



Photo: Randy Halverson



Regional Drought & Climate Update July 7, 2017

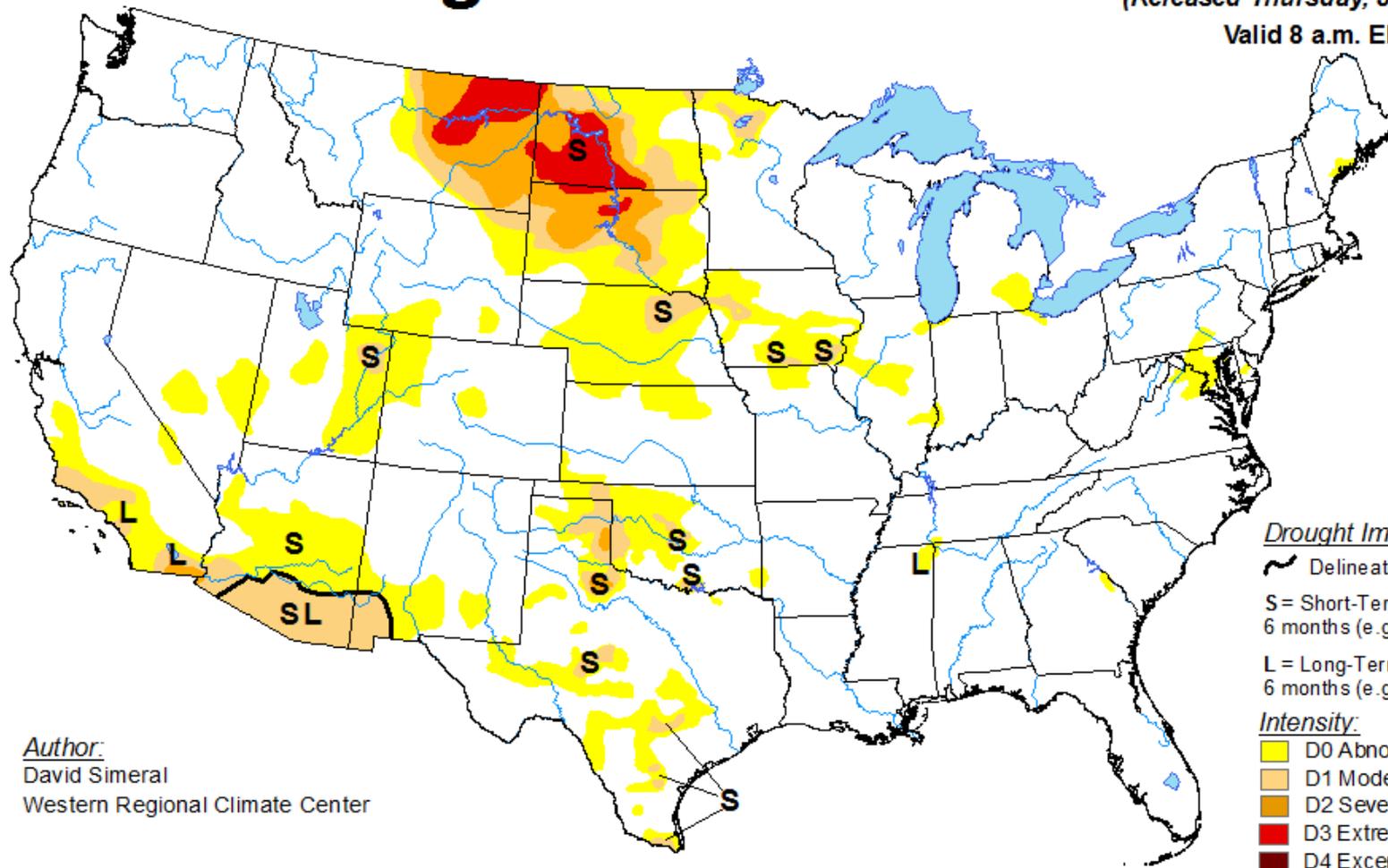
Laura Edwards
State Climatologist

U.S. Drought Monitor

July 4, 2017

(Released Thursday, Jul. 6, 2017)

Valid 8 a.m. EDT



Author:
David Simeral
Western Regional Climate 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

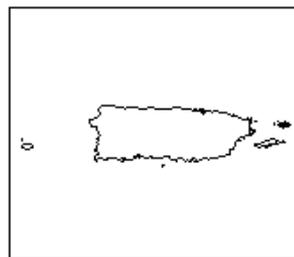
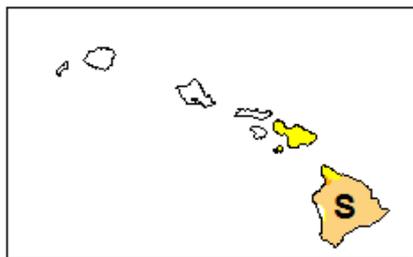
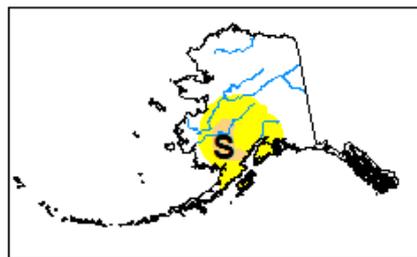
D1 Moderate Drought

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.



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

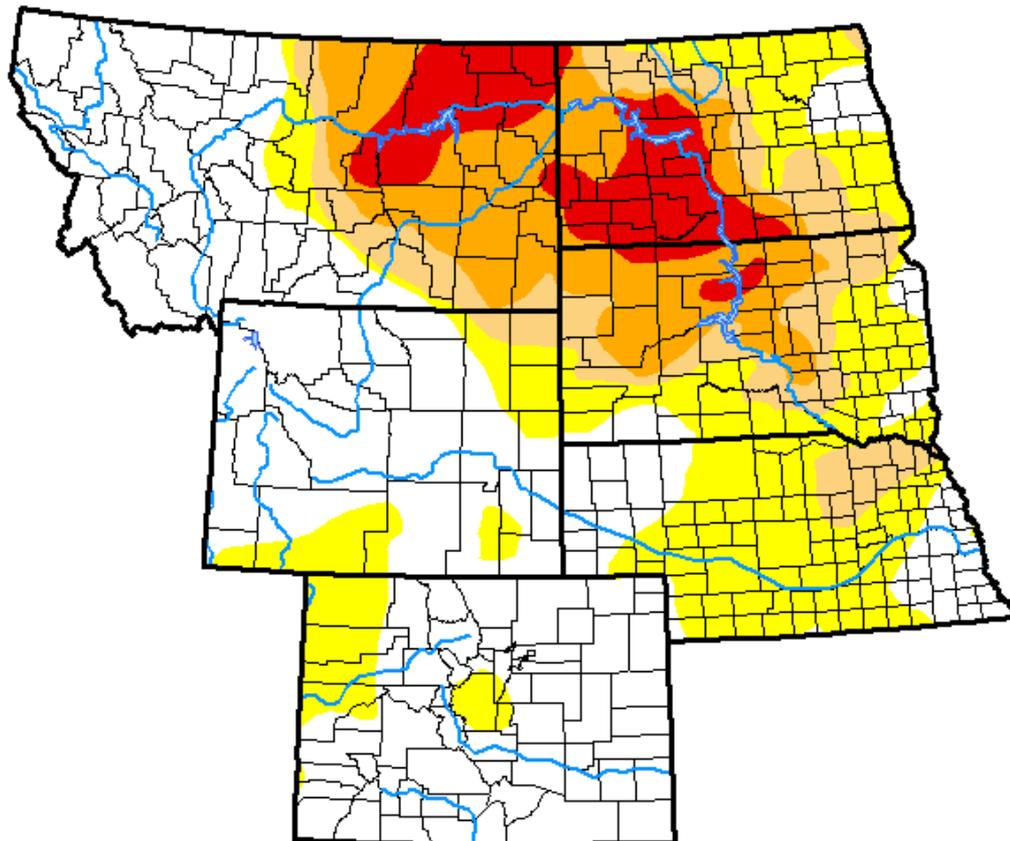
U.S. Drought Monitor

USDA Northern Plains Climate Hub

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Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	48.76	51.24	28.65	19.32	7.49	0.00
Last Week <i>06-27-2017</i>	51.26	48.74	26.99	16.44	5.10	0.00
3 Months Ago <i>04-04-2017</i>	77.04	22.96	8.58	0.55	0.00	0.00
Start of Calendar Year <i>01-03-2017</i>	61.47	38.53	15.95	1.47	0.00	0.00
Start of Water Year <i>09-27-2016</i>	62.66	37.34	14.21	3.88	0.23	0.00
One Year Ago <i>07-05-2016</i>	71.32	28.68	10.47	1.70	0.25	0.00

Intensity:

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

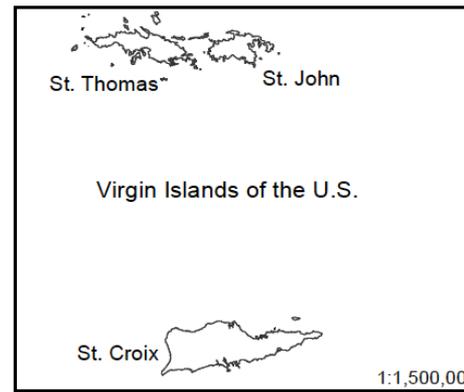
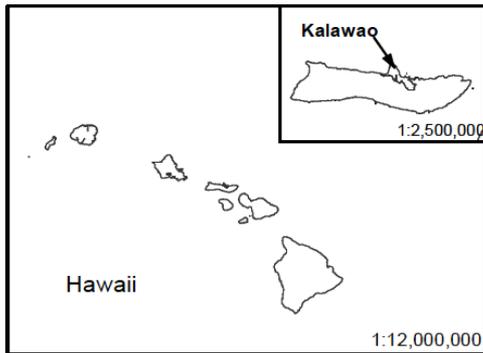
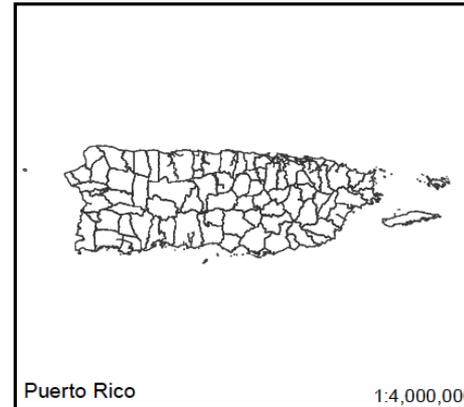
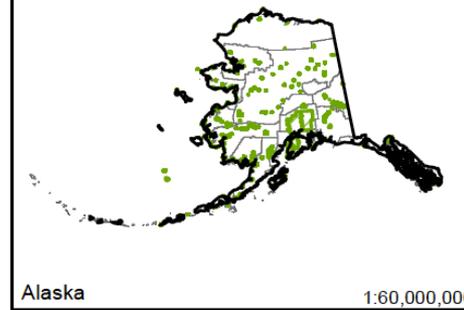
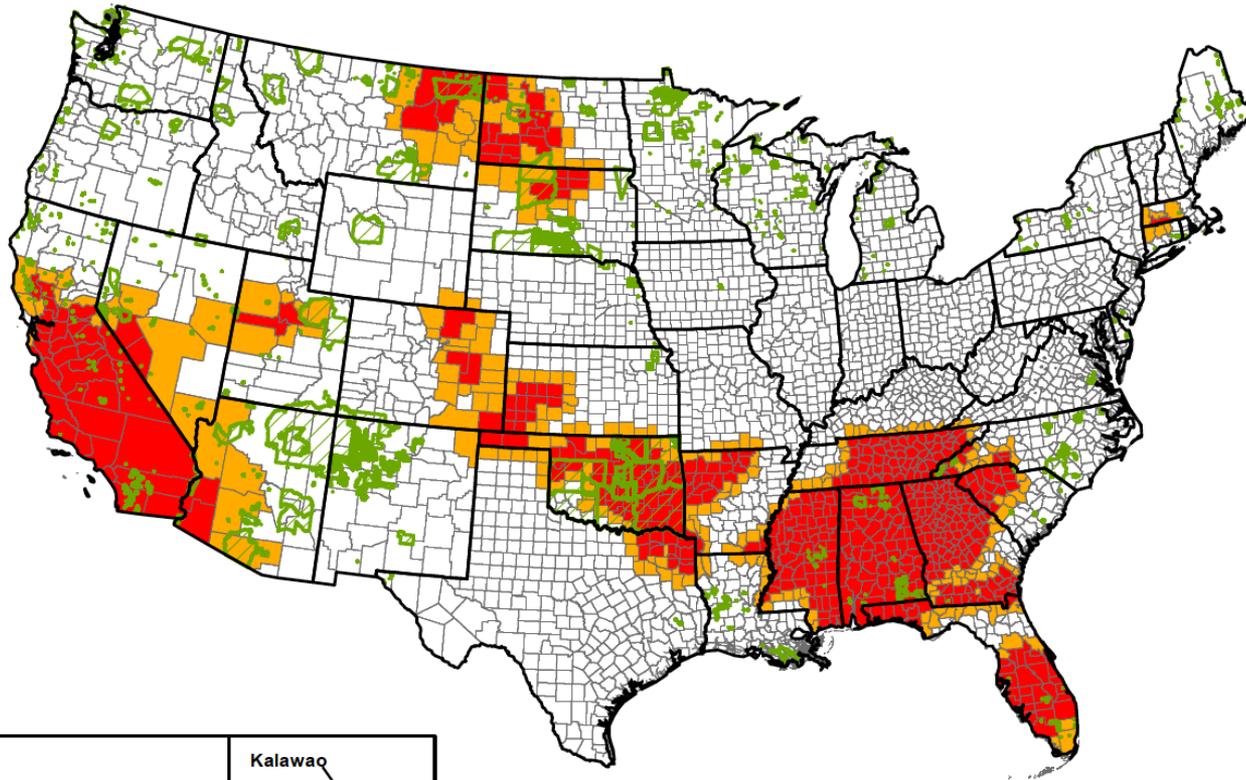
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David Simeral
Western Regional Climate Center



2017 Secretarial Drought Designations - All Drought



Secretarial Drought Designations for 2017

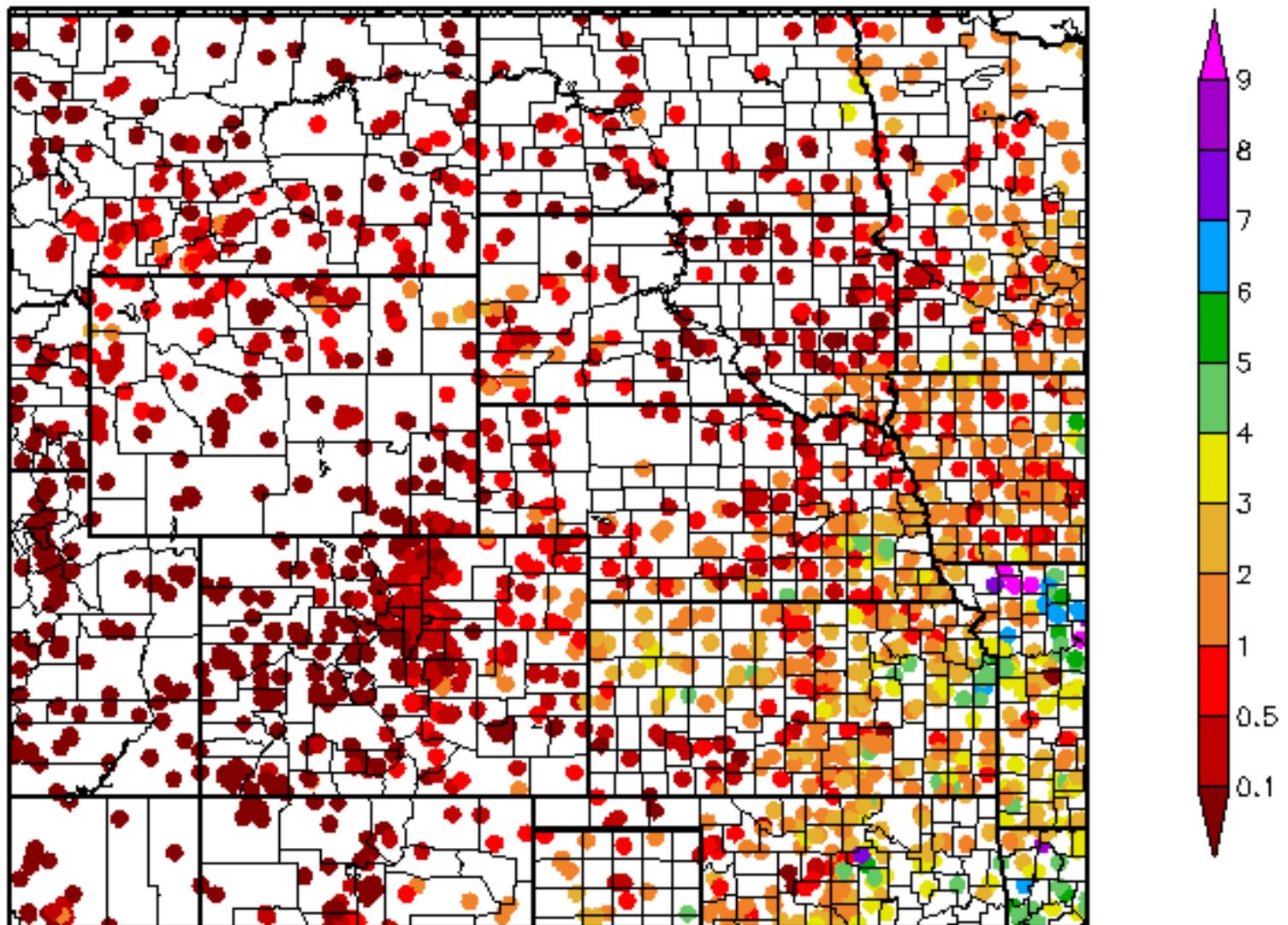
Disaster Incidents as of June 28, 2017

- State Boundary
- County Boundary
- Tribal Lands
- Primary Counties: 557
- Contiguous Counties: 271

1:25,000,000

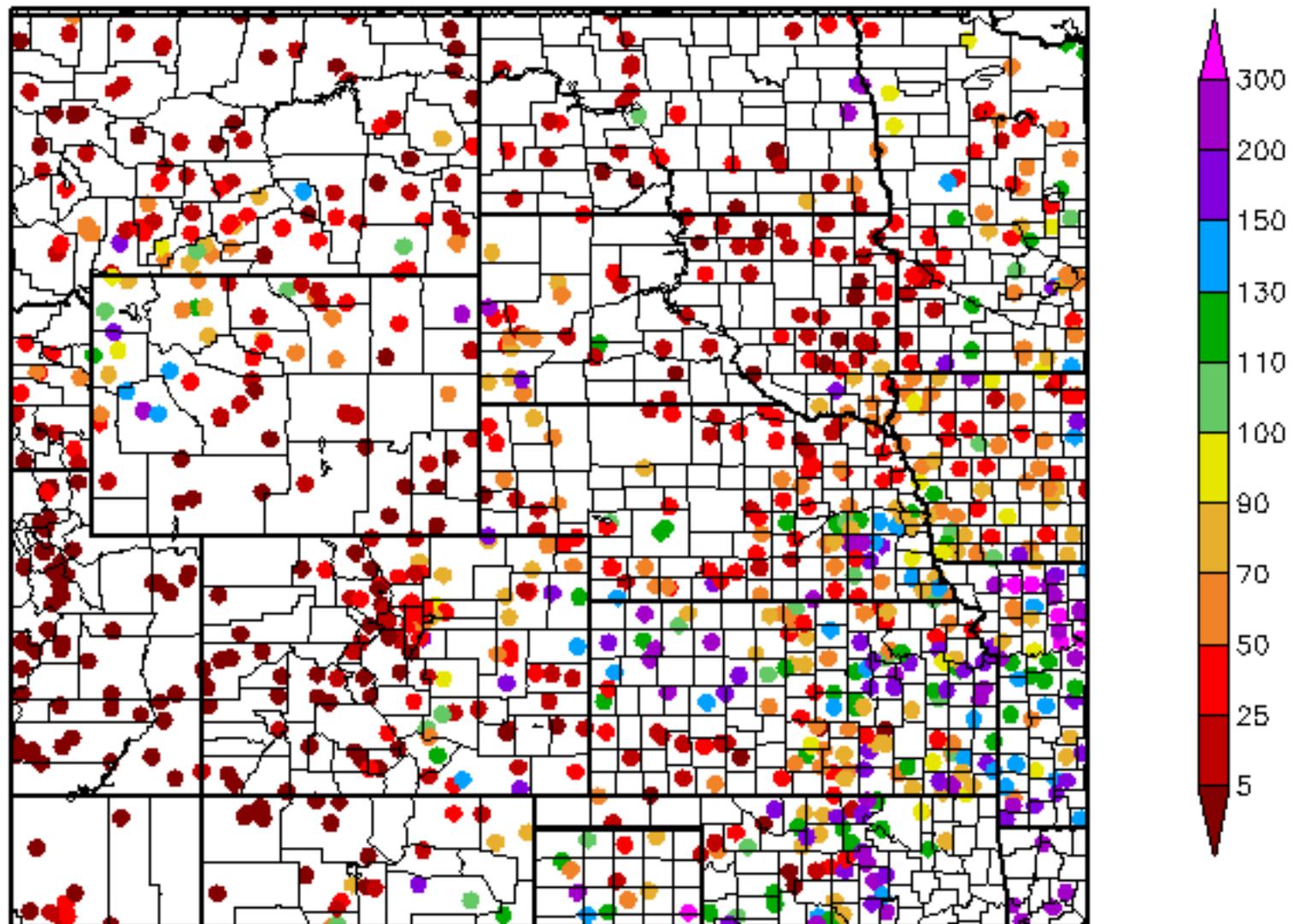
Precipitation (in)

6/23/2017 - 7/6/2017



Percent of Normal Precipitation (%)

6/23/2017 - 7/6/2017



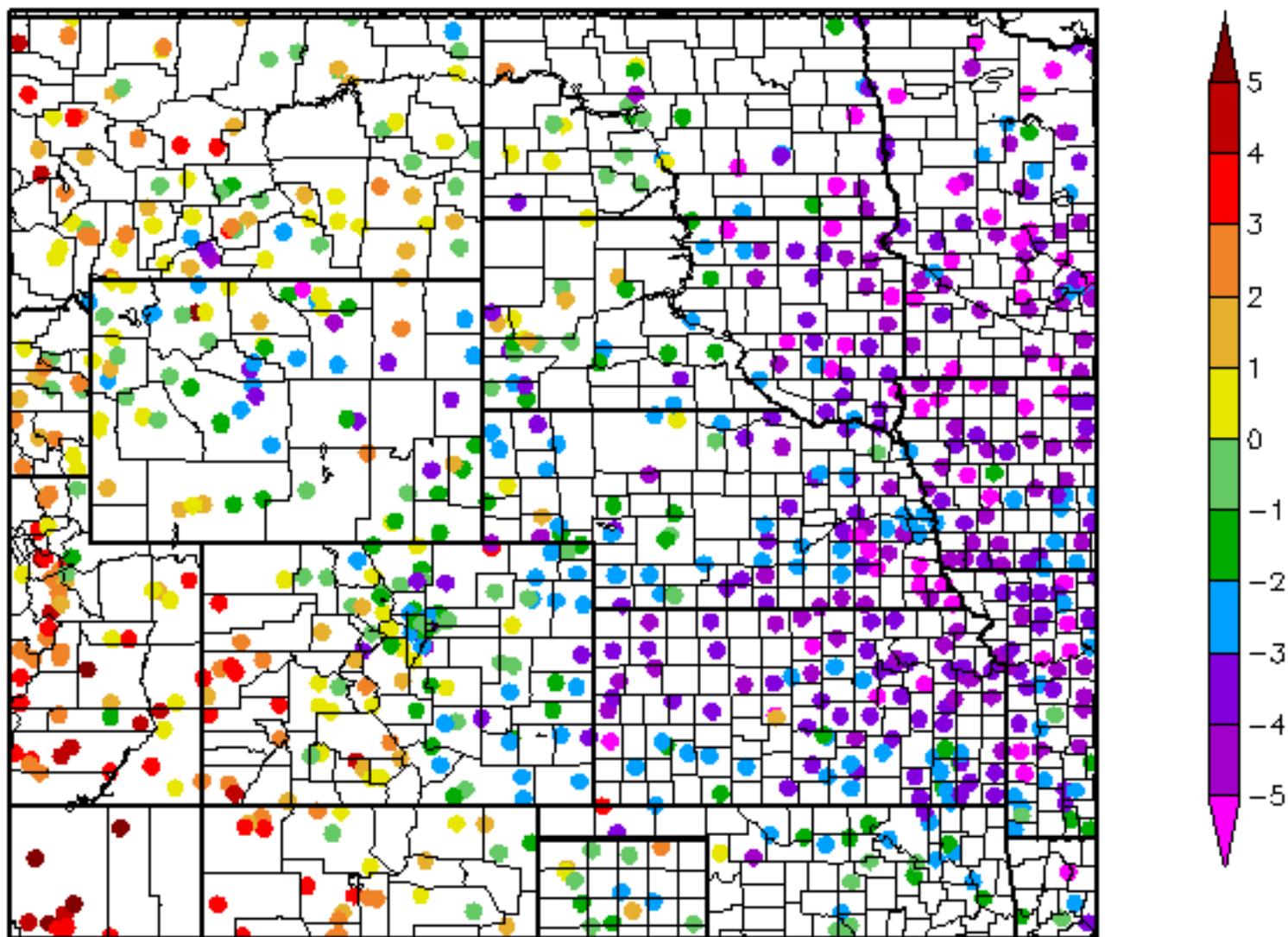
Northern Rockies & Plains region

MT, WY, ND, SD, NE

- June 2017: 8th driest on record, similar years 1936 and 1988
- May-June 2017: 8th driest on record, driest since 2006
- April-June 2017: 22nd driest on record, driest since 2006
- 6 northeast MT locations driest June on record. 12 locations driest April-June on record.

Departure from Normal Temperature (F)

6/23/2017 - 7/6/2017



Northern Rockies & Plains region

MT, WY, ND, SD, NE

- June 2017: 25th warmest. 2016 was warmer. Similar years: 1910, 1970
- April-June 2017: 26th warmest. 2016 was warmer. Similar years: 1926, 2001
- Feb-June 2017: 10th warmest on record. 2012 and 2016 were the record warmest in this region

VIC Soil Moisture Percentiles (wrt 1916-2004)
Central United States 20170704

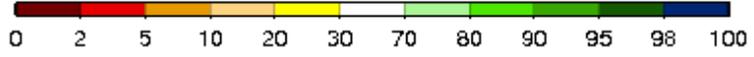
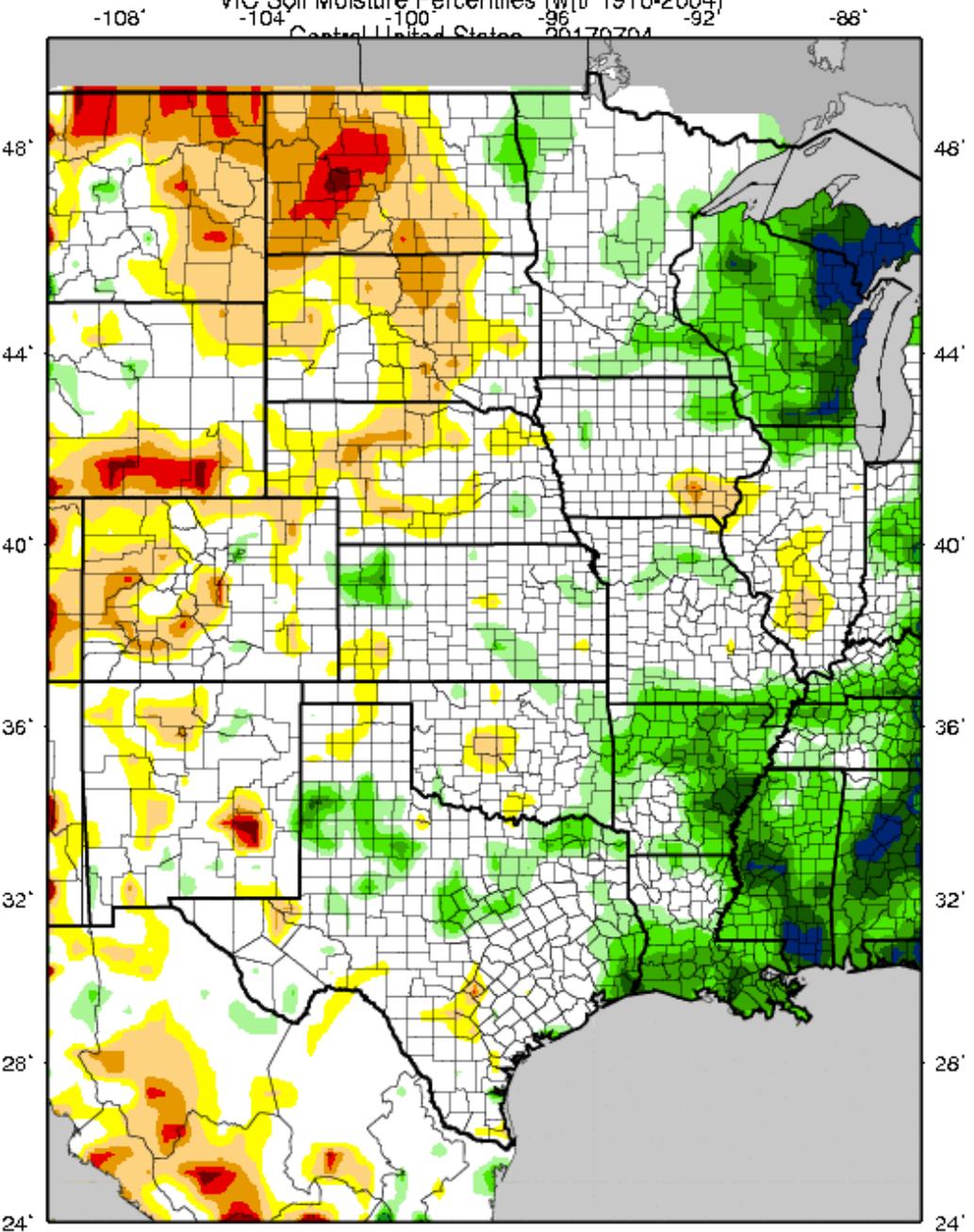
Soil Moisture



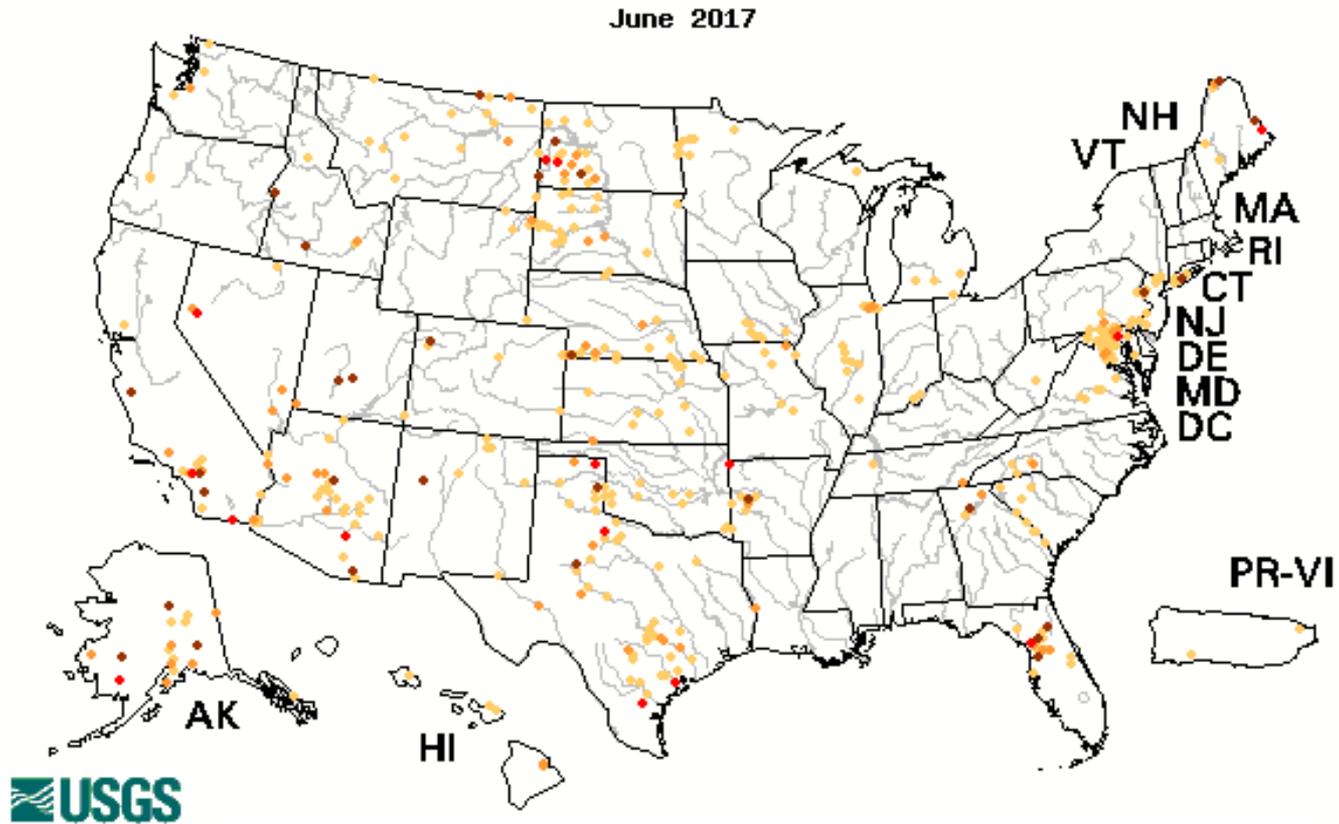
July 4, 2017

Percentile for this time of year, compared to 1916-2004 average

Source:
University of Washington
<http://www.hydro.washington.edu/forecast/monitor/>



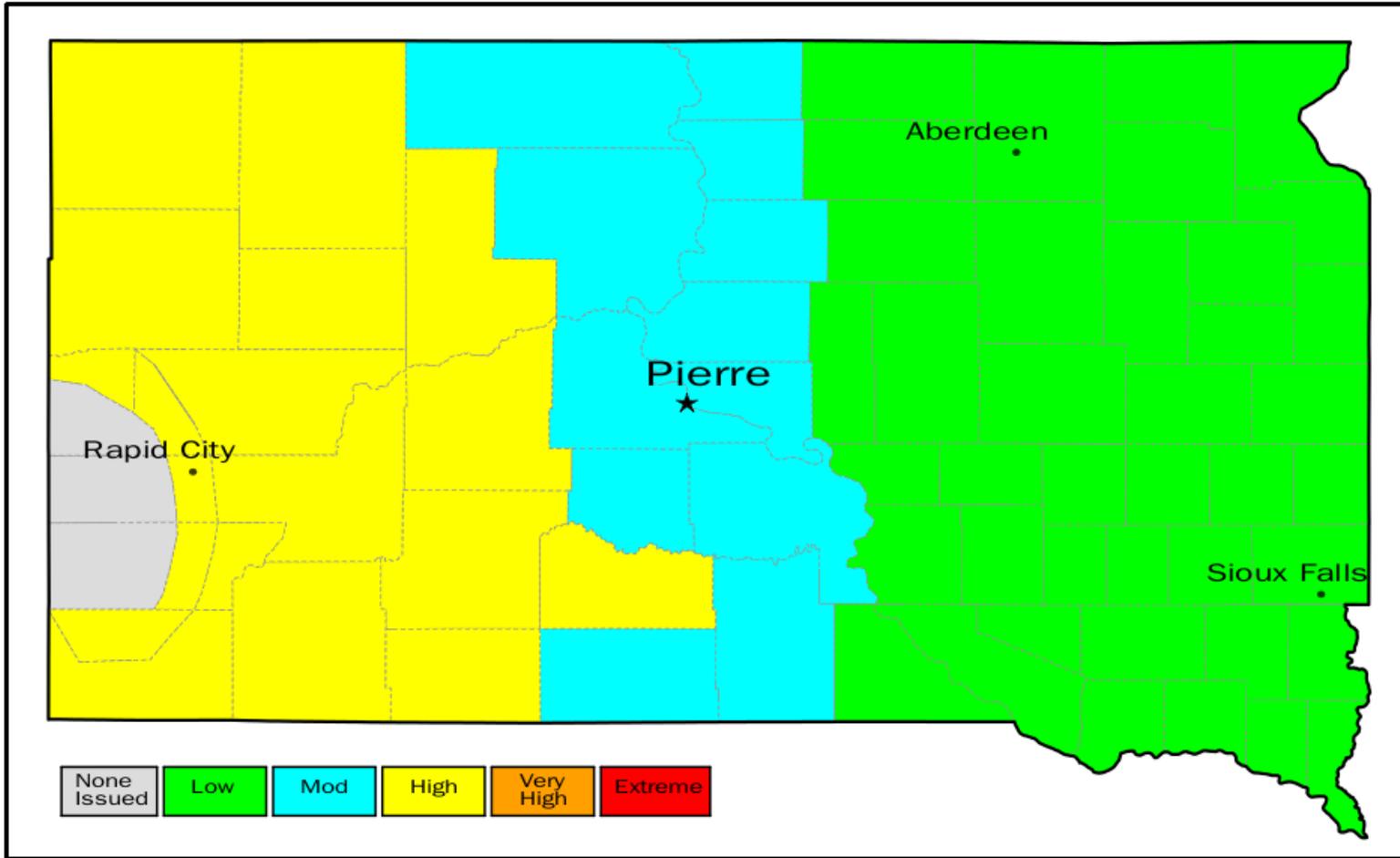
USGS Monthly Average Streamflow



Explanation - Percentile classes			
			
Low	<=5	6-9	10-24
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal

https://waterwatch.usgs.gov/index.php?id=mv0ld_dry

SD Grassland Fire Danger: Sat, Jul 8, 2017



National Weather Service
Aberdeen/Rapid City/Sioux Falls, SD
7/7/2017 12:10pm MDT

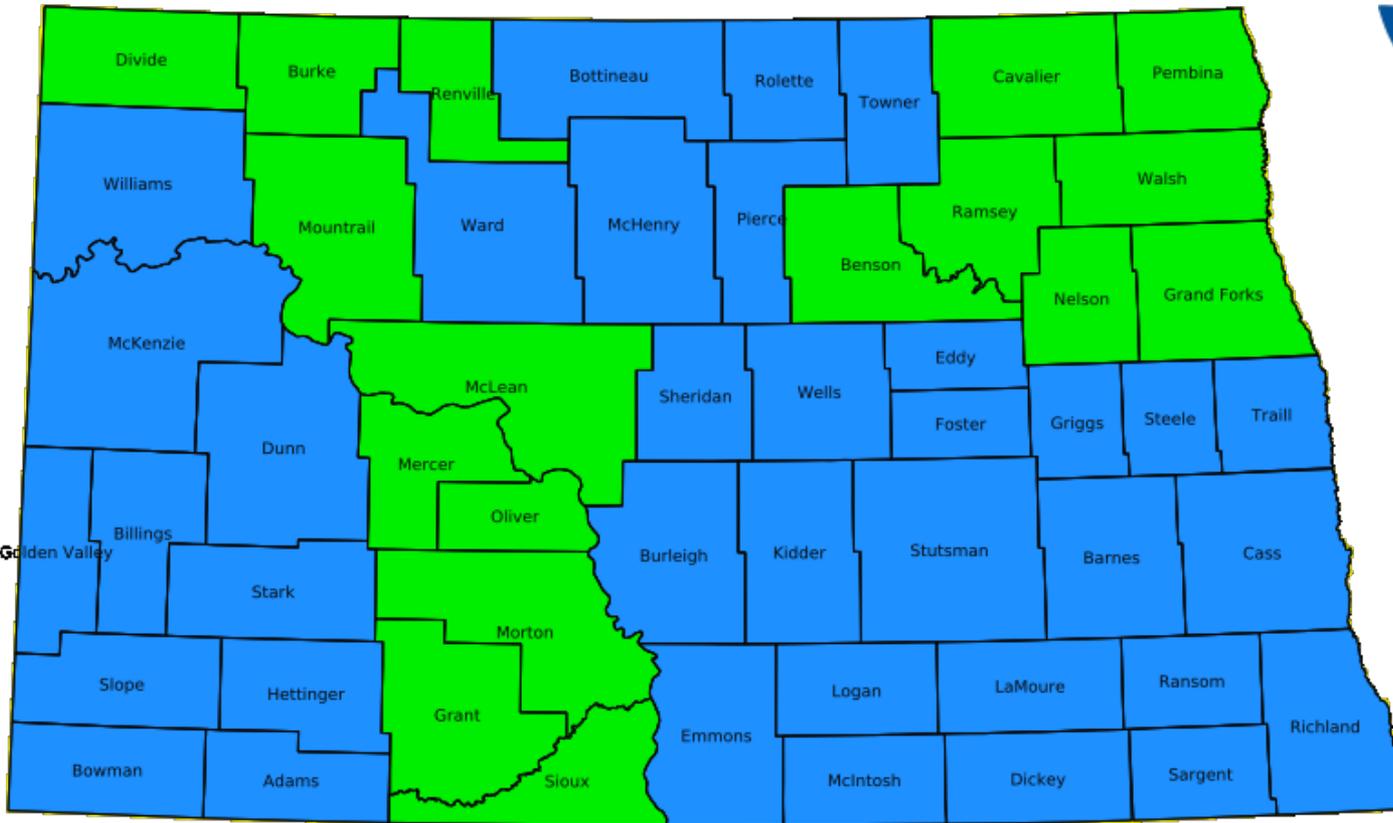
Follow Us:   
weather.gov

<https://www.weather.gov/unr/rfd>

North Dakota Adjective Fire Danger



- Low
- Moderate
- High
- Very High
- Extreme

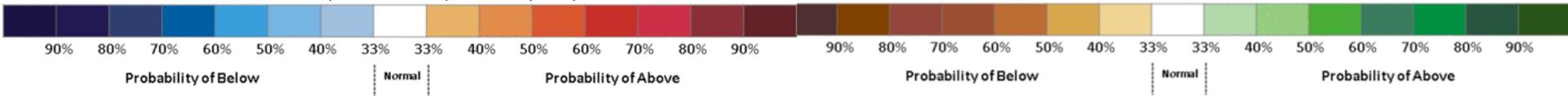
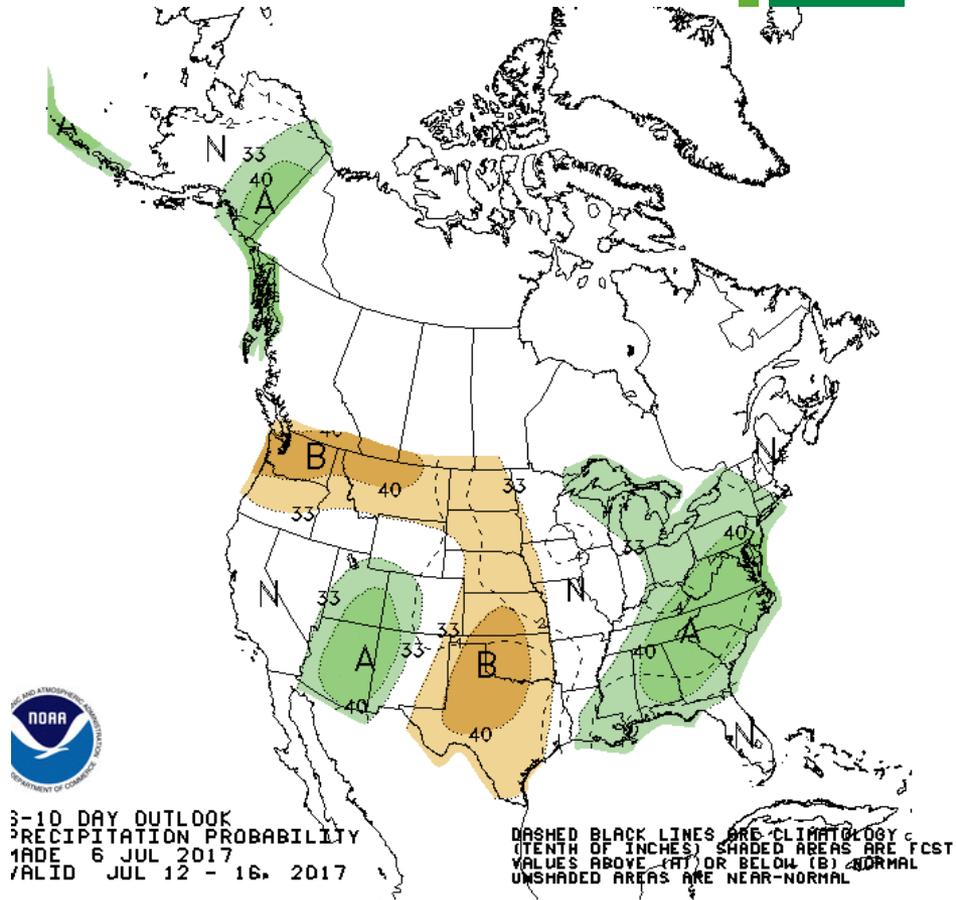
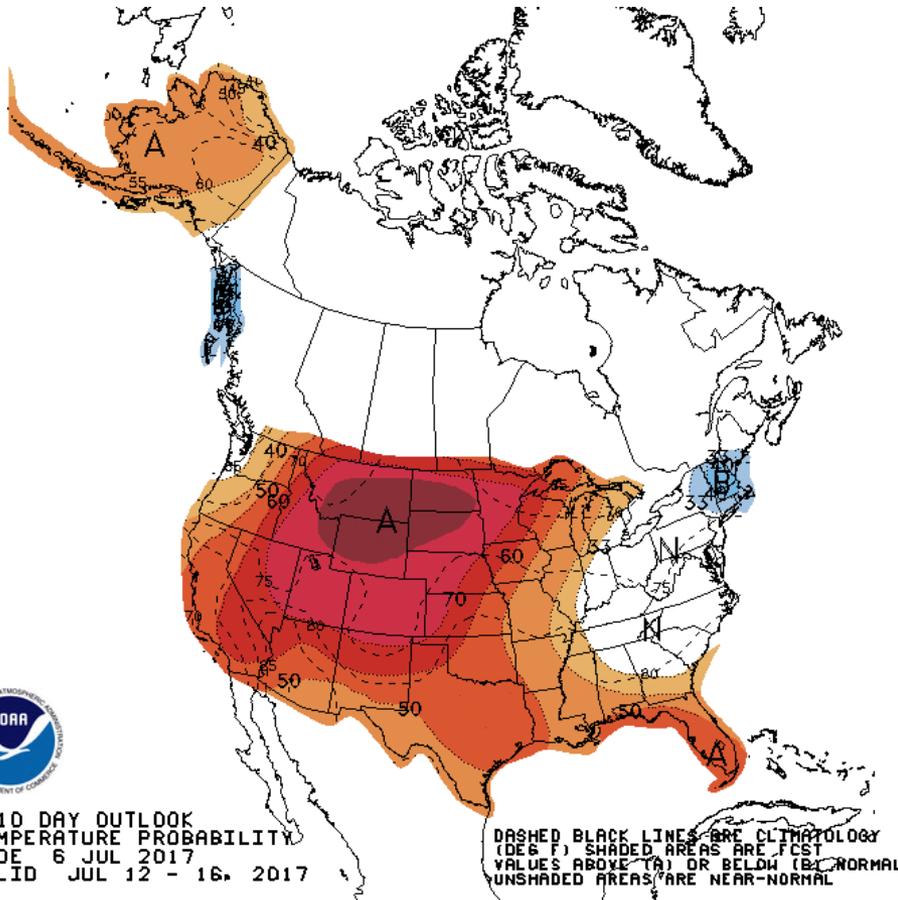


0100 PM Fri Jul 07 2017

Wildland Fire Assessment System (WFAS)

<http://wfas.net/index.php/north-dakota-fire-danger-rating>

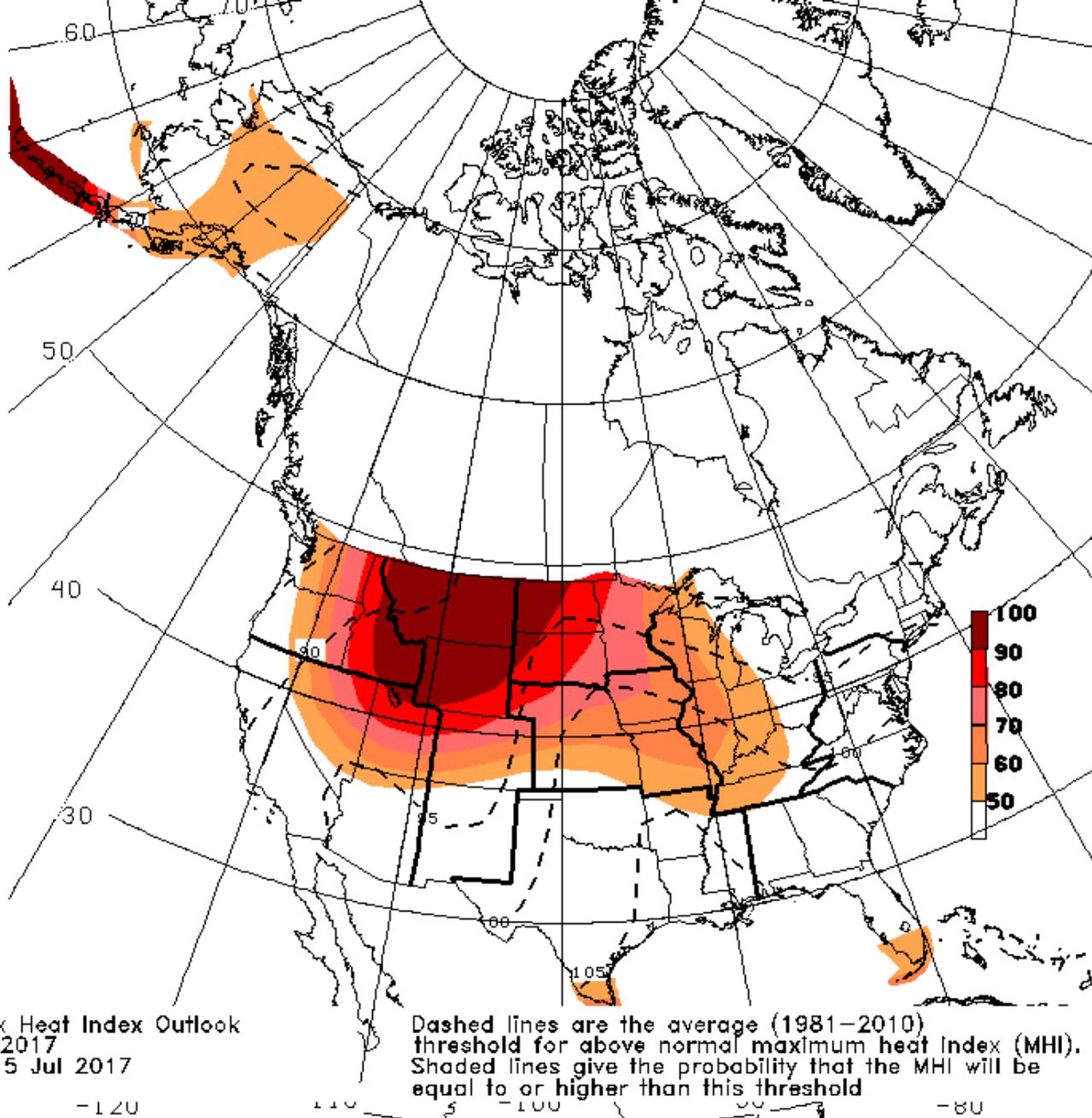
6-10 Day Outlook



<http://www.cpc.ncep.noaa.gov/products/predictions/610day/>



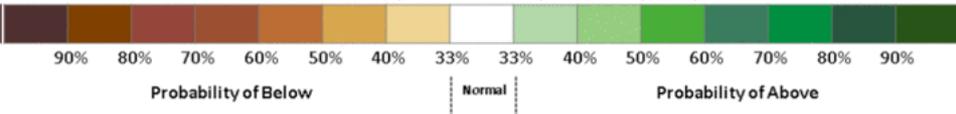
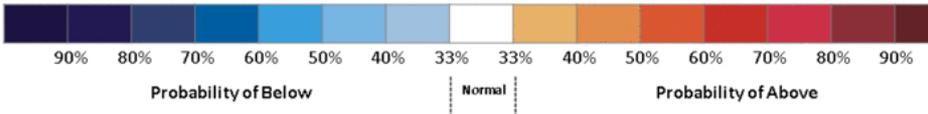
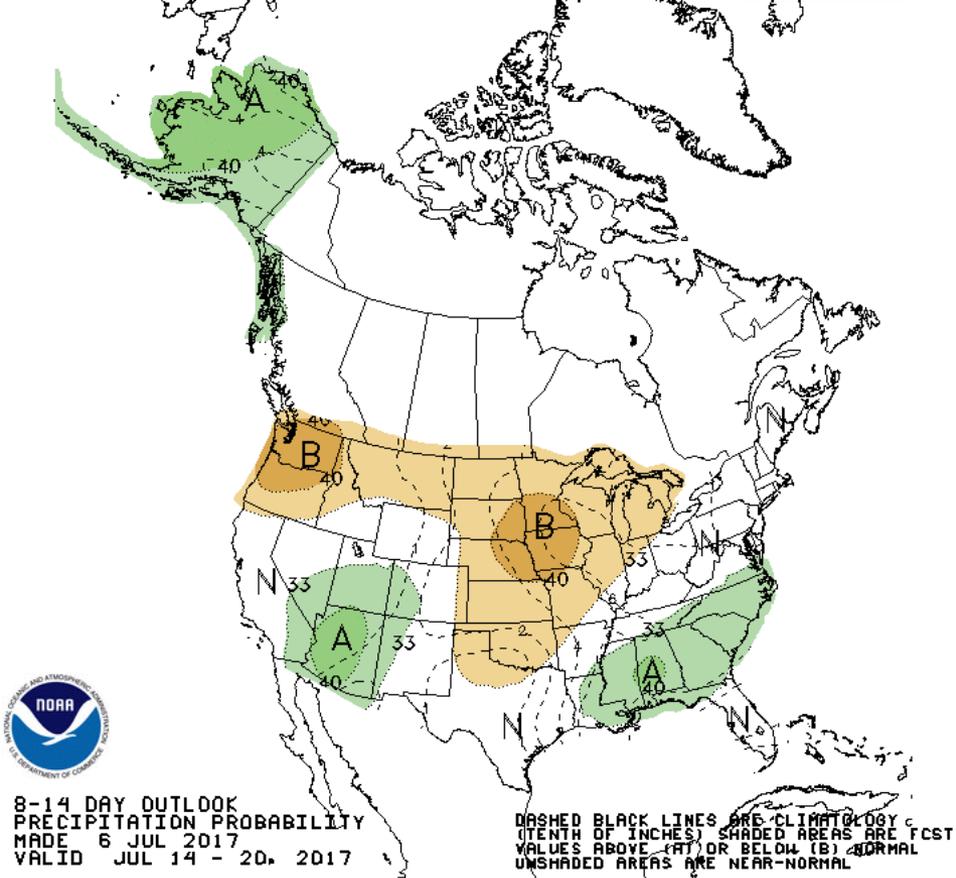
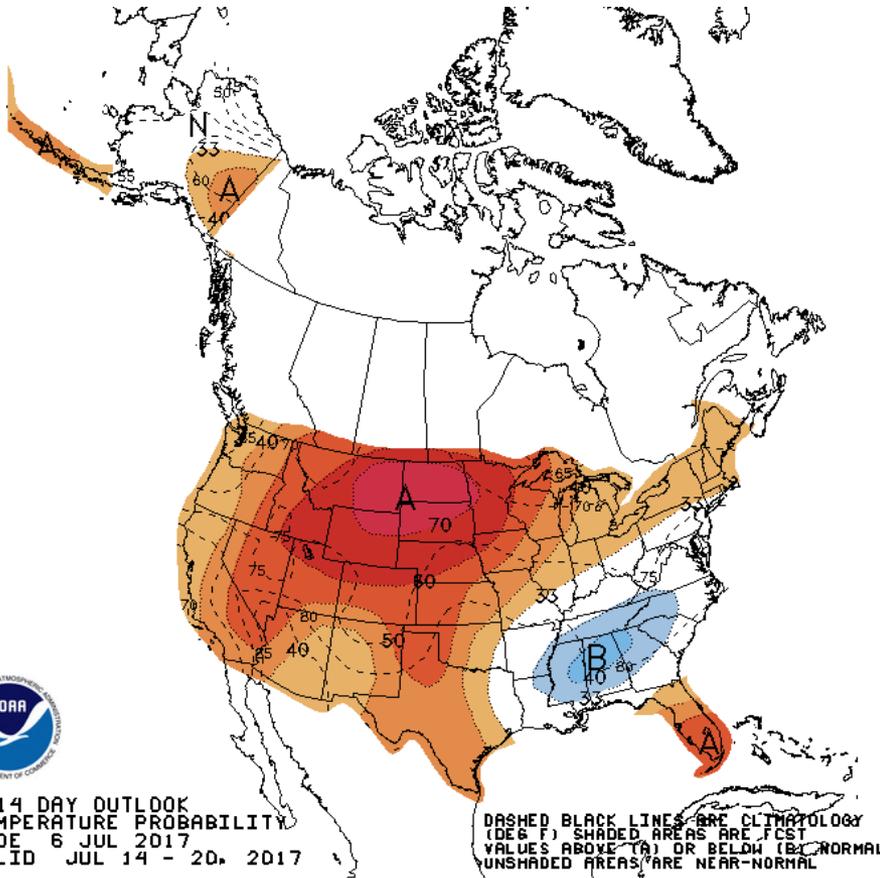
6-10 Day Max Heat Index Outlook
MADE: Jul 05 2017
VALID: 11 - 15 Jul 2017



Dashed lines are the average (1981-2010) threshold for above normal maximum heat index (MHI). Shaded lines give the probability that the MHI will be equal to or higher than this threshold

http://www.cpc.ncep.noaa.gov/products/predictions/short_range/heat/hi_610.php

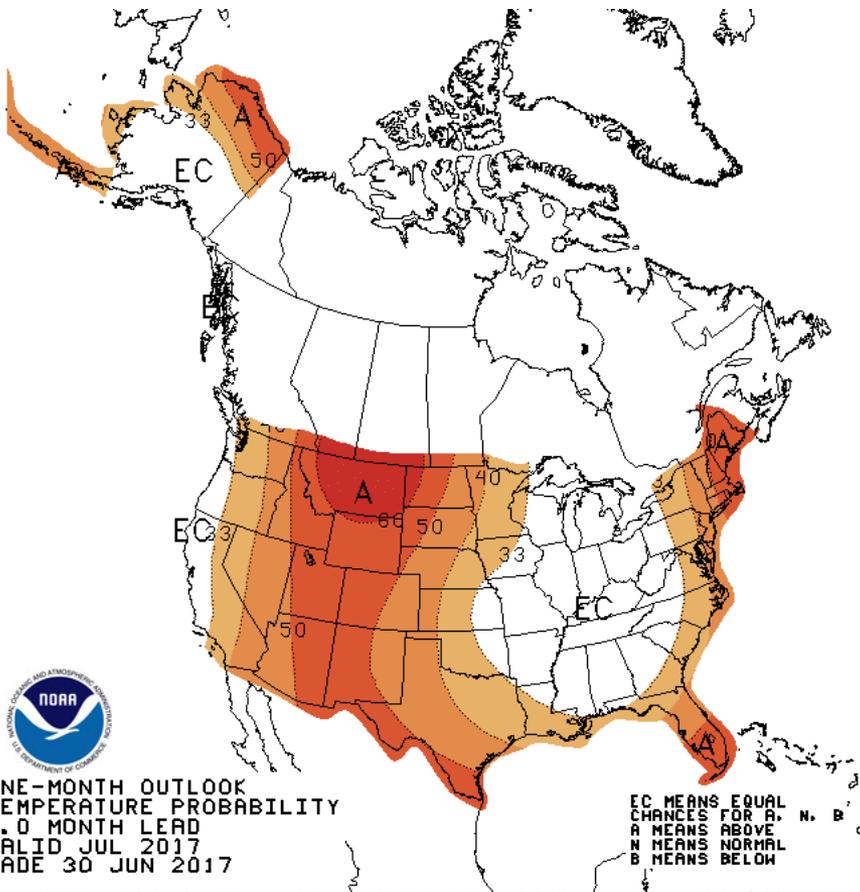
8-14 Day Outlook



<http://www.cpc.ncep.noaa.gov/products/predictions/814day/>

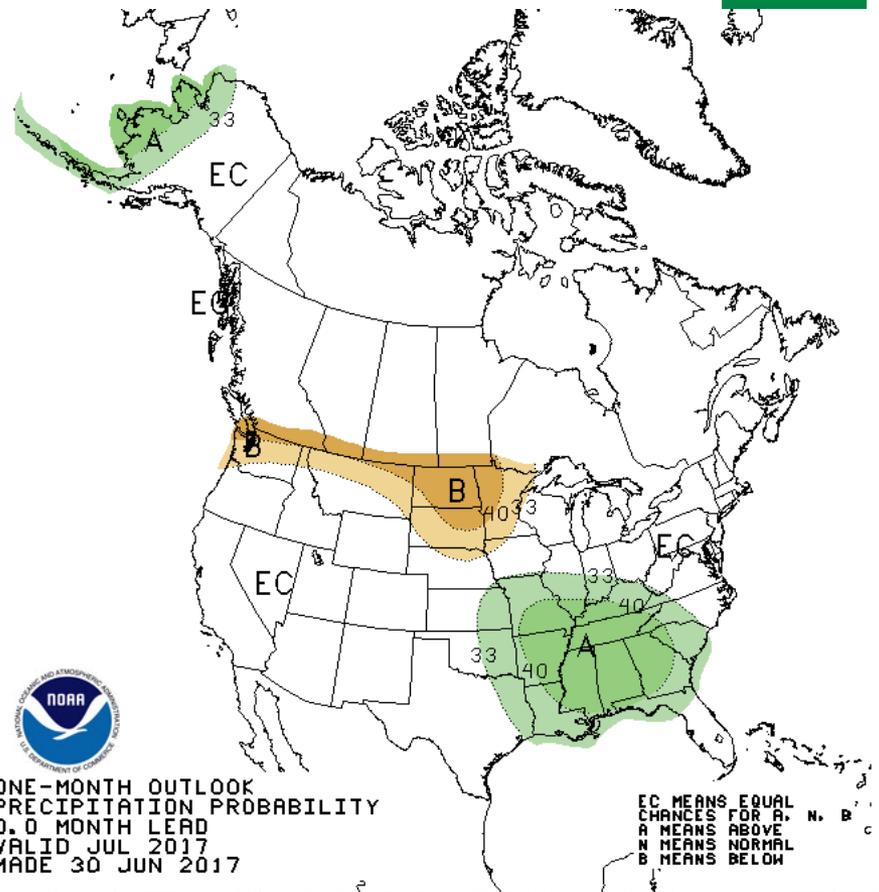
July Climate Outlook

As of 6/30/17



ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.0 MONTH LEAD
VALID JUL 2017
MADE 30 JUN 2017

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.0 MONTH LEAD
VALID JUL 2017
MADE 30 JUN 2017

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

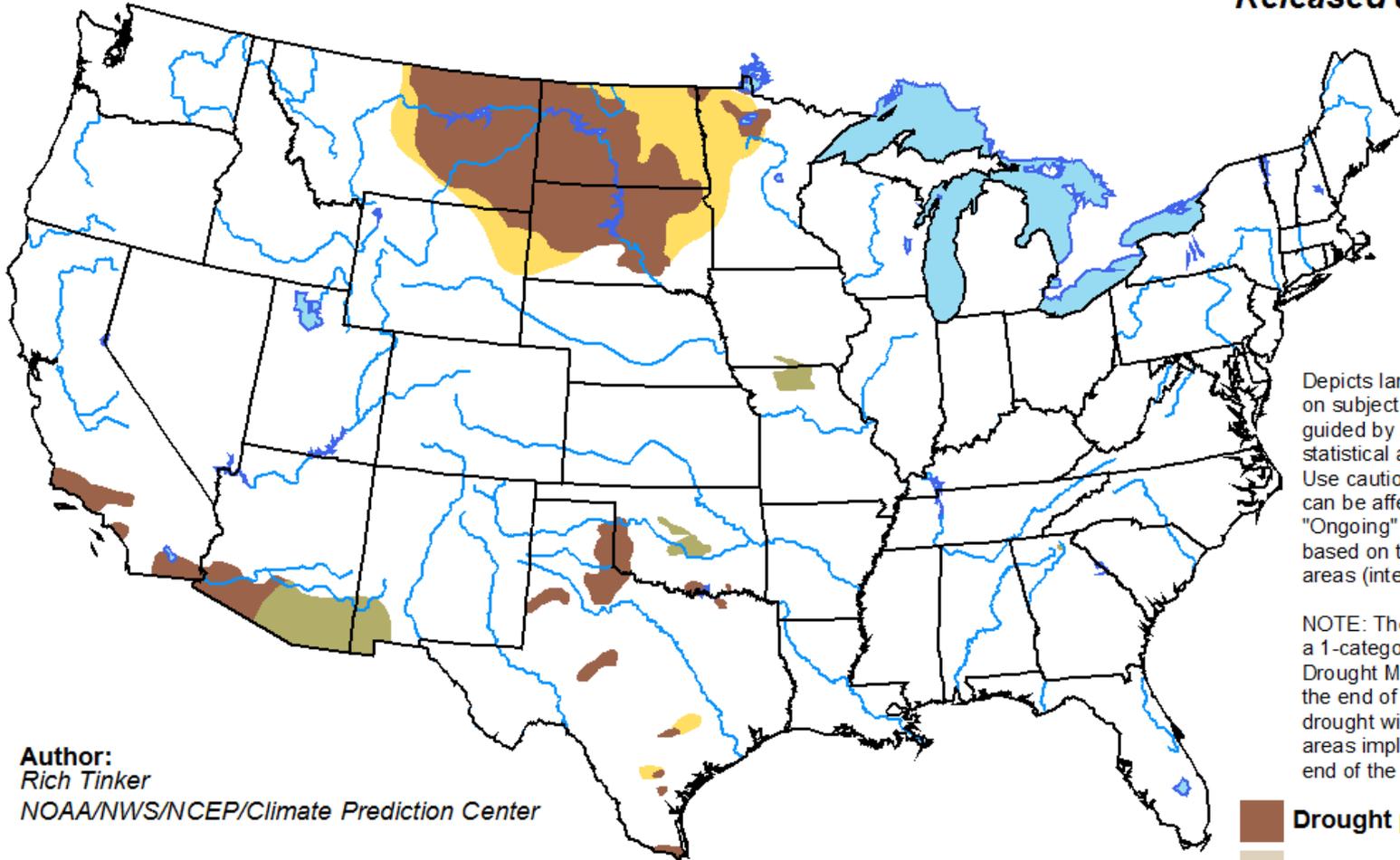


http://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead14/

U.S. Monthly Drought Outlook

Drought Tendency During the Valid Period

Valid for July 2017
Released June 30, 2017

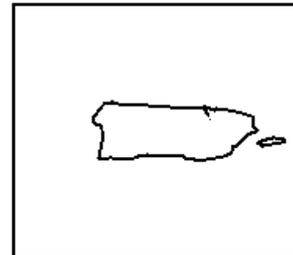
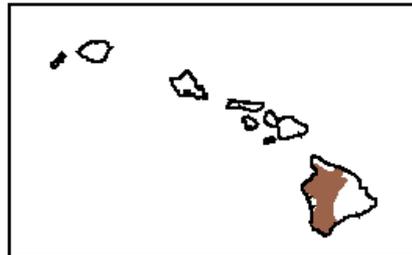
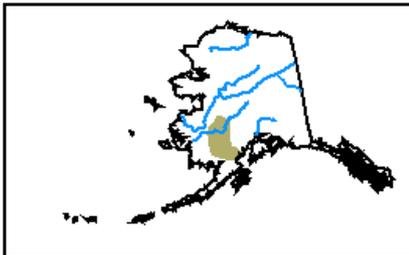


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to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

Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

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



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

For more information

- SDSU Extension: igrow.org
- NDSU Agriculture & Extension:
<https://www.ag.ndsu.edu/ndsuag/>
- SD Drought Dashboard:
climate.sdstate.edu/tools/dashboard
- US Drought Portal: drought.gov
- National Weather Service: weather.gov
- Climate Prediction Center:
<http://www.cpc.ncep.noaa.gov/>
- High Plains Regional Climate Center: hprcc.unl.edu
- This recording will be found at:
<https://www.drought.gov/drought/calendar/events/northern-plains-drought-webinar-july-7>



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