

NOAA Climate Science & Services

Monthly Climate Update

A look back at March and Year-to-Date

A preview of May-July

Jake Crouch

Climate Scientist

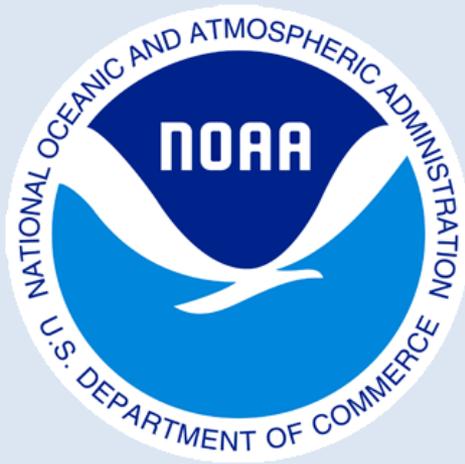
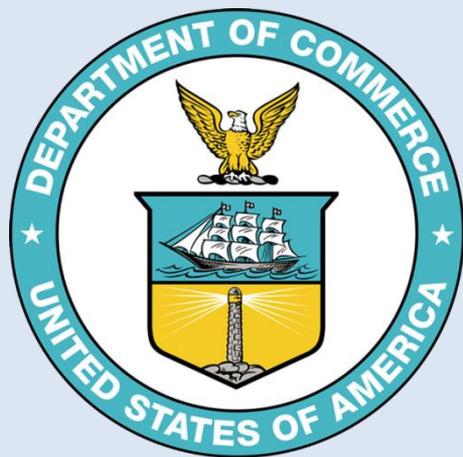
NOAA's National Climatic Data Center

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NOAA Regional Climate Services Director
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Meteorologist and Seasonal Forecaster
NOAA's Climate Prediction Center

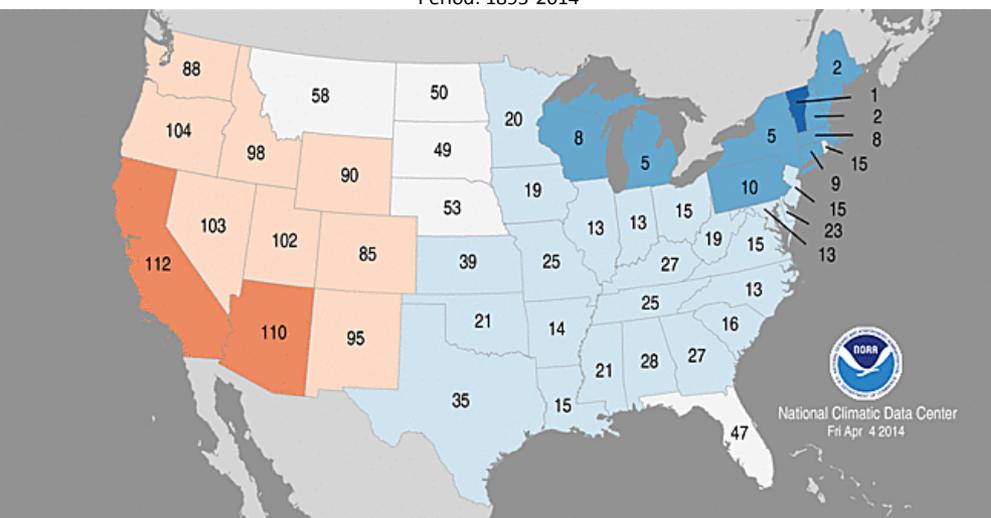


U.S. Temperature: March 2014

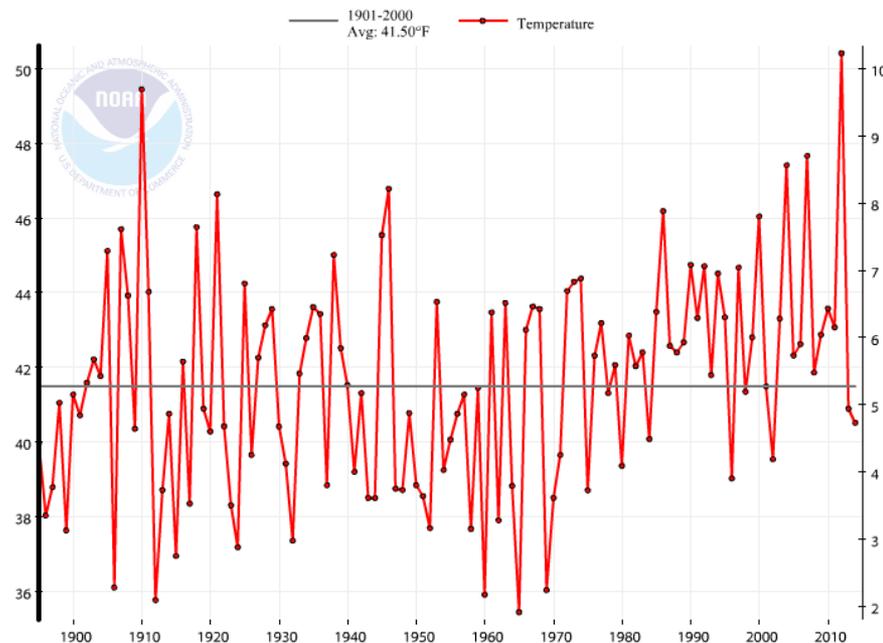
Temperature: 40.5°F, 1.0° below 20th century average
Warm in the West and cold in the East

Statewide Temperature Ranks

March 2014
Period: 1895-2014



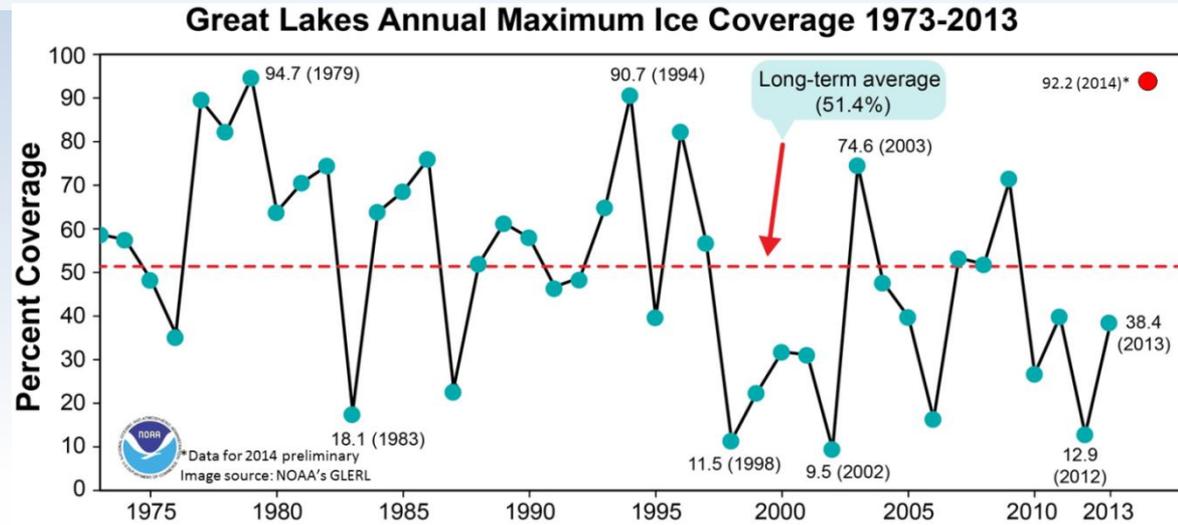
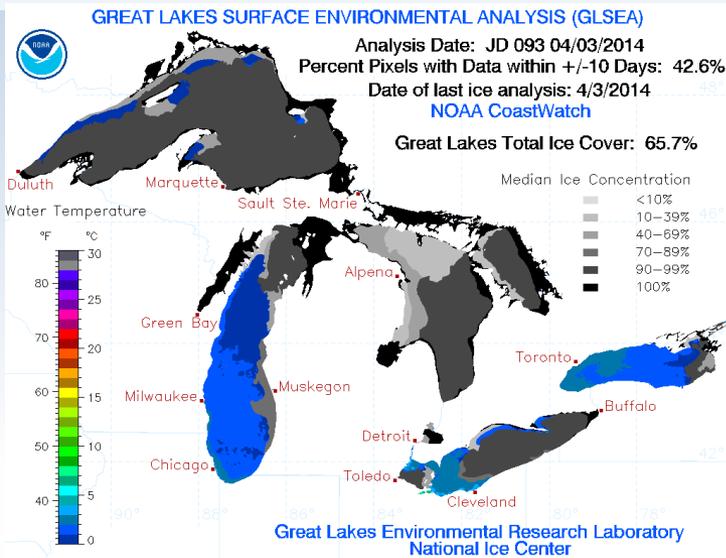
Contiguous U.S., Temperature, March



- Continuation of temperature pattern seen over the past several months
- Vermont had its coldest March on record
- Warm temperatures in the West, where California was top 10 warm



Great Lakes Ice Cover



- Cold temperatures in the Great Lakes region resulted in ice cover peaking at 92.2 percent in early March – the 2nd largest extent on record
- Previous record occurred in mid-February of 1979
- Ice extent on Lake Michigan reached 93.3 percent, setting a new record
- Ice cover impacted commercial shipping through the lakes, but should help lakes recover from record low water levels that occurred in early 2013

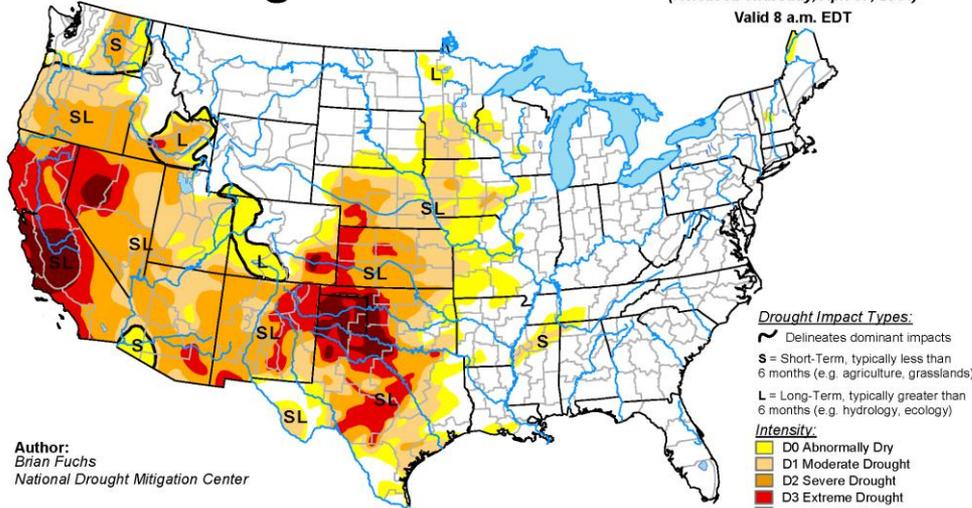
March 2014 US Drought

37.9% of CONUS in Drought

- Drought intensified in parts of the Plains and Midwest – agricultural and wildfire impacts
- Dismal snowpack in parts of the West, with little time left in season to make up deficits

U.S. Drought Monitor

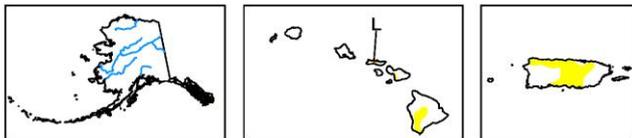
April 15, 2014
(Released Thursday, Apr. 17, 2014)
Valid 8 a.m. EDT



Author:
Bryan Fuchs
National Drought Mitigation Center

Drought Impact Types:
 ~ Delineates dominant impacts
S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)
Intensity:
 D0 Abnormally Dry
 D1 Moderate Drought
 D2 Severe Drought
 D3 Extreme Drought
 D4 Exceptional Drought

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

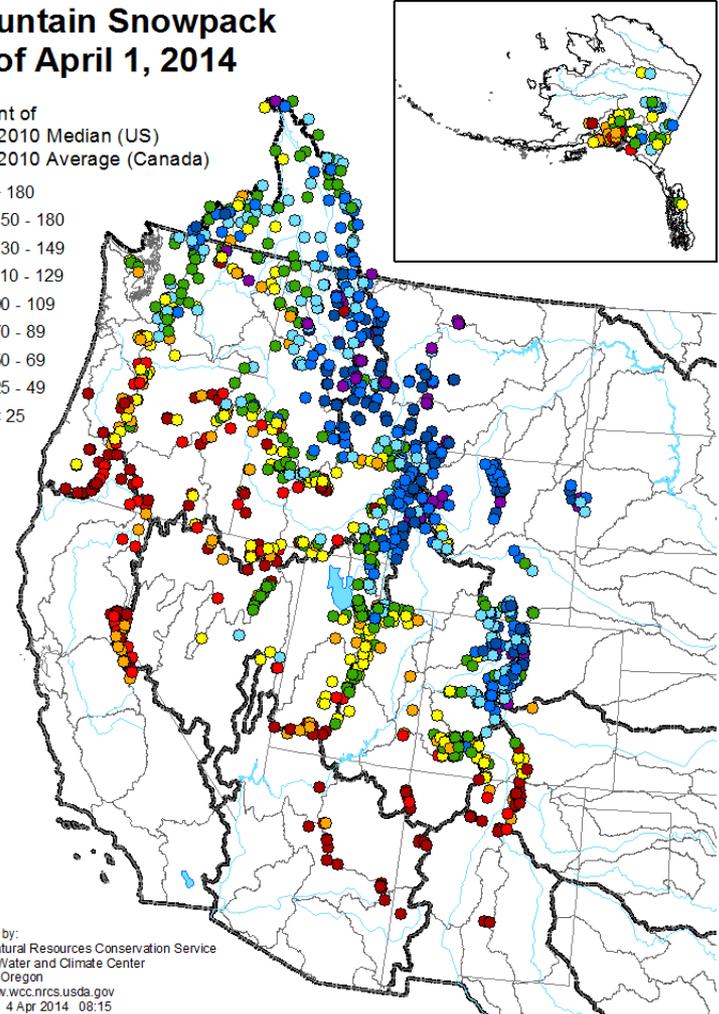


USDA
 National Drought Mitigation Center
<http://droughtmonitor.unl.edu/>

Mountain Snowpack as of April 1, 2014

Percent of
1981-2010 Median (US)
1981-2010 Average (Canada)

- > 180
- 150 - 180
- 130 - 149
- 110 - 129
- 90 - 109
- 70 - 89
- 50 - 69
- 25 - 49
- < 25



Prepared by:
USDA Natural Resources Conservation Service
National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>
Created: 4 Apr 2014 08:15

U.S. Drought Monitor New Mexico

April 15, 2014
(Released Thursday, Apr. 17, 2014)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.50	99.50	97.47	79.77	24.88	0.22
Last Week 4/6/2014	0.49	99.51	97.49	68.38	24.62	0.00
3 Months Ago 1/4/2014	0.39	99.61	79.94	33.13	3.97	0.00
Start of Calendar Year 1/1/2013	0.39	99.61	75.21	32.68	3.96	0.00
Start of Water Year 10/1/2013	1.66	98.34	74.92	37.81	3.39	0.00
One Year Ago 4/16/2013	0.00	100.00	98.68	93.95	58.73	4.36

Intensity:

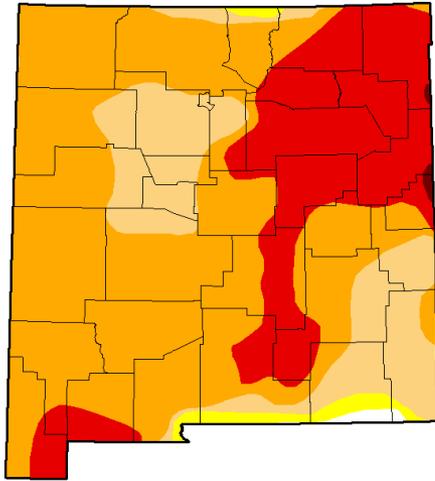


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U.S. Drought Monitor Oklahoma

April 15, 2014
(Released Thursday, Apr. 17, 2014)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	6.73	93.27	78.95	54.81	26.51	13.71
Last Week 4/6/2014	6.34	93.66	76.48	52.63	26.39	13.54
3 Months Ago 1/4/2014	35.17	64.83	38.04	18.99	4.84	2.40
Start of Calendar Year 1/1/2013	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 4/16/2013	8.09	91.91	81.91	57.61	33.47	7.62

Intensity:

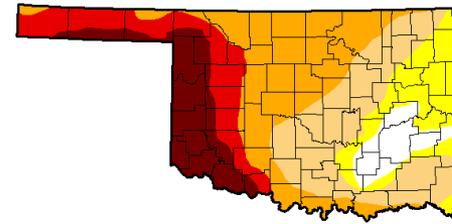


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U.S. Drought Monitor Texas

April 15, 2014
(Released Thursday, Apr. 17, 2014)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	17.64	82.36	65.67	44.14	28.98	10.31
Last Week 4/6/2014	17.48	82.52	63.58	40.46	27.60	7.08
3 Months Ago 1/4/2014	26.18	73.82	44.54	21.59	6.68	0.79
Start of Calendar Year 1/1/2013	28.48	71.52	43.84	21.15	5.82	0.79
Start of Water Year 10/1/2013	6.62	93.38	70.95	25.08	4.01	0.12
One Year Ago 4/16/2013	1.29	98.71	91.31	72.30	34.82	12.19

Intensity:

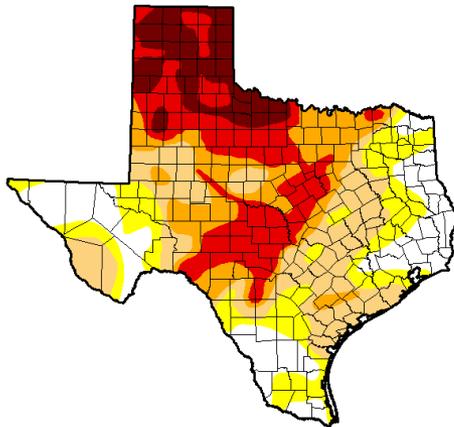


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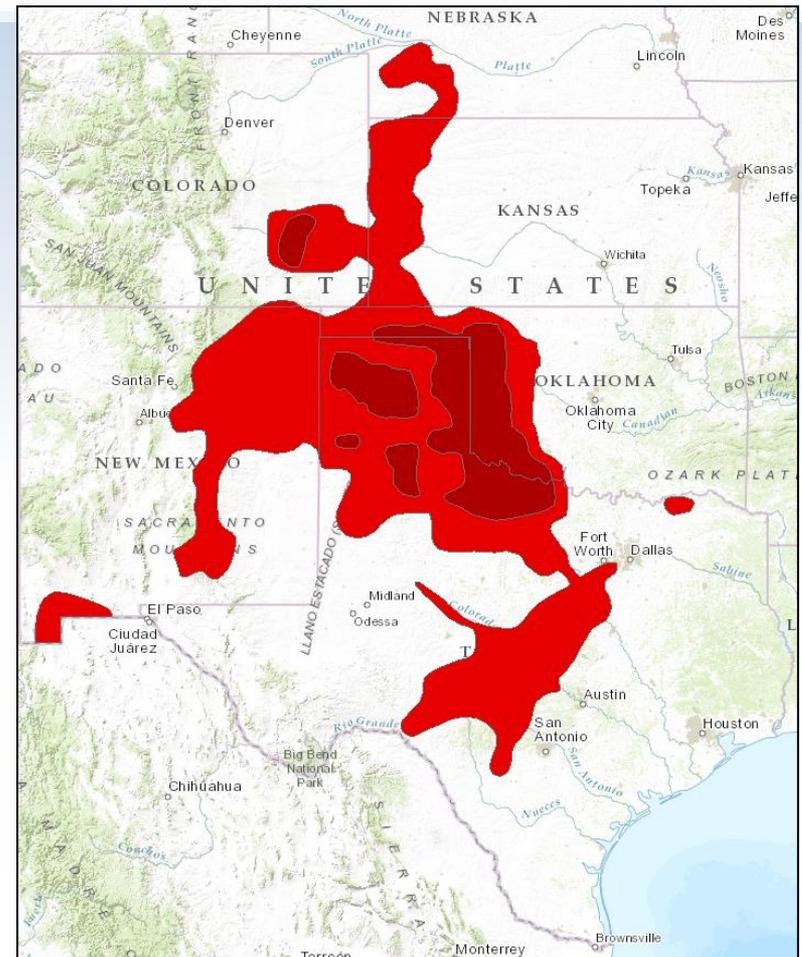
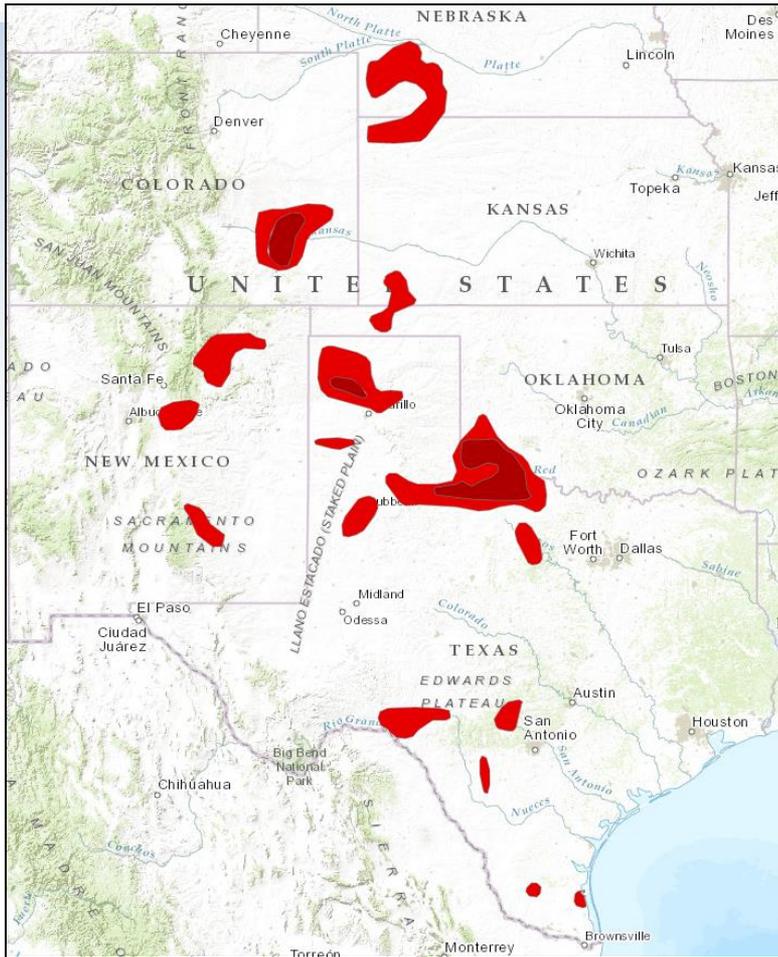
<http://droughtmonitor.unl.edu/>



- Nearly 2 million Southern Plains residents are currently suffering through extreme or exceptional drought
- The number of affected residents in the region has more than doubled since the beginning of winter
- Most of the affected population is in Texas, in cities such as Lubbock, Amarillo, and Wichita Falls

Extreme and Exceptional Drought December 17, 2013

Extreme and Exceptional Drought April 8, 2014



The geographic extent of extreme and exceptional drought has increased nearly four-fold in Texas, over five-fold in Oklahoma, and nearly six-fold in New Mexico since the beginning of winter.



Since October 2010, it has been the driest such period in nearly a century in west Texas and southwest Oklahoma.

The regional economic and environmental impacts continue to be pronounced:

- Beef prices at highest point since 1987 (source: USDA)
- Texas reservoir levels nearly 500,000 acre-feet lower than at this time in 2013 (source: TWDB)
- Wichita Falls TX enacting Stage 5 water restrictions and exploring re-use of wastewater for drinking (source: wichitafallstx.gov)

Some relief is hoped for:

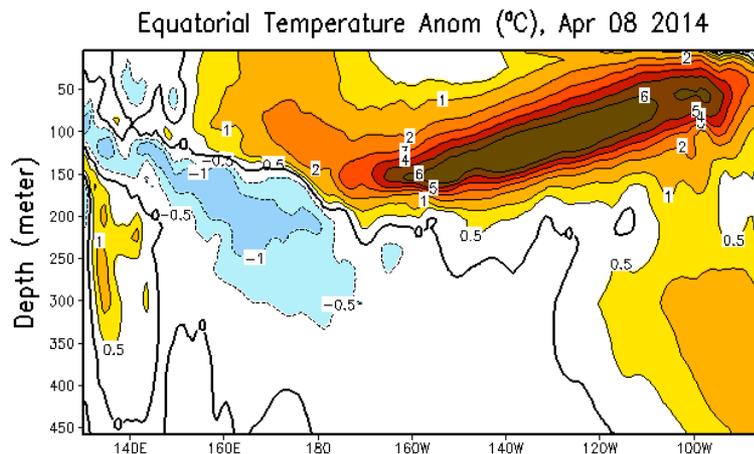
- May and June are typically the wettest months in Texas and Oklahoma
- The potential for El Nino development continues



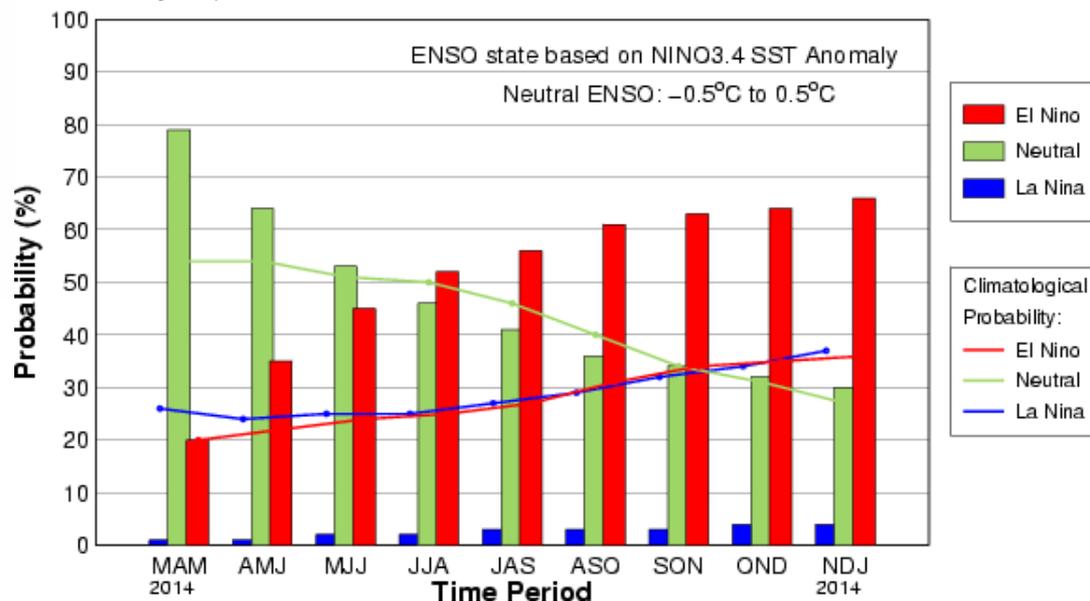
Dust storm northwest of Amarillo TX, March, 2014

Source: NOAA National Weather Service and @RaiderTex52

El Niño/La Niña Southern Oscillation (ENSO) Sea Surface Temperature Update

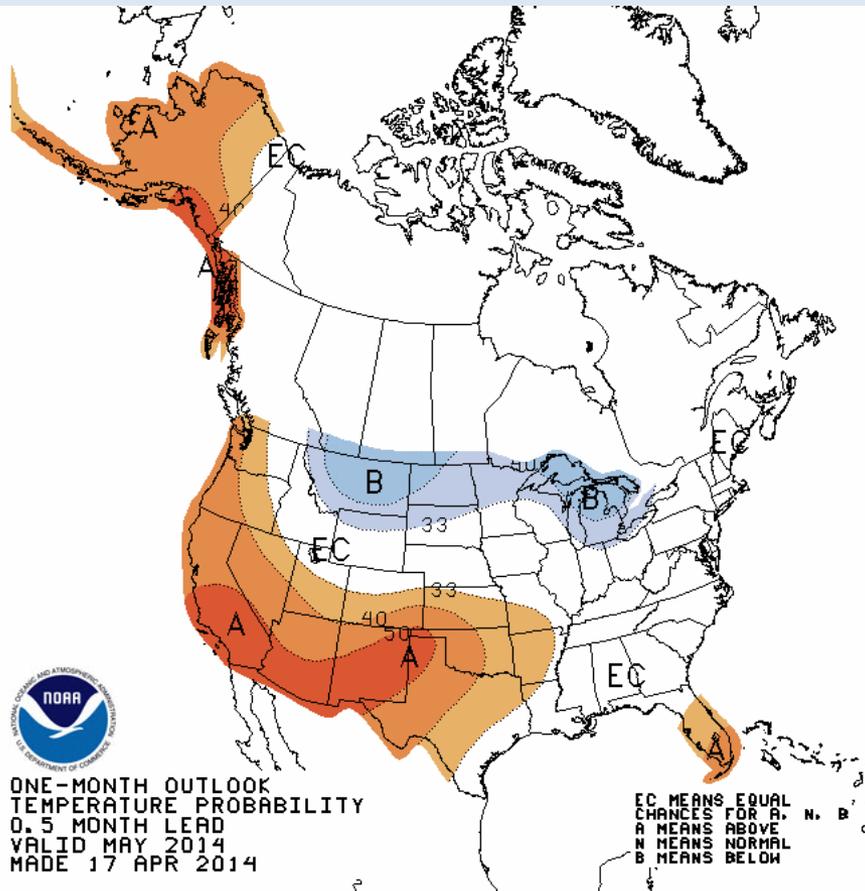


Early-Apr CPC/IRI Consensus Probabilistic ENSO Forecast

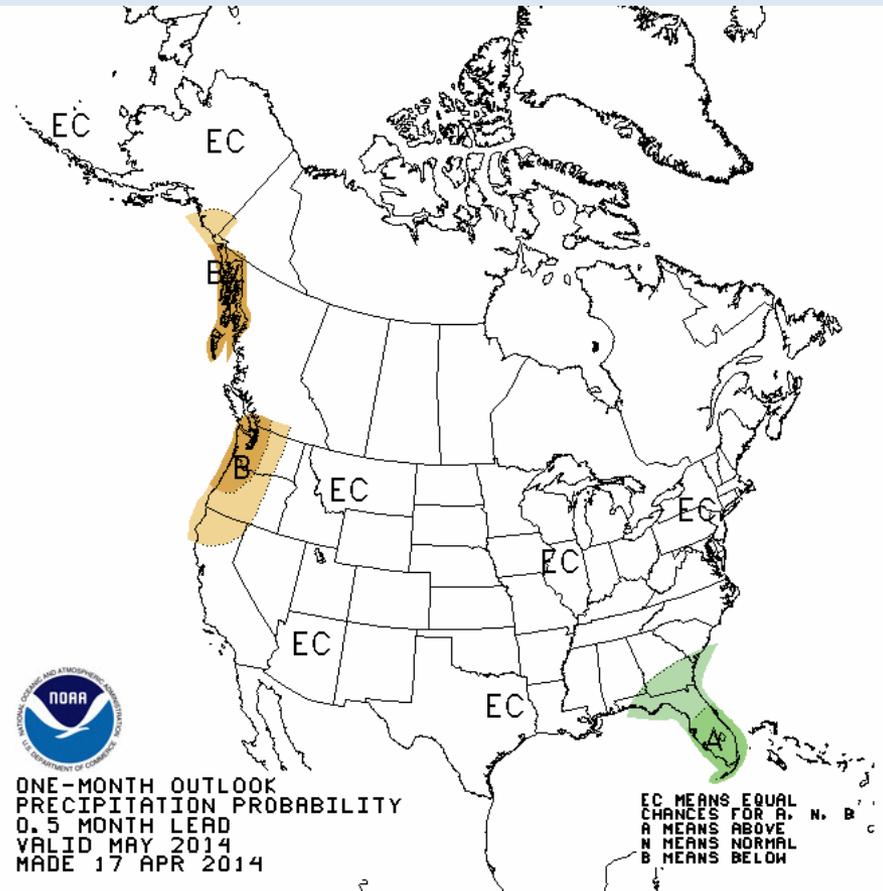


Monthly Forecast (May)

May Average Temperature Probability

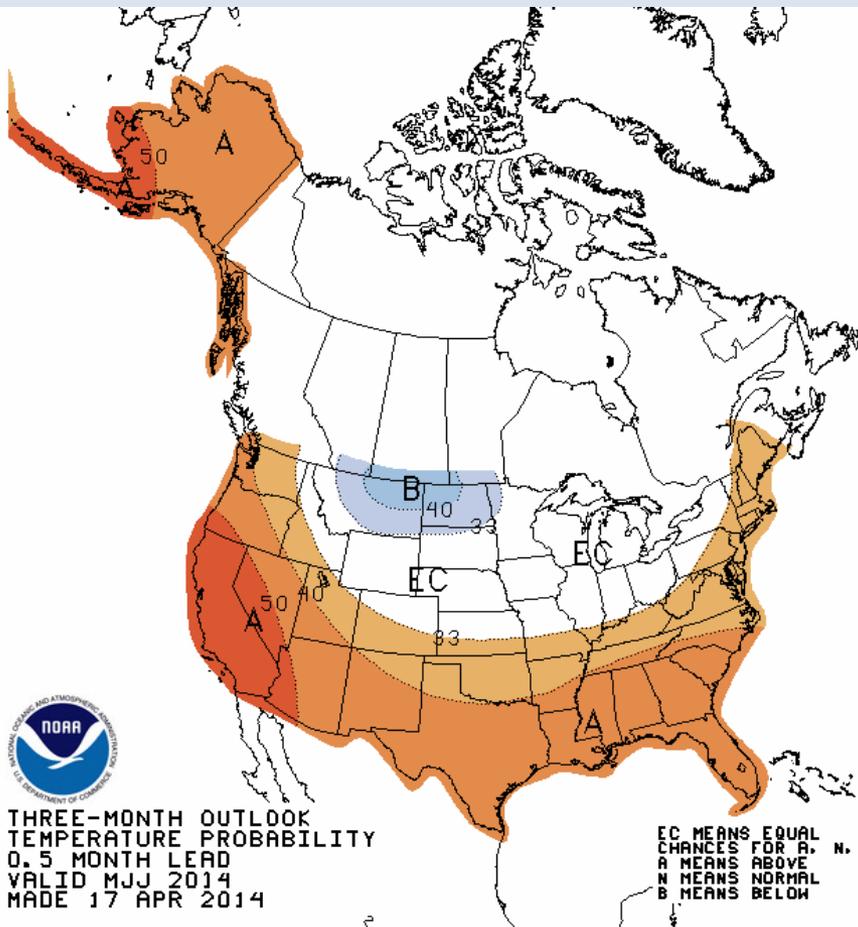


May Total Precipitation Probability



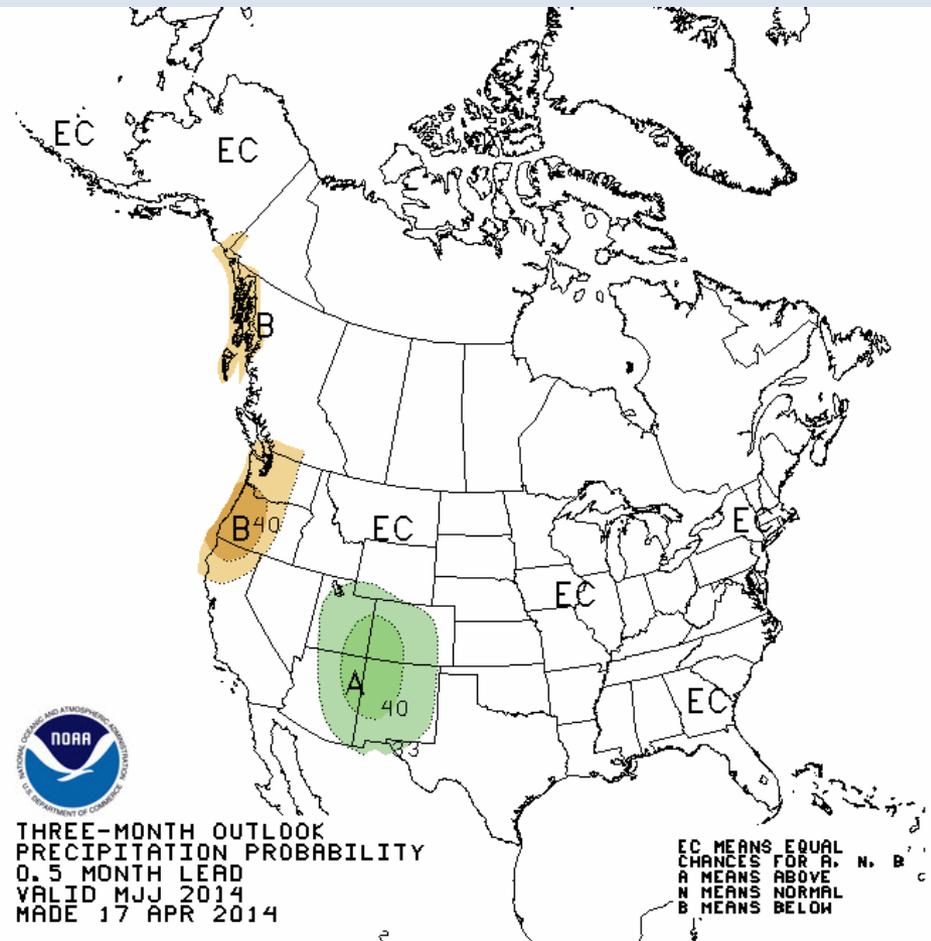
Seasonal Forecast (May-June-July)

May-June-July Average Temperature Probability



THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID MJJ 2014
MADE 17 APR 2014

May-June-July Total Precipitation Probability

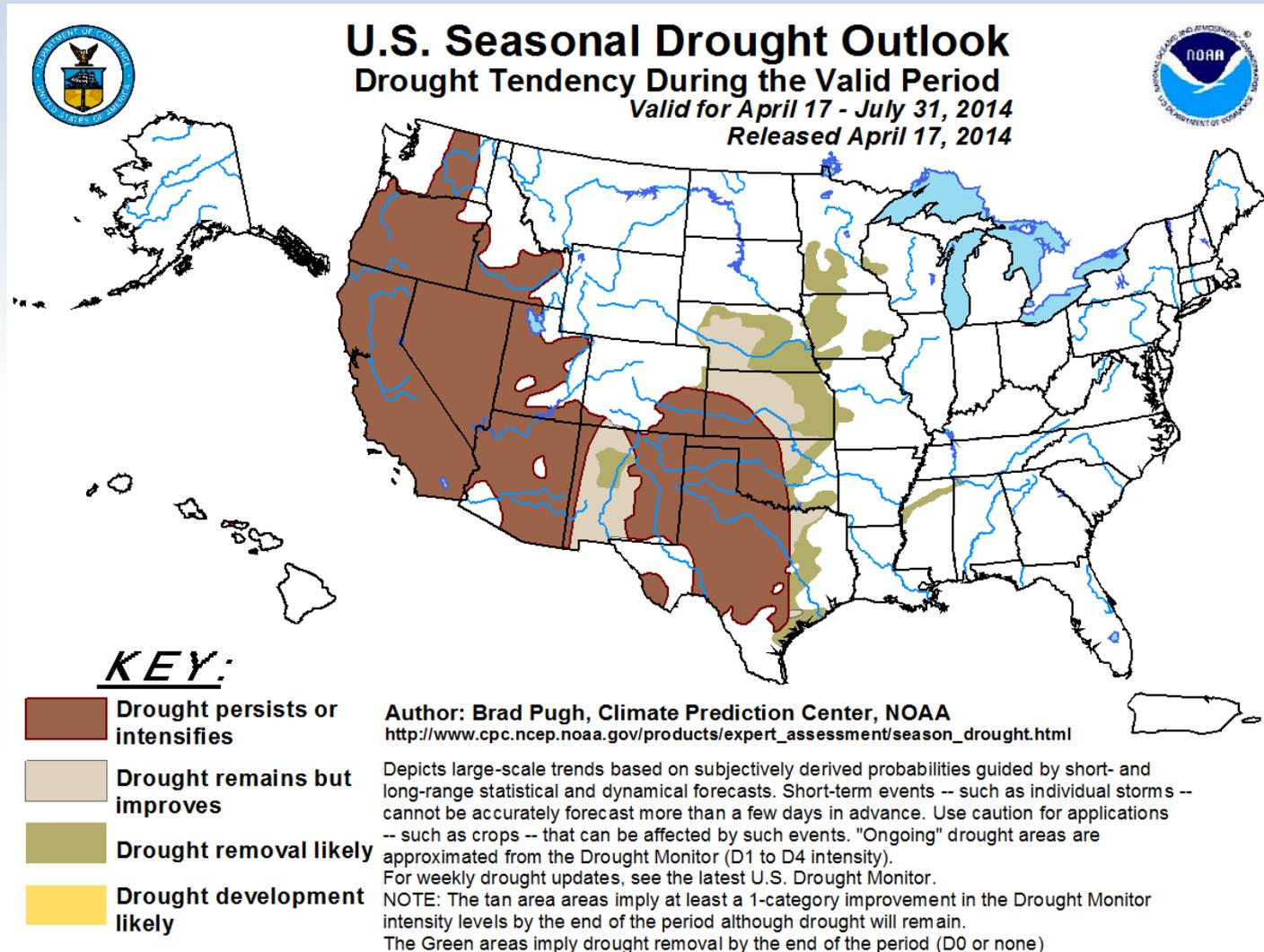


THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID MJJ 2014
MADE 17 APR 2014

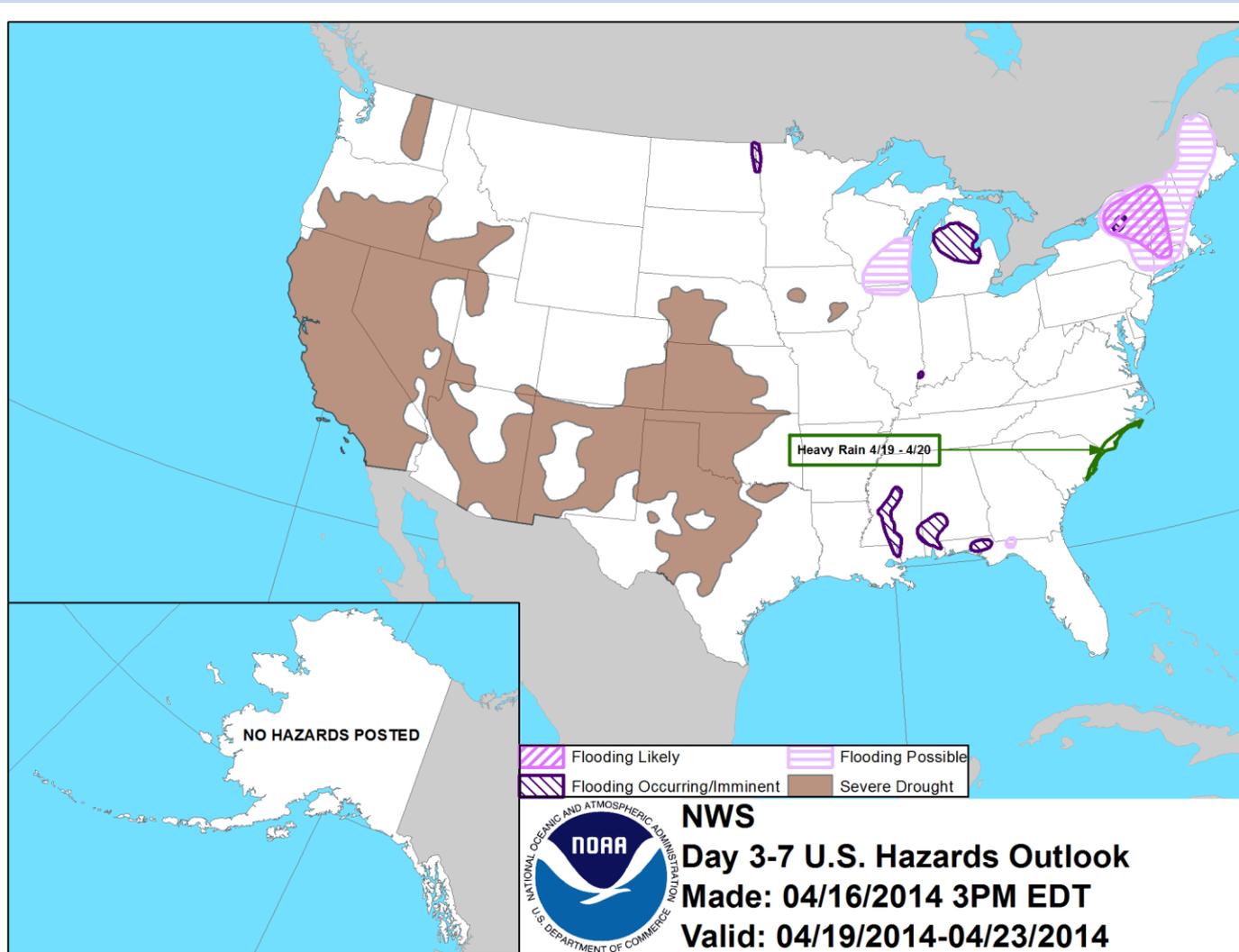


U.S. Drought Outlook

3-month forecast



U.S. Hazards Outlook (3-7 Days)



For More Information



Today's Presentation:

- <http://www.ncdc.noaa.gov/sotc/briefings>

NOAA's National Climatic Data Center: www.ncdc.noaa.gov

- Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/
- Dates for upcoming reports: <http://www.ncdc.noaa.gov/monitoring-references/dyk/monthly-releases>

NOAA's Climate Prediction Center: www.cpc.ncep.noaa.gov

U.S. Drought Monitor: <http://drought.gov>

Southern Climate Impacts Planning Program: <http://www.southernclimate.org>

Climate Portal: www.climate.gov

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