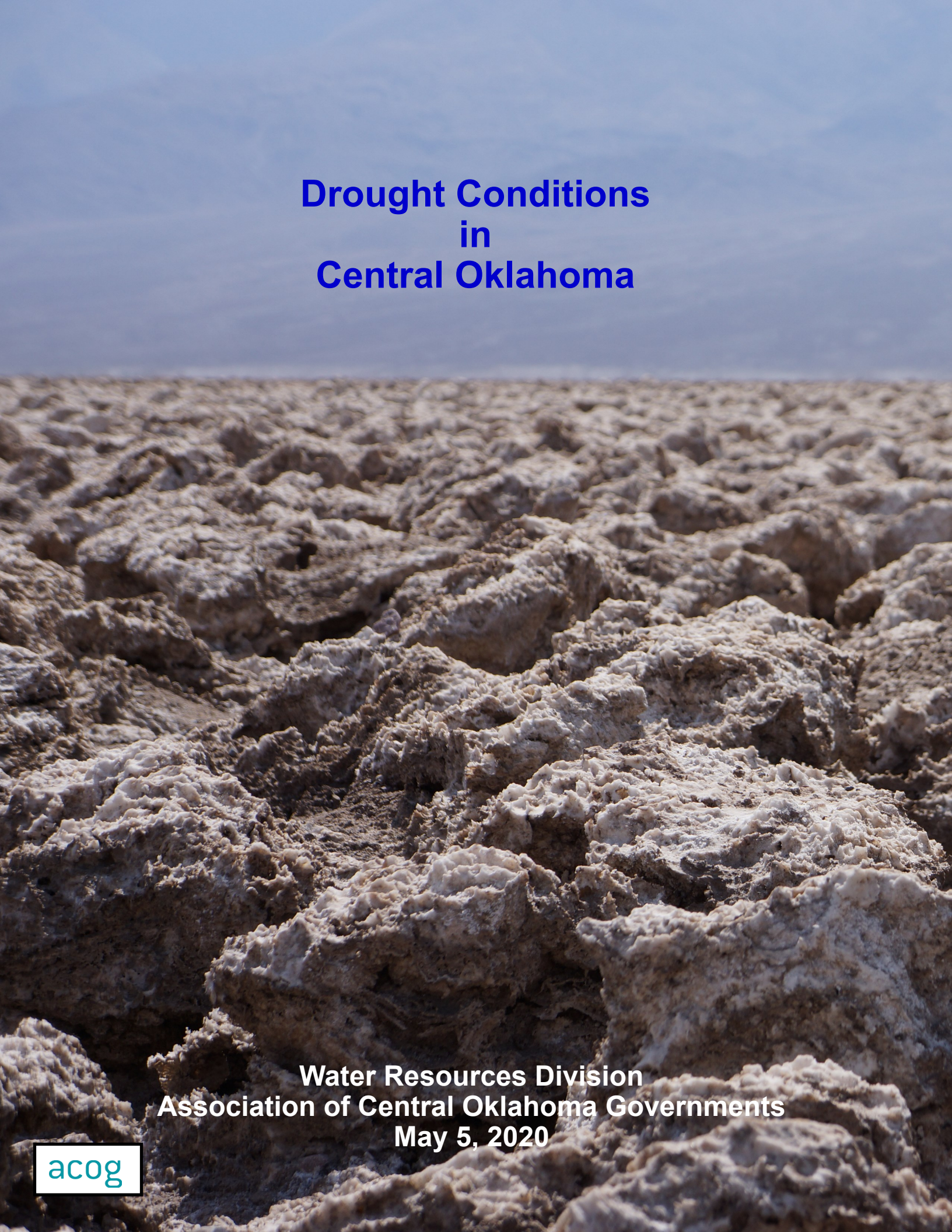




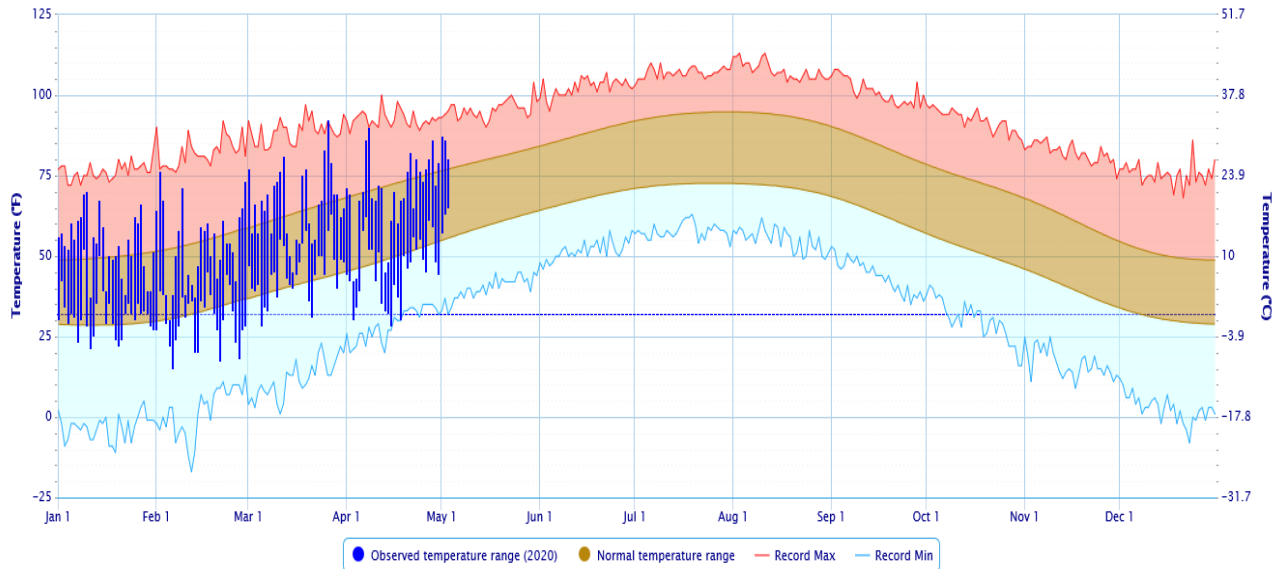
Drought Conditions in Central Oklahoma

**Water Resources Division
Association of Central Oklahoma Governments
May 5, 2020**

Temperature and Precipitation Plot for Oklahoma City, Oklahoma for 2020

Daily Temperature Data – Oklahoma City Area, OK

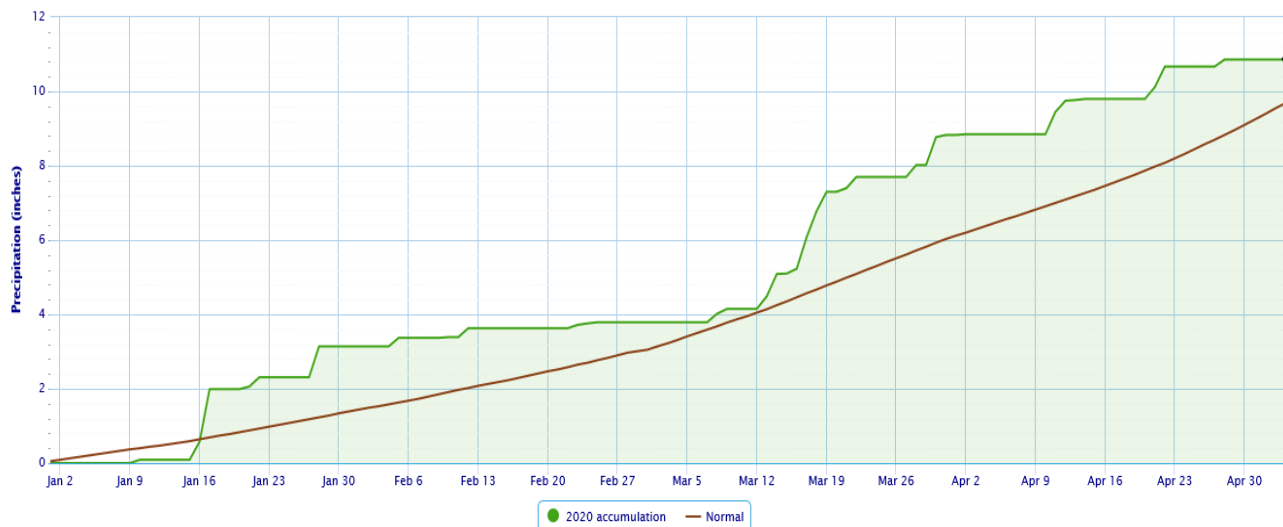
Period of Record – 1890–11–01 to 2020–05–03. Normals period: 1981–2010. Click and drag to zoom chart.



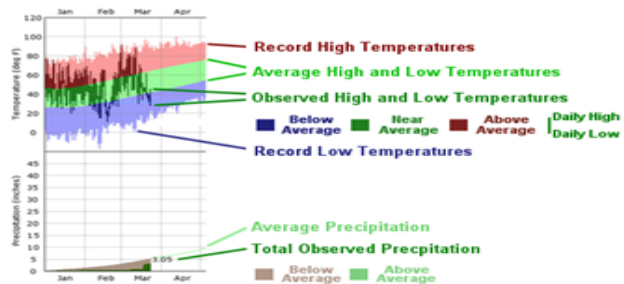
Powered by ACIS

Accumulated Precipitation – Oklahoma City Area, OK

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



Powered by ACIS



<http://xmacis.rcc-acis.org/>

Rainfall Summaries by Oklahoma Climate Division

Calendar Year 01-Jan-2020 through 03-May-2020

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	5.94"	-1.11"	84%	43rd driest	0.66" (1996)	14.33" (1957)
Central	12.37"	+2.18"	121%	16th wettest	2.32" (1936)	24.23" (1990)
S. Central	17.06"	+5.06"	142%	7th wettest	4.69" (2003)	33.55" (1990)
Statewide	12.91"	+2.82"	128%	13th wettest	3.01" (1936)	22.05" (1990)

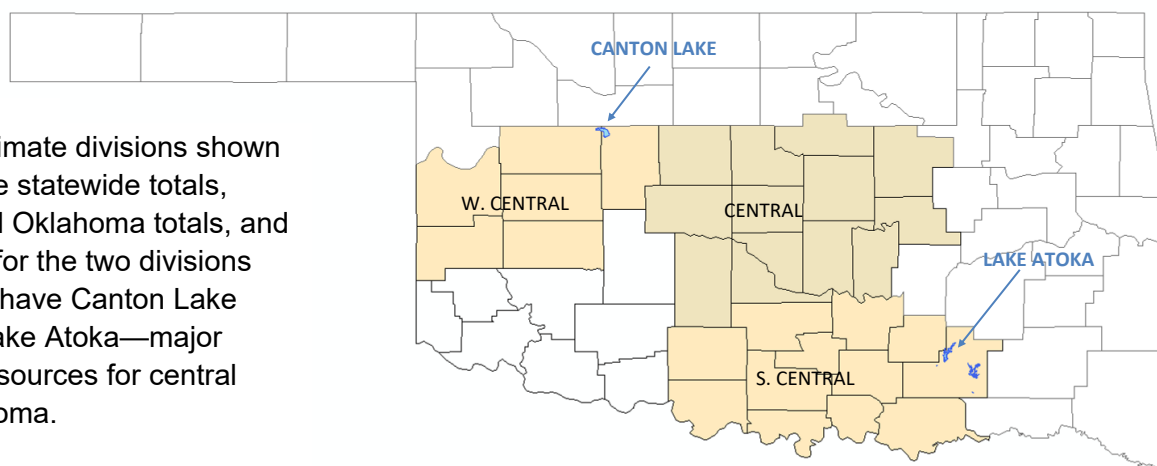
Water Year: 01-Oct-2019 through 03-May-2020

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	9.40"	-3.19"	75%	33rd driest	2.94" (1995-96)	21.27" (1998-99)
Central	19.70"	+1.40"	108%	24th wettest	8.20" (1958-59)	33.79" (1984-85)
S. Central	27.00"	+5.31"	124%	15th wettest	8.99" (1955-56)	36.20" (2015-16)
Statewide	21.38"	+3.21"	118%	17th wettest	8.69" (1995-96)	28.75" (1984-85)

Spring 01-Mar through 03-May-2020

Climate Division	Total Rainfall	Departure from Normal	Pct of Normal	Rank since 1921 (88 periods)	Driest on Record	Wettest on Record
W. Central	3.53"	-1.39"	72%	36th driest	0.41" (1996)	12.45" (1957)
Central	7.61"	+0.74"	111%	33rd wettest	1.50" (2005)	18.01" (1990)
S. Central	9.13"	+1.57"	121%	20th wettest	2.44" (2005)	24.64" (1990)
Statewide	7.63"	+1.01"	115%	32nd wettest	2.14" (1936)	15.19" (1990)

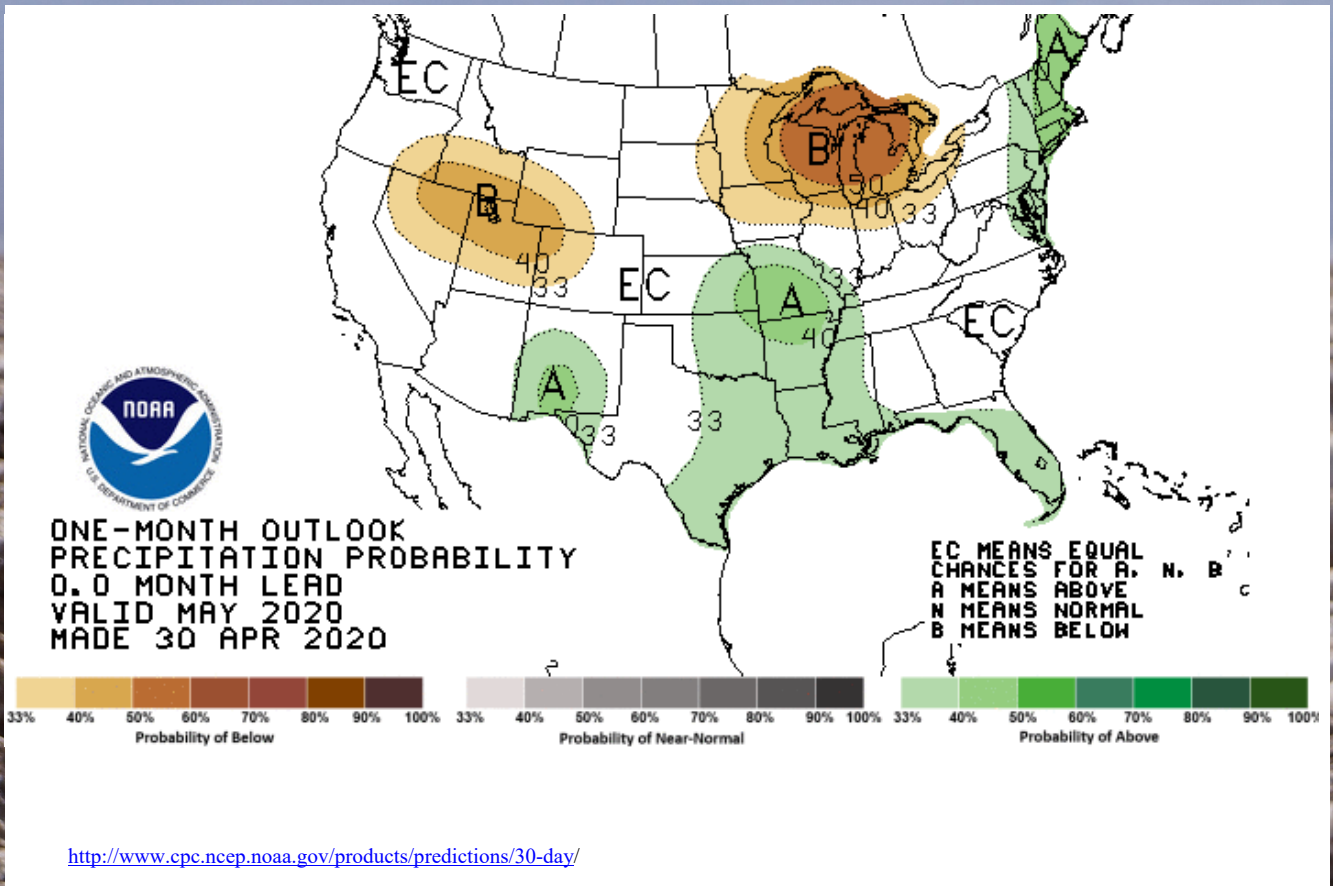
The climate divisions shown include statewide totals, central Oklahoma totals, and totals for the two divisions which have Canton Lake and Lake Atoka—major water sources for central Oklahoma.



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

OKLAHOMA
CLIMATOLOGICAL SURVEY

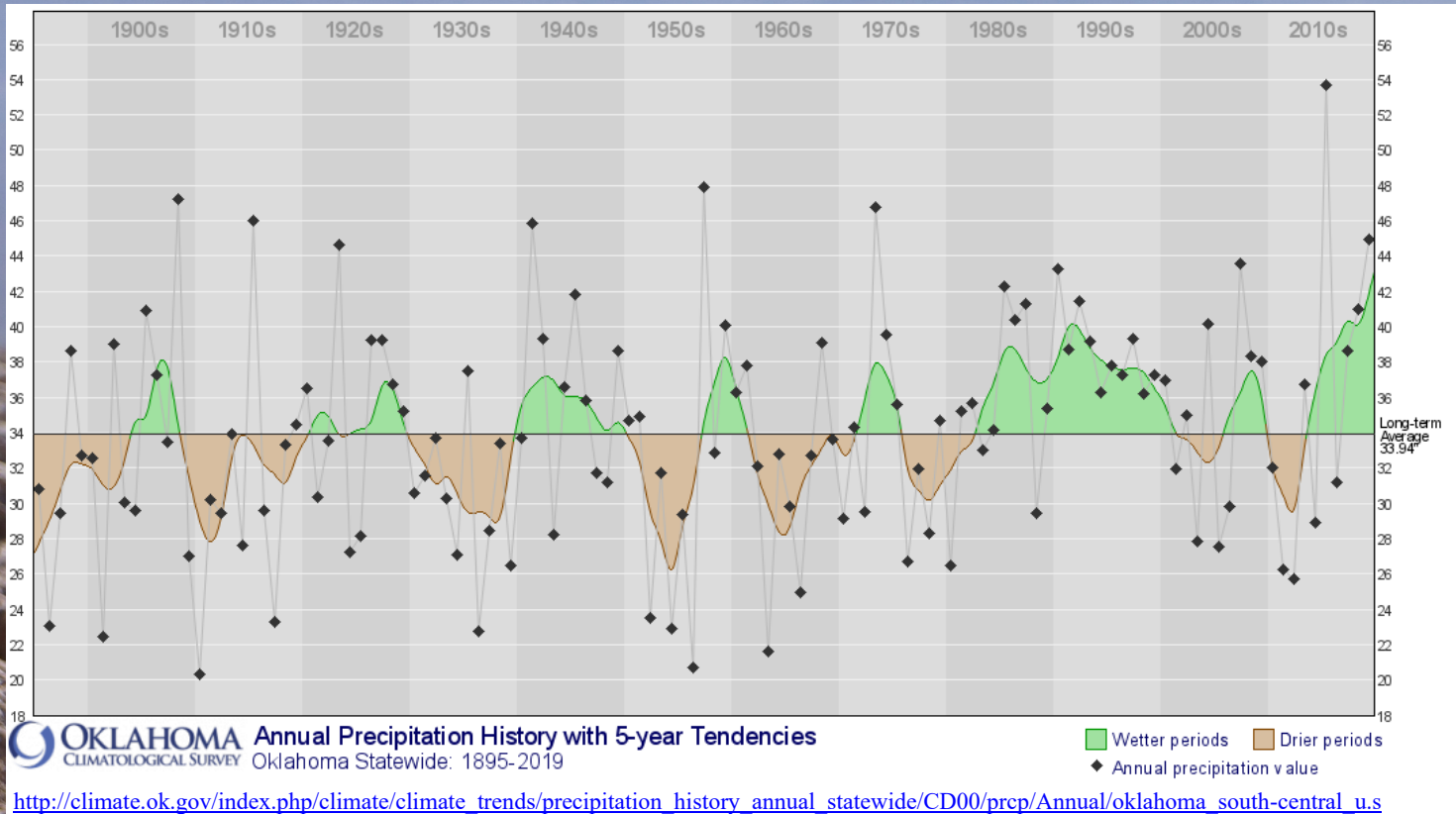
NOAA One-Month Outlook



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.

Annual Precipitation History with 5-Year Tendencies

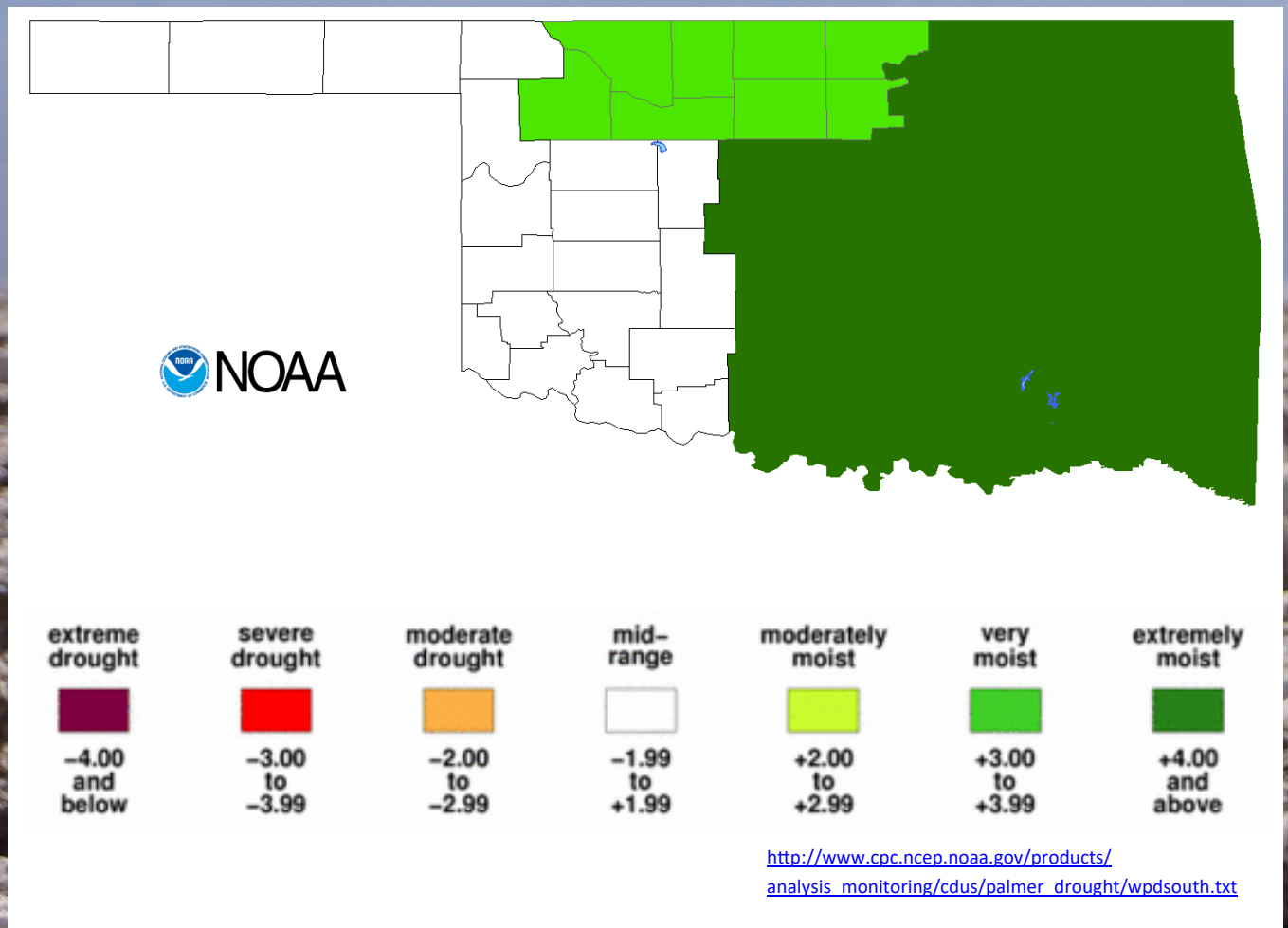


This graph shows the cyclical nature of wet and drought periods in Oklahoma. The black dots represent the annual precipitation for that particular year. The line represents the annual precipitation data smoothed over five years.

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 Value Ending 25 APR 2020



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.

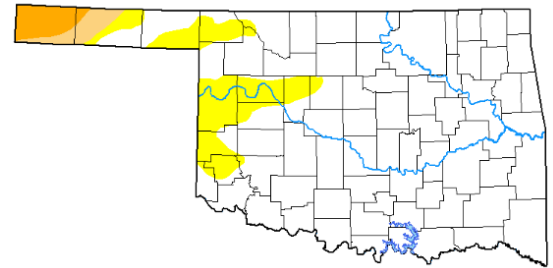
On these maps, the red shading denotes drought conditions while the green shading indicates wet conditions.

U.S. Drought Monitor

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2020-04-28	85.96	14.04	3.94	2.27	0.00	0.00
Last Week	2020-04-21	89.09	10.91	3.94	2.27	0.00	0.00
3 Months Ago	2020-01-28	81.34	18.66	8.03	0.85	0.00	0.00
Start of Calendar Year	2019-12-31	76.45	23.55	10.47	3.64	0.00	0.00
Start of Water Year	2019-10-01	71.94	28.06	11.08	1.01	0.00	0.00
One Year Ago	2019-04-30	100.00	0.00	0.00	0.00	0.00	0.00

U.S. Drought Monitor Oklahoma

Abnormal dryness or drought are currently affecting approximately 11,761 people in Oklahoma.



Intensity:

■ D0 - Abnormally Dry
■ D1 - Moderate Drought
■ D2 - Severe Drought

■ D3 - Extreme Drought
■ D4 - Exceptional Drought

NATIONAL
INTEGRATED
DROUGHT
INFORMATION
SYSTEM



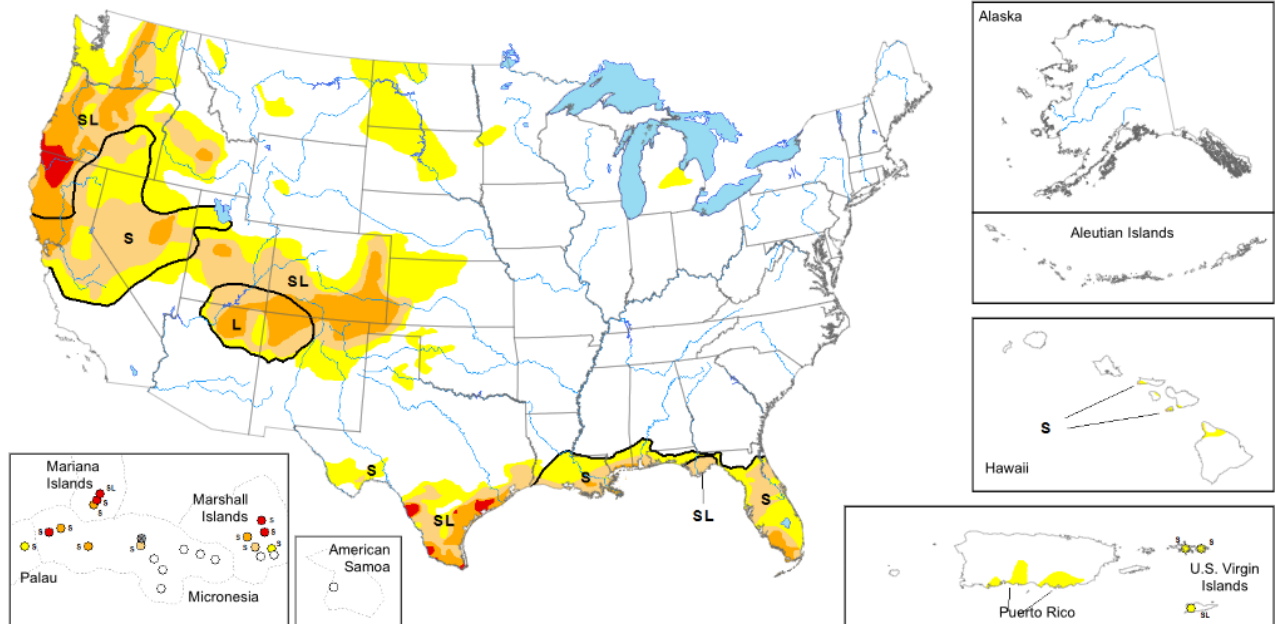
Drought.gov
U.S. Drought Portal

[https://droughtmonitor.unl.edu/CurrentMap/
StateDroughtMonitor.aspx?OK](https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OK)

U.S. Drought Monitor Nationwide Map

Map released: April 30, 2020

Data valid: April 28, 2020



United States and Puerto Rico Author(s):

Deborah Bathke, National Drought Mitigation Center

U.S. Affiliated Pacific Islands and Virgin Islands Author(s):

Ahira Sanchez-Lugo, NOAA/NCEI

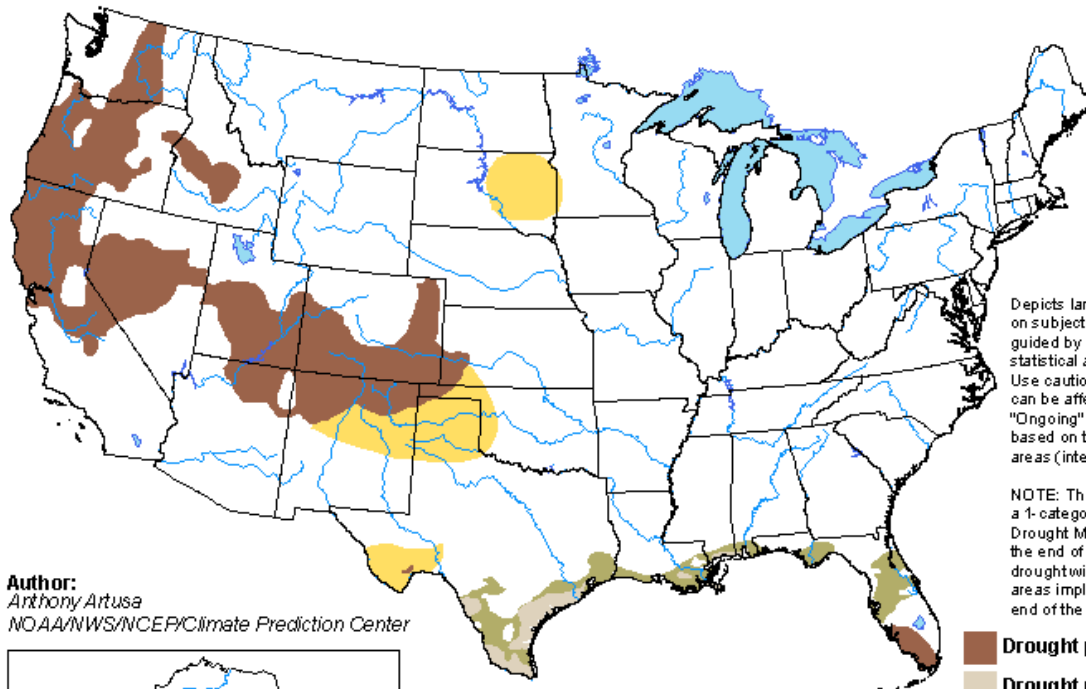
<http://droughtmonitor.unl.edu>

U.S. Drought Monitor

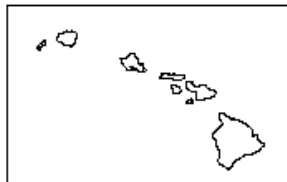
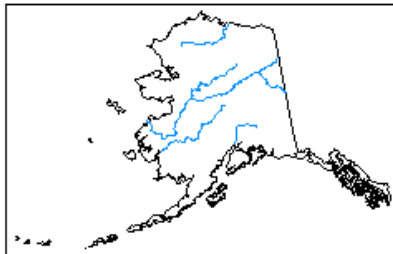
Monthly Drought Outlook Map

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

Valid for May 2020
Released April 30, 2020



Author:
Anthony Artusa
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>

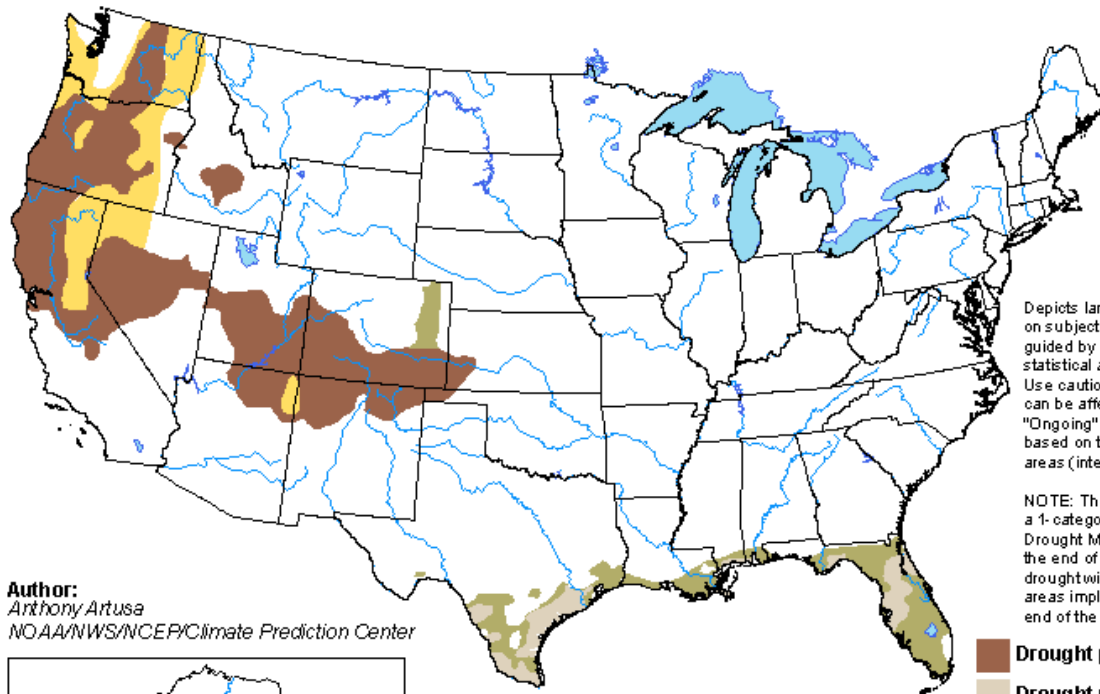
http://www.cpc.ncep.noaa.gov/products/expert_assessment/mdo_summary.php

U.S. Drought Monitor

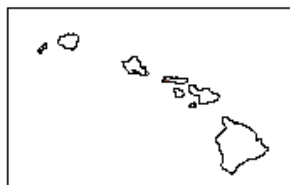
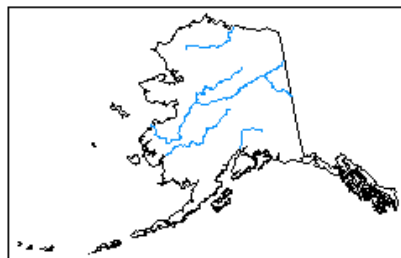
Seasonal Drought Outlook Map

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

Valid for April 16 - July 31, 2020
Released April 16



Author:
Anthony Artusa
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

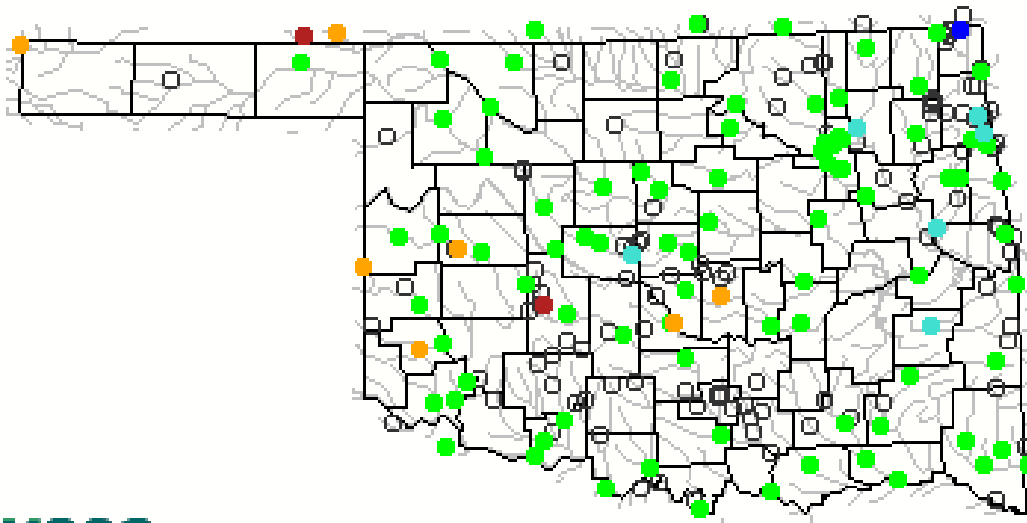


<http://go.usa.gov/3eZ73>

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

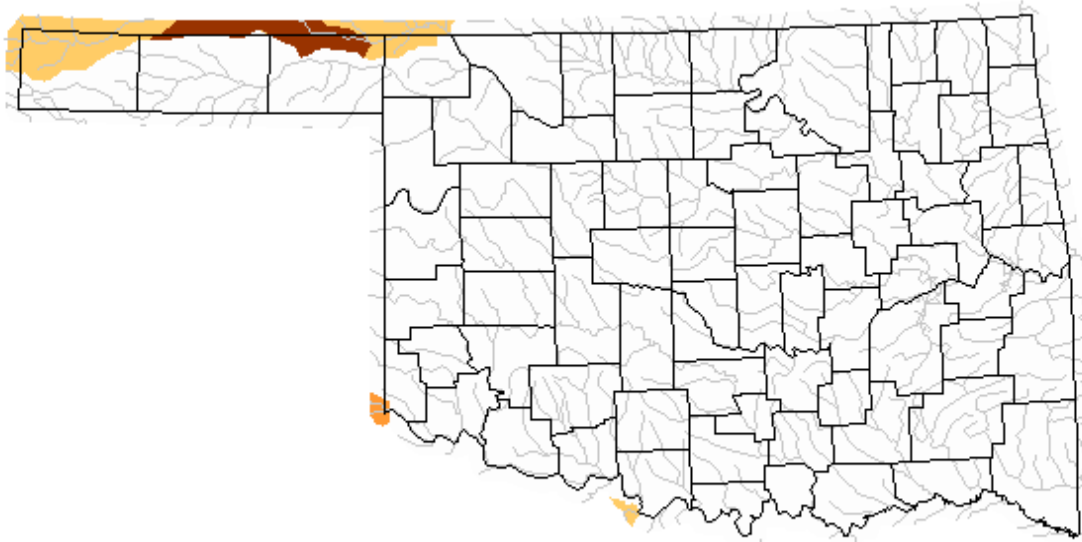
USGS Streamflow Data

Monday, May 04, 2020 11:30ET



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, May 03, 2020

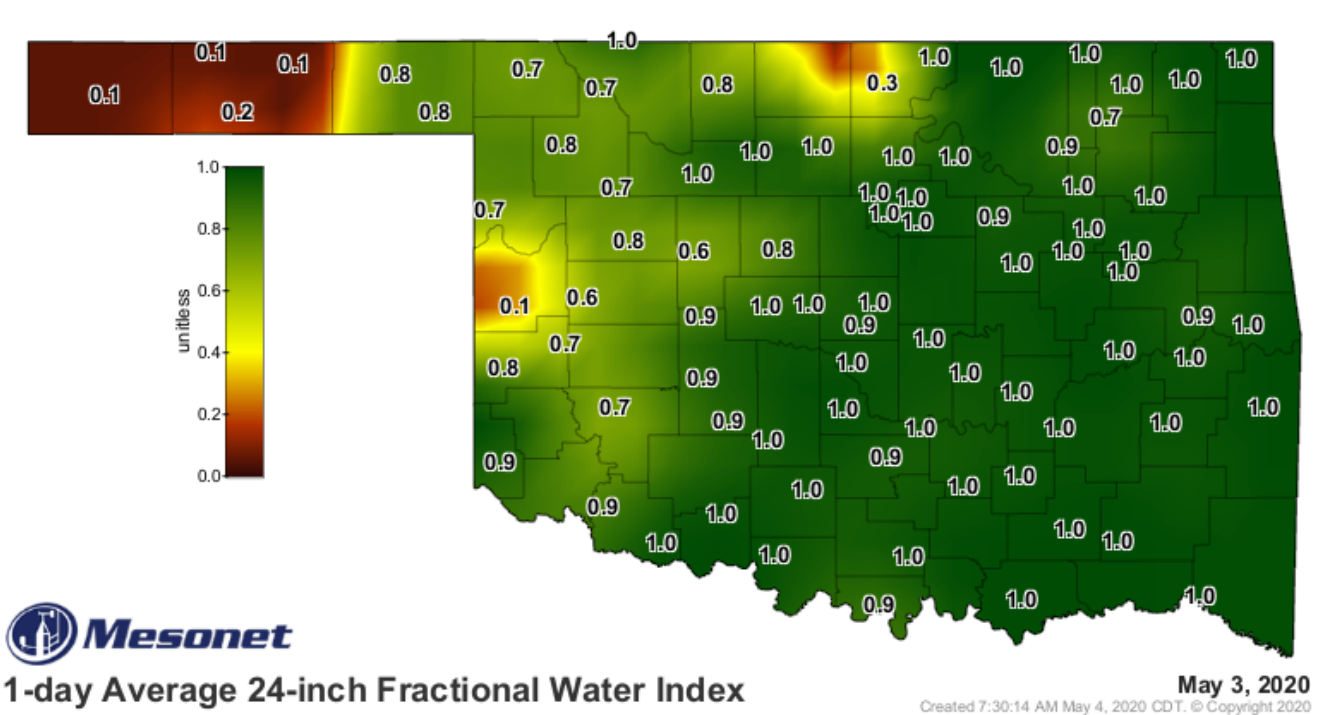


■	■	■	■	■
Low	<=5	6-9	10-24	Insufficient data for a hydrologic region
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

<https://waterdata.usgs.gov/ok/nwis/rt>

https://waterwatch.usgs.gov/index.php?id=pa28d_dry&sid=w_map|m_pa28d_dwc&r=ok

SOIL MOISTURE MAP



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

CONSECUTIVE DAYS WITHOUT RAINFALL MAP

Mesonet
Consecutive Days With Less Than 0.25" Rainfall

May 3, 2020
Created 8:15:03 AM May 4, 2020 CDT. © Copyright 2020

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

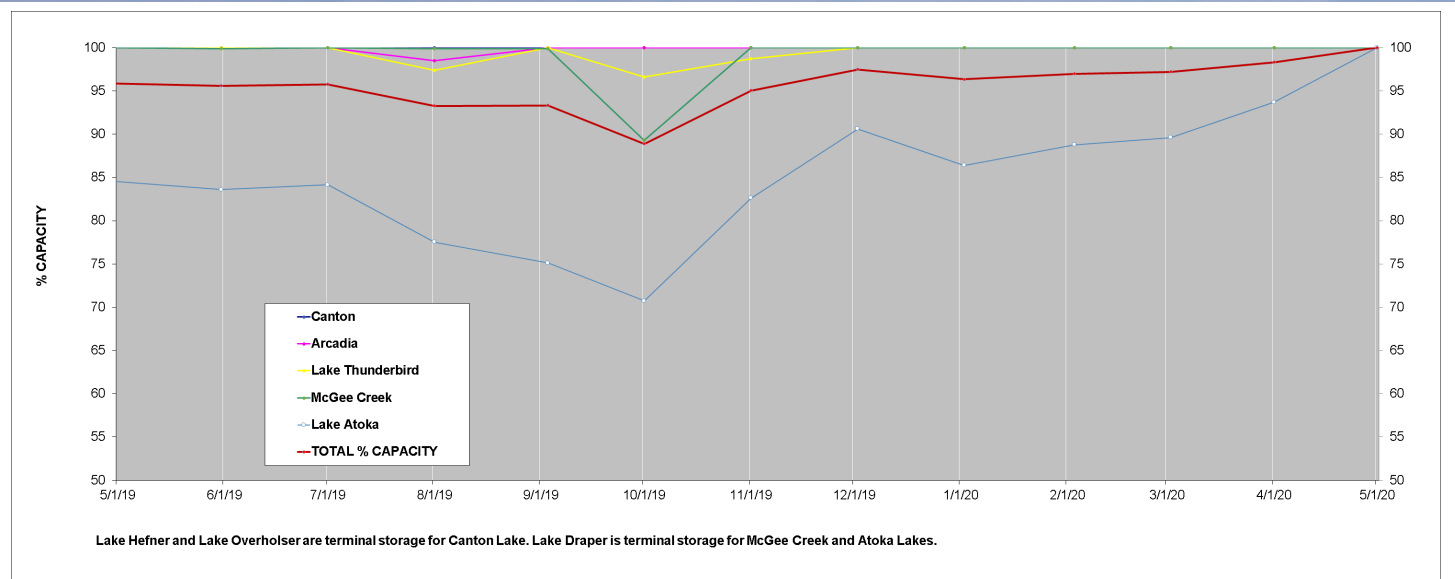


May 3, 2020

Created 8:15:03 AM May 4, 2020 CDT. © Copyright 2020

acog

Percent of Surface Water Conservation Storage Central OK Reservoirs



LAKE	% CAPACITY	% CHANGE FROM 4/1/2020
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	6.3
TOTAL % CAPACITY	100.0	1.7

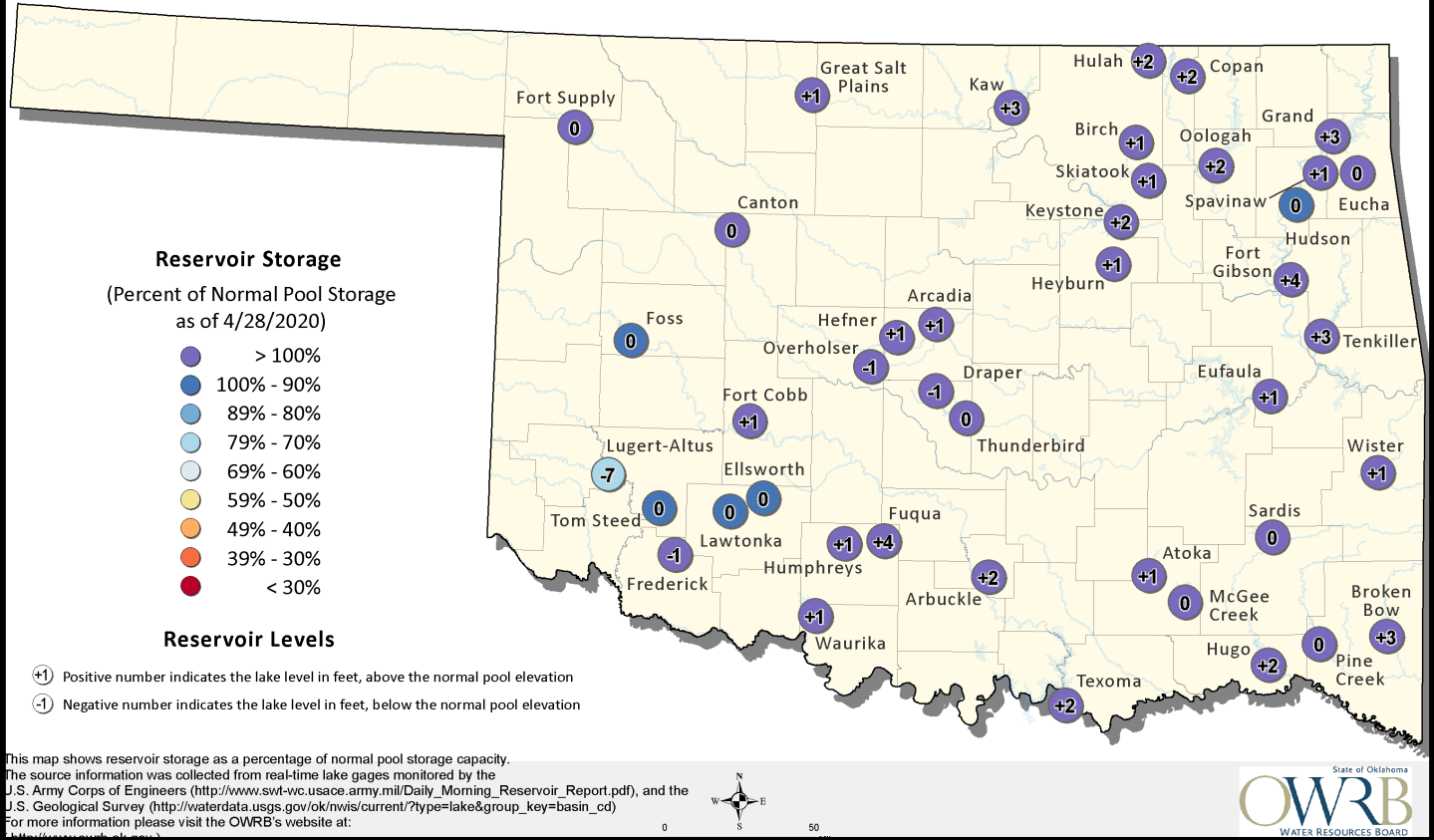
http://www.swt-wc.usace.army.mil/Daily_Morning_Reservoir_Report.pdf

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.

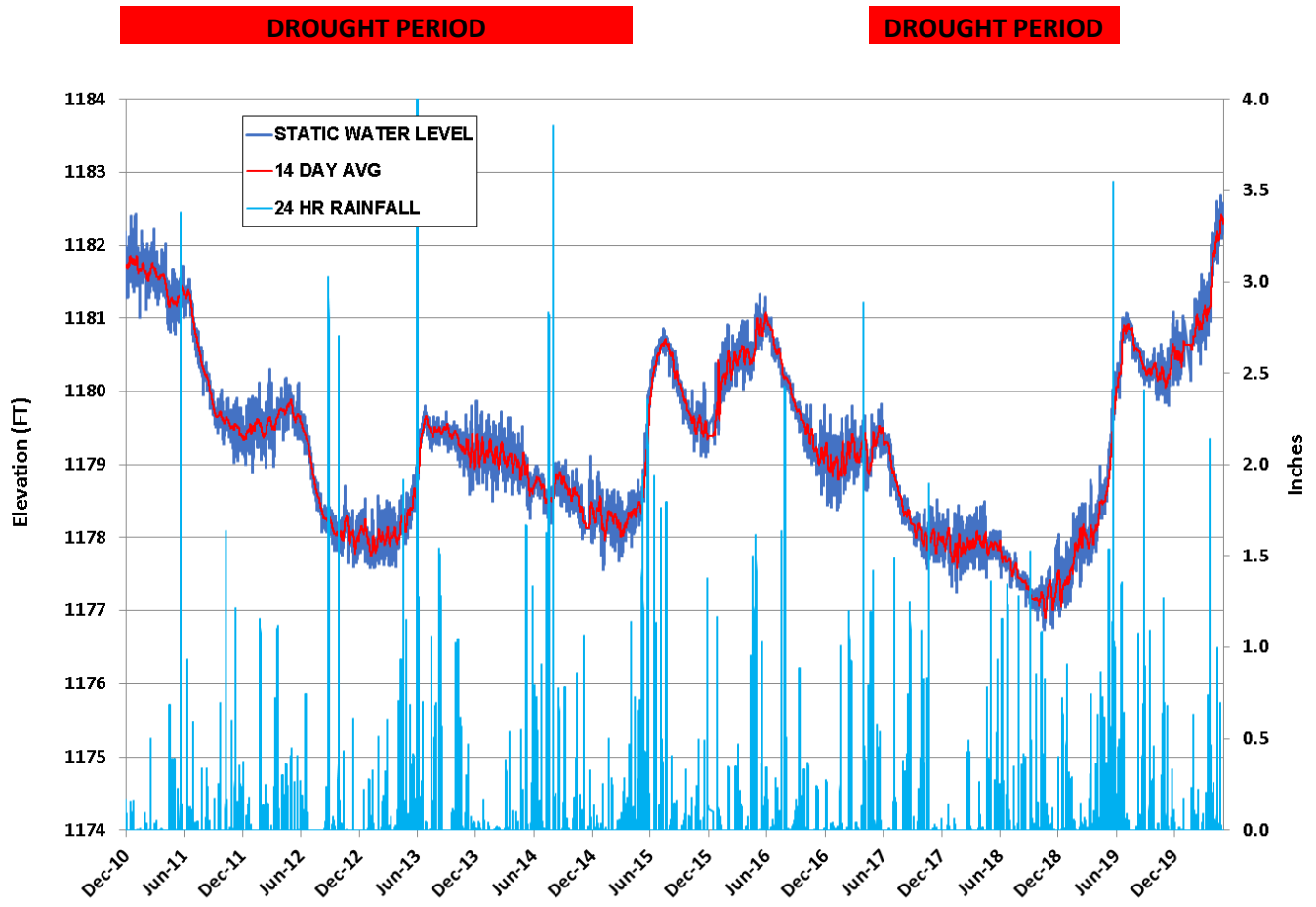
Oklahoma Surface Water Resources

Reservoir Levels and Storage as of 4/28/2020



<https://www.owrb.ok.gov/supply/drought/reservoirstorage.php>

Groundwater Levels Spencer Mesonet Station

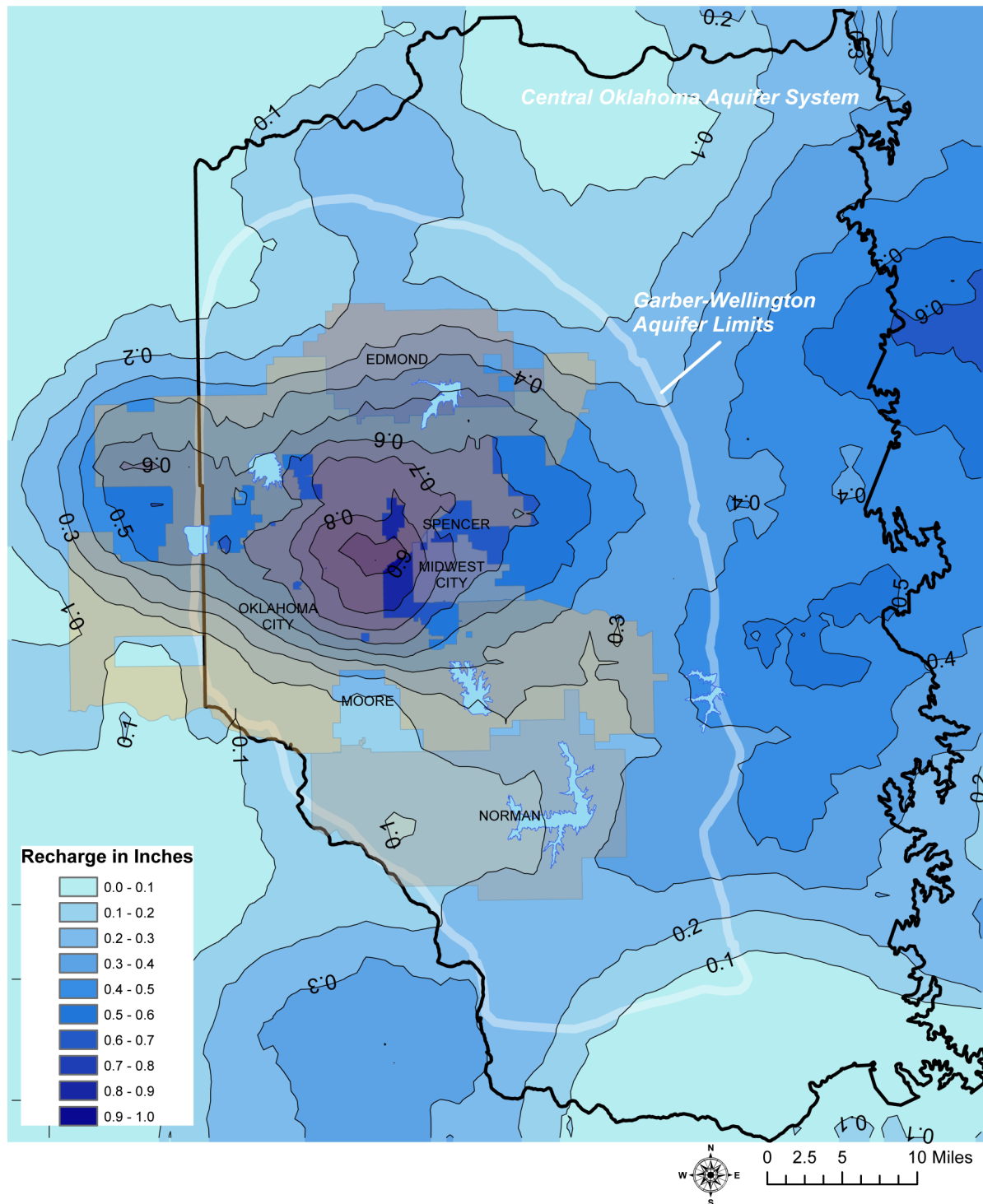


<http://www.mesonet.org/index.php/weather/groundwater>



Recharge Map Central Oklahoma Aquifer System

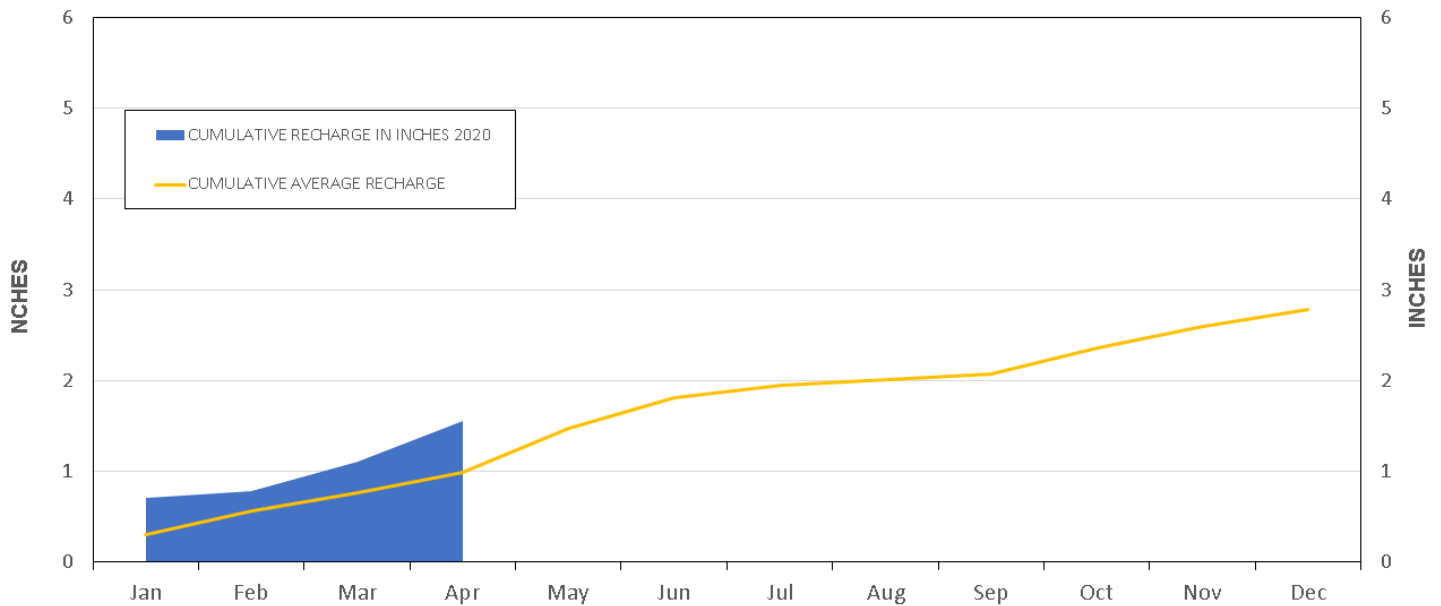
AQUIFER RECHARGE APRIL 2020



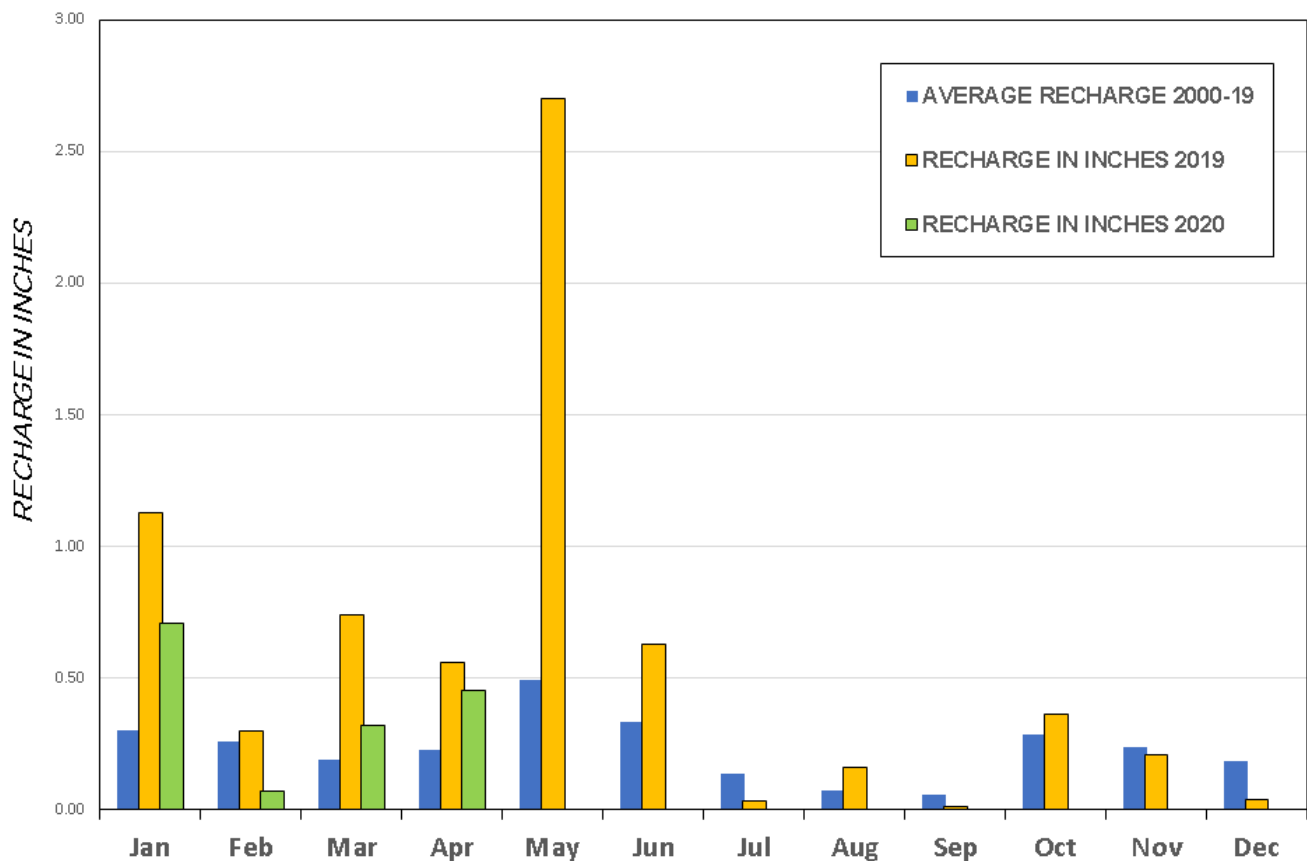
Recharge Charts

Central Oklahoma Aquifer System

ACCUMULATED RECHARGE 2020

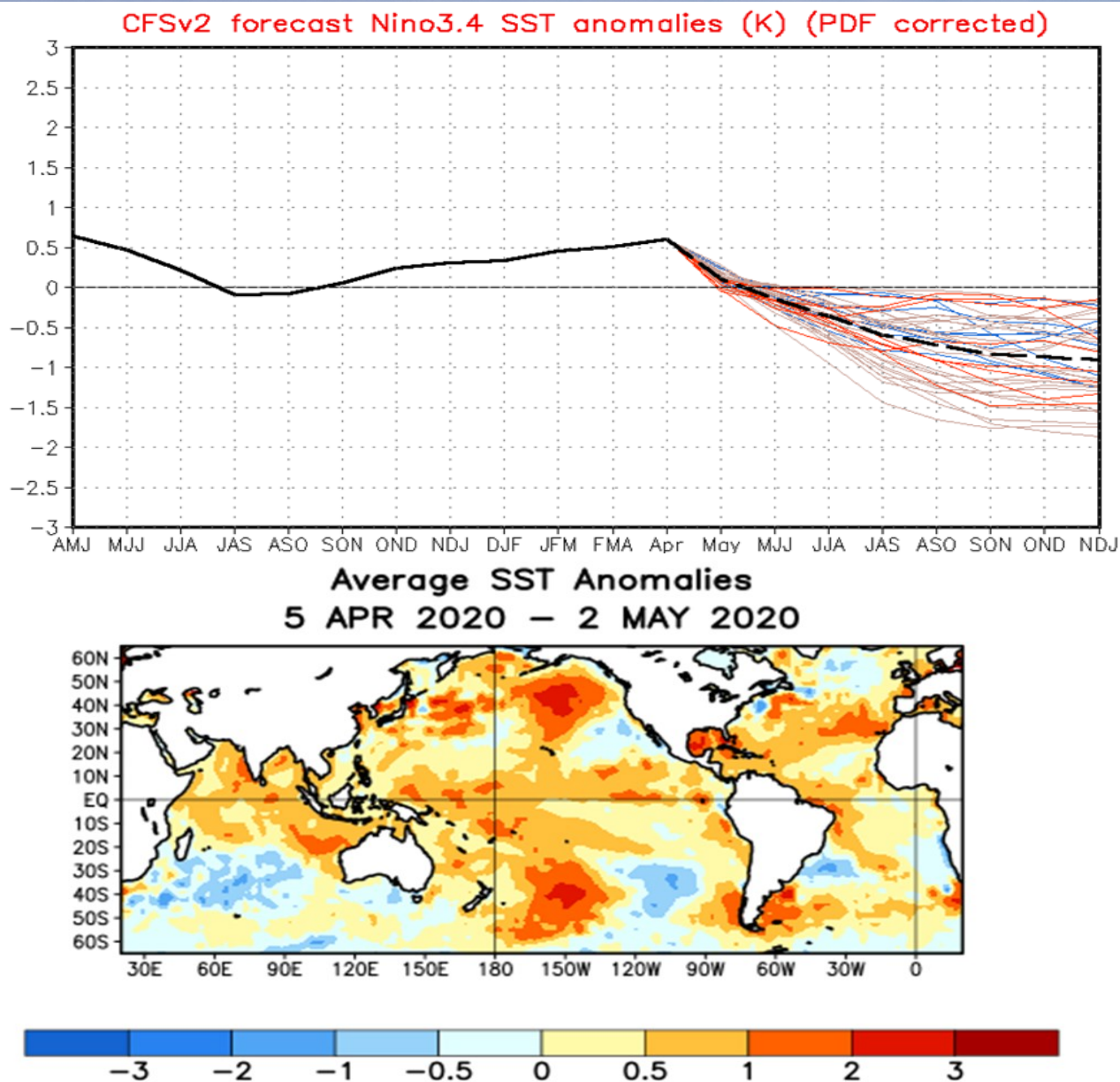


MONTHLY AQUIFER RECHARGE



ENSO Cycle

Recent Evolution, Current Status and Predictions



Summary

ENSO Alert System Status: Not Active

- ENSO-neutral conditions are present.
- Equatorial sea surface temperatures (SSTs) are near-to-above average across most of the Pacific Ocean.
- The tropical atmospheric circulation is consistent with ENSO-neutral.
- ENSO-neutral is favored for the Northern Hemisphere summer 2020 (~60% chance), remaining the most likely outcome through autumn.