



North Central U.S. Climate/Drought Summary & Outlook

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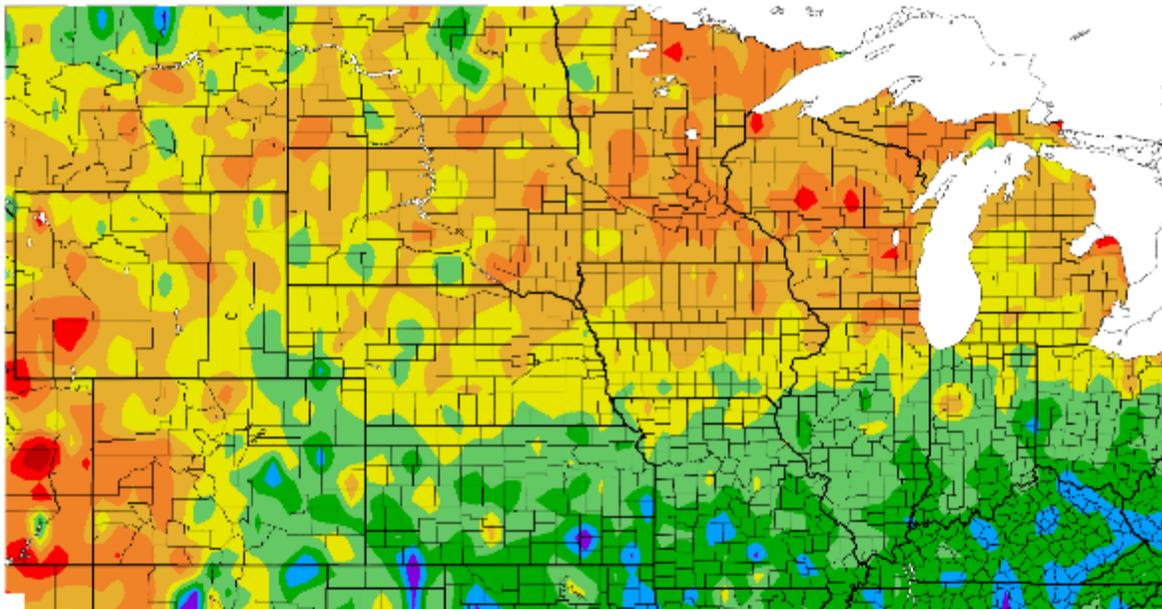


Credit: Laura Edwards



Temperature & Precipitation Last 90 Days

Departure from Normal Temperature (F)
4/1/2021 - 6/29/2021



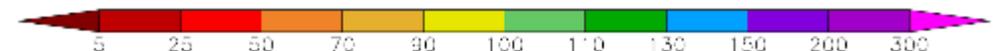
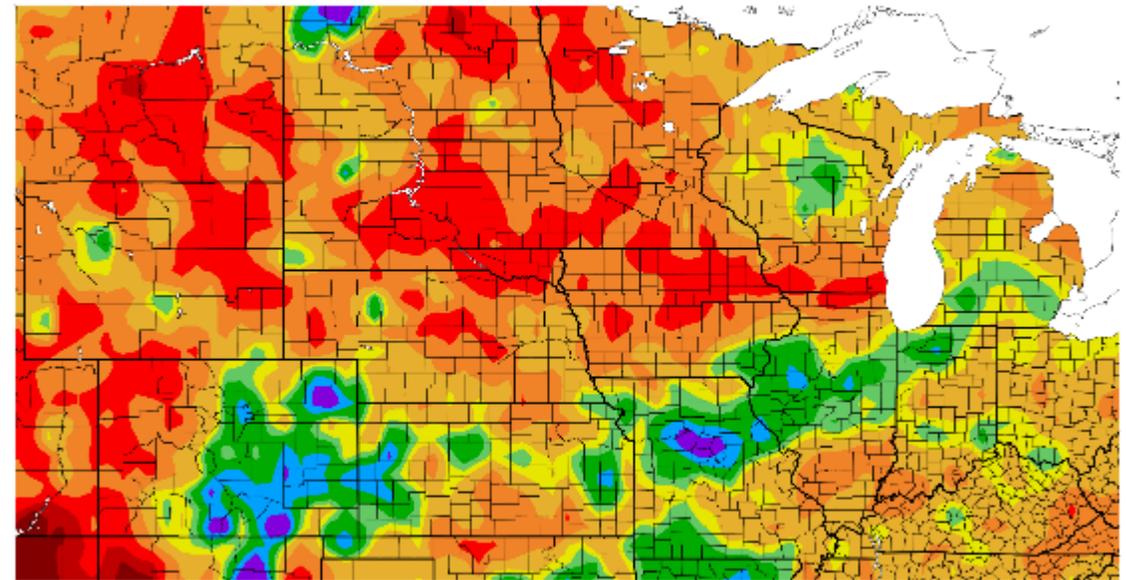
Generated 6/30/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

Temperatures: mostly above normal

Precipitation: mostly below normal

Percent of Normal Precipitation (%)
4/1/2021 - 6/29/2021



Generated 6/30/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

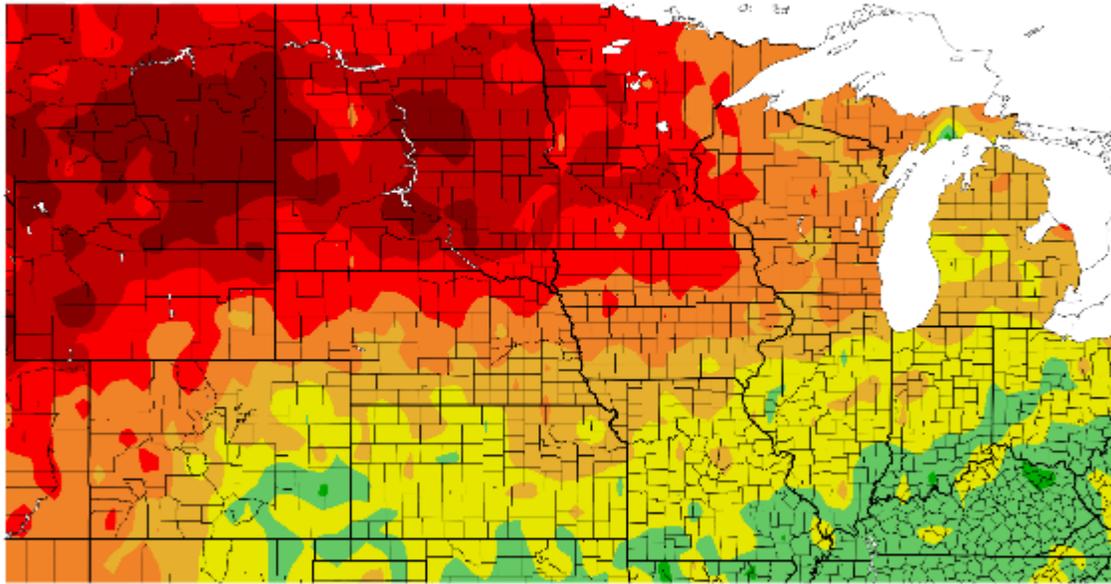


Temperature & Precipitation

Last 30 days

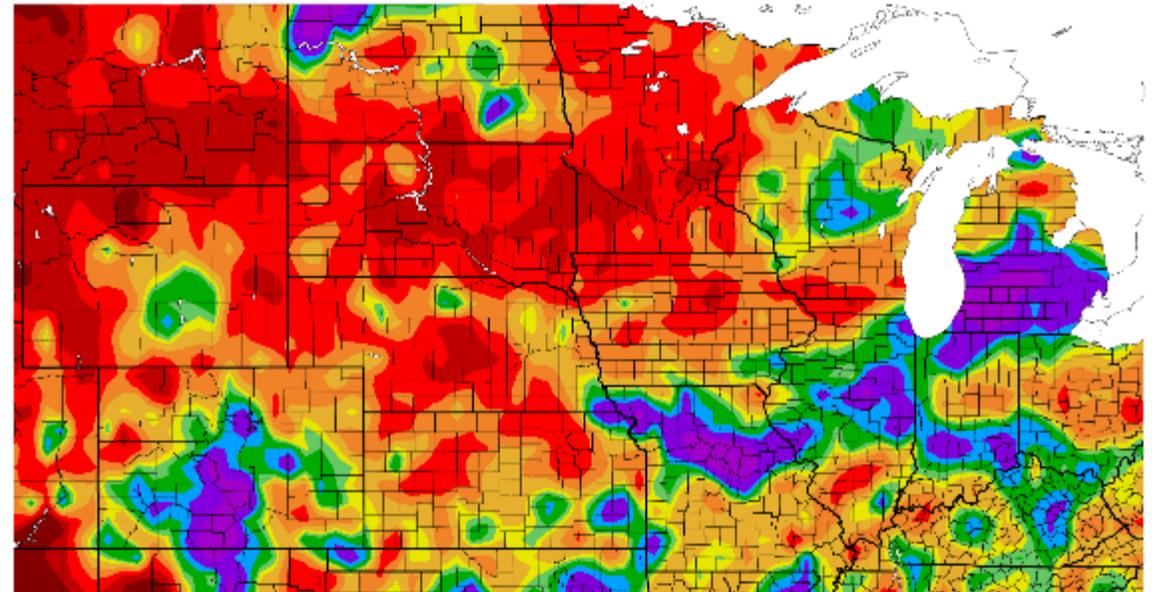
Departure from Normal Average Maximum Temperature (F)
5/31/2021 - 6/29/2021

Temperatures: very warm (esp. north)
Precipitation: mostly very dry



Generated 6/30/2021 at HPRCC using provisional data. NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
5/31/2021 - 6/29/2021



Generated 6/30/2021 at HPRCC using provisional data. NOAA Regional Climate Centers

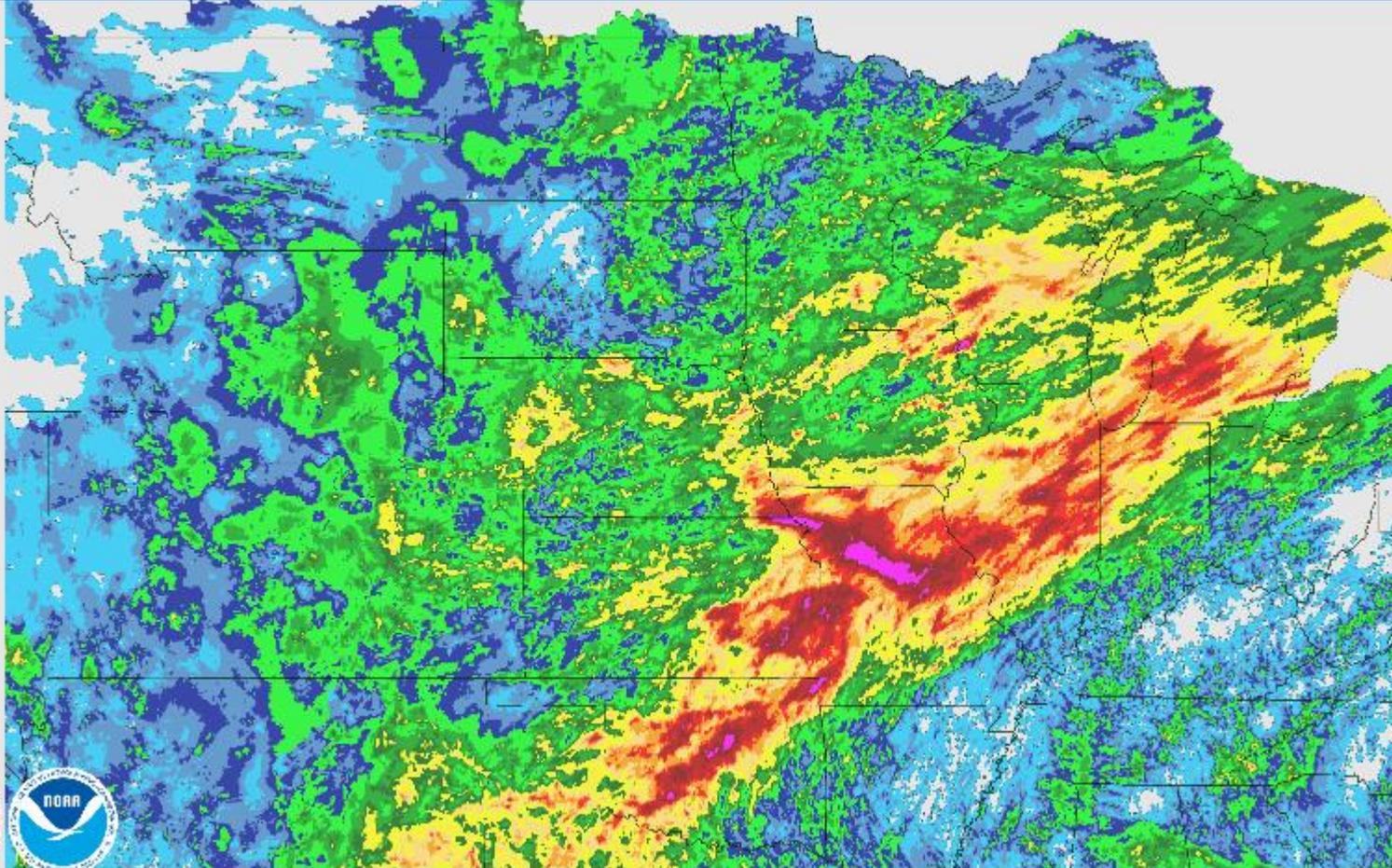


Last 7 Days Precipitation Totals

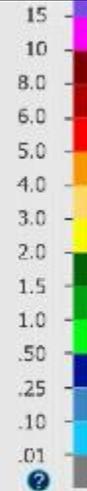
June 30, 2021 7-Day Observed Precipitation

Created on: June 30, 2021 - 22:29 UTC

Valid on: June 30, 2021 12:00 UTC



- Persistent precipitation Kansas – Michigan
- Some minor to moderate flooding

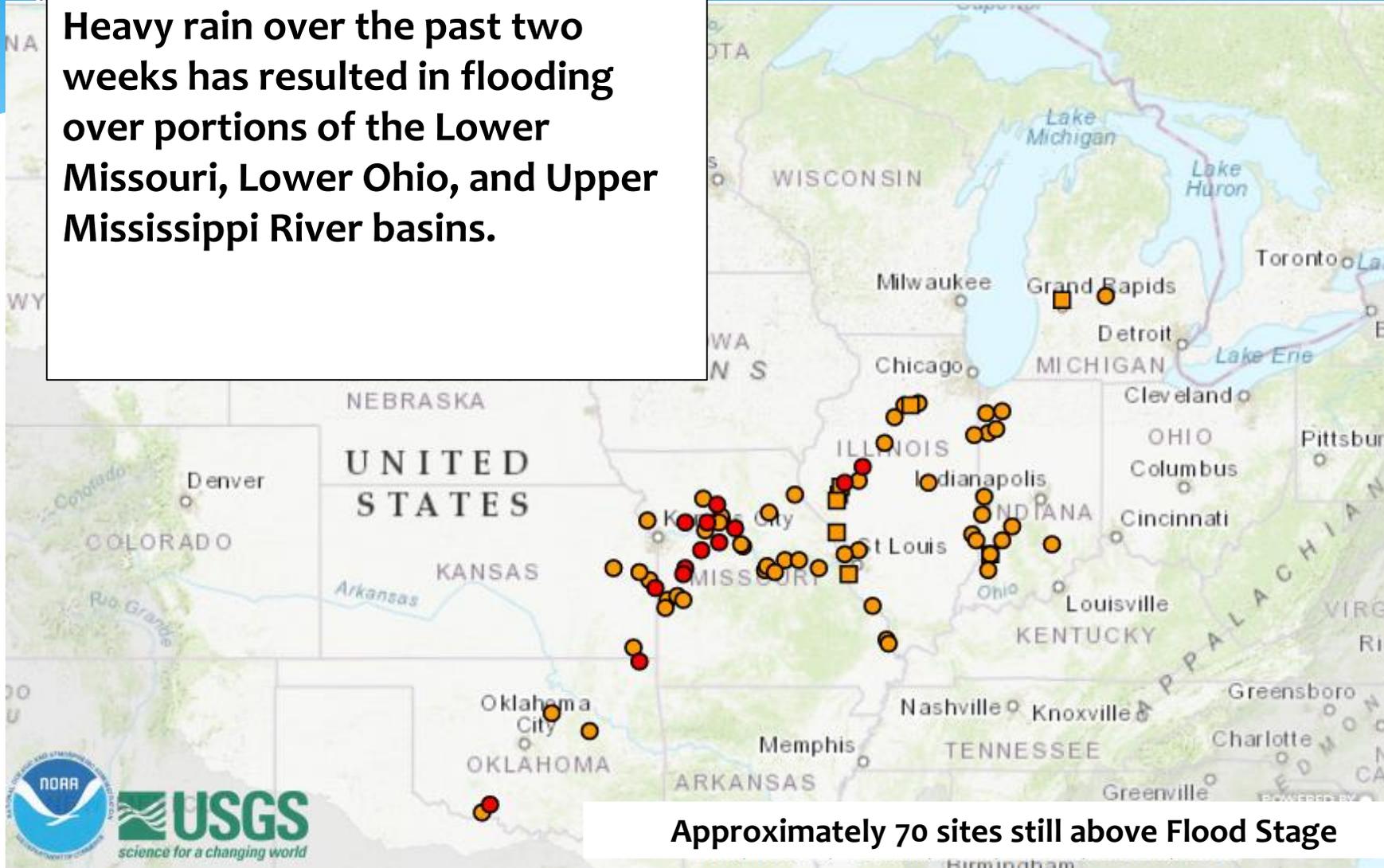




NORTH CENTRAL U.S.

Current River Flood Status

Heavy rain over the past two weeks has resulted in flooding over portions of the Lower Missouri, Lower Ohio, and Upper Mississippi River basins.



- Probability and forecasts available
- Forecasts available

73 total gauges
[Show all locations in flood \(73\)](#)

- 0 Gauges: Major Flooding
- 13 Gauges: Moderate Flooding
- 60 Gauges: Minor Flooding
- 0 Gauges: Near Flood Stage
- 0 Gauges: No Flooding
- 0 Flood Category Not Defined
- 0 At or Below Low Water Threshold
- 0 Gauges: Forecasts Are Not Current
- 0 Gauges: No forecast within selected timeframe
- 0 Gauges: Out of Service

[Show all locations](#)

Last map update:
 07/01/2021 at 09:51:00 am EDT
 07/01/2021 at 13:51:00 UTC

[What is UTC time?](#)

[Map Help](#)

[Disclaimer](#)



Approximately 70 sites still above Flood Stage

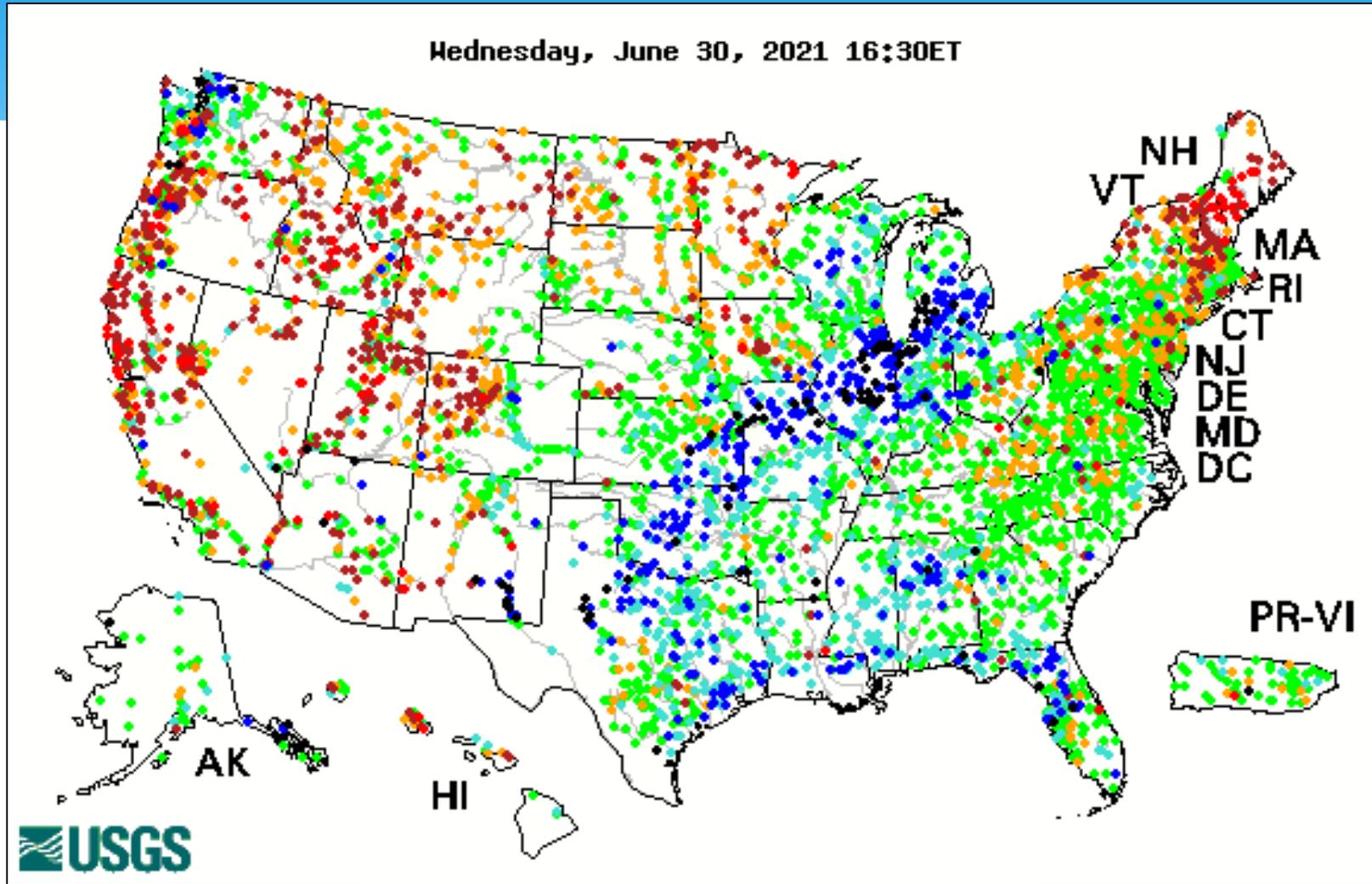
water.weather.gov





Streamflow

Wednesday, June 30, 2021 16:30ET



Explanation - Percentile classes

Low	<10	10-24	25-75	76-90	>90		High
	Much below normal	Below normal	Normal	Above normal	Much above normal		



Outlooks

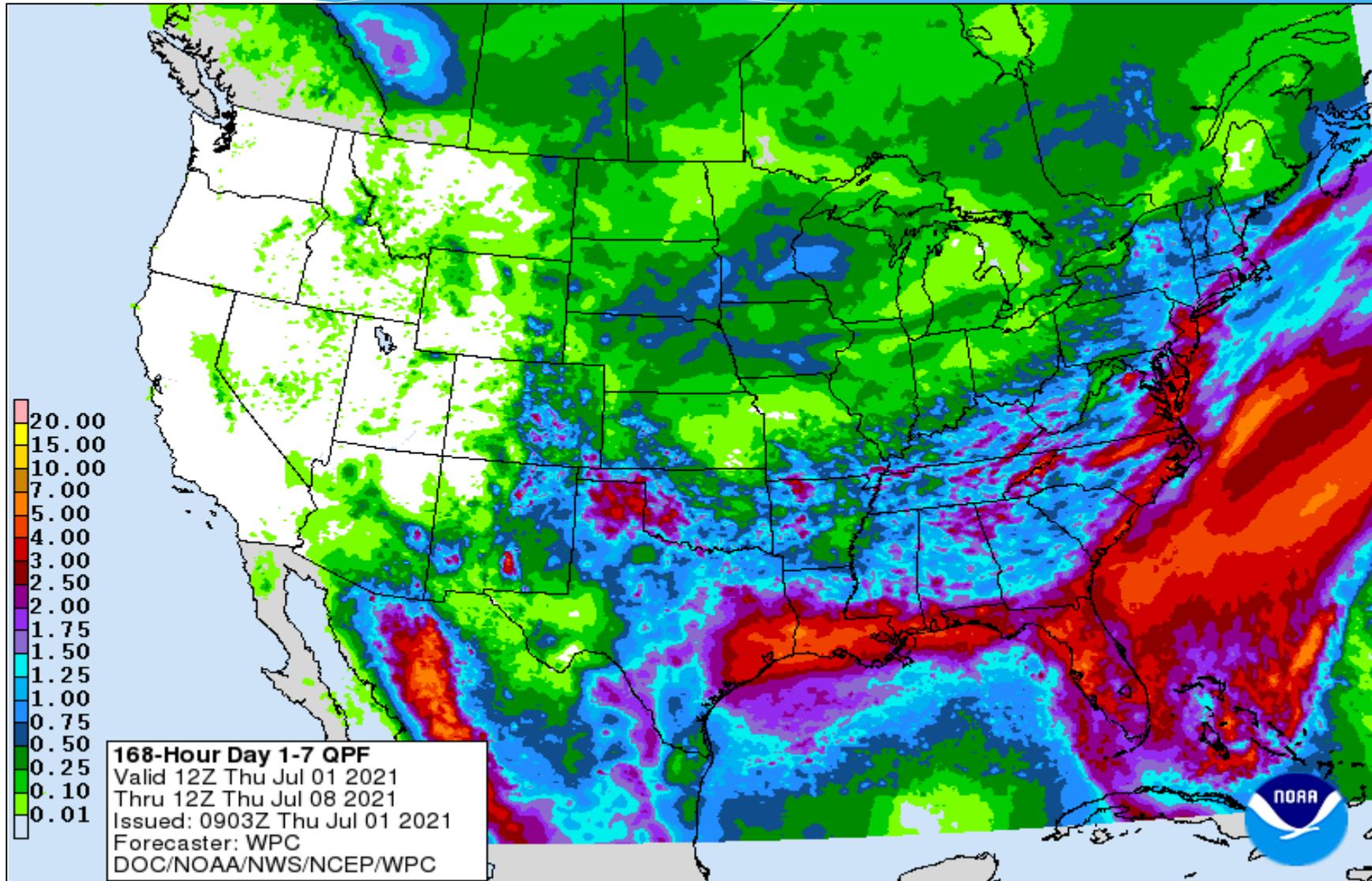


Butte county, SD, from Chuck Crago.



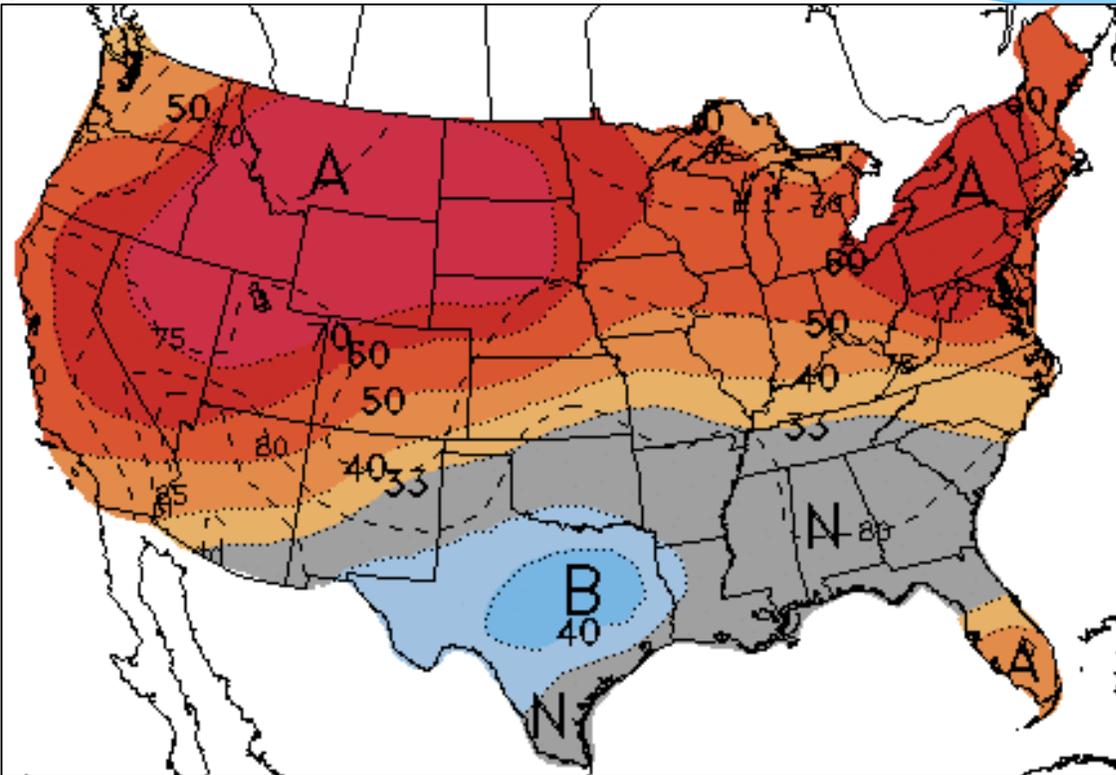
From Adele Harty, Haakon county, SD

Total Precipitation Outlook Through 7/8/21

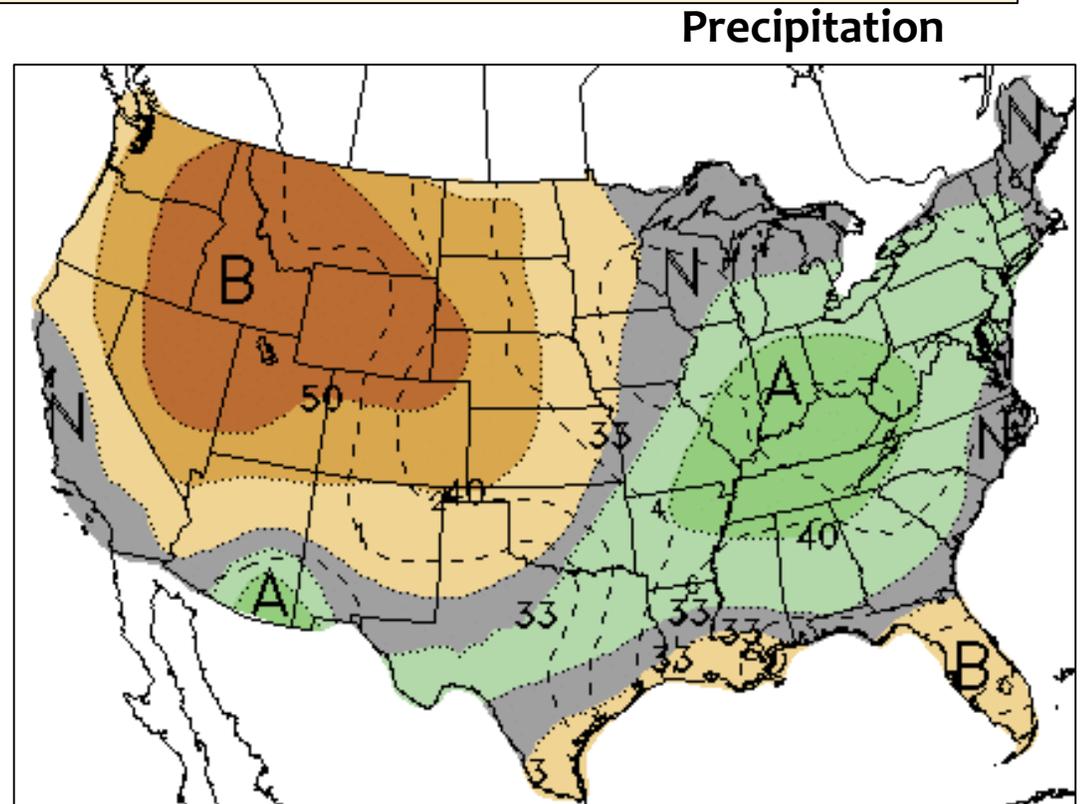


Week 2 Temperature & Precipitation Outlook (July 8-14, 2021)

Temperatures: above normal northwest basin
Precipitation: lean towards drier than normal northwest basin



Temperature

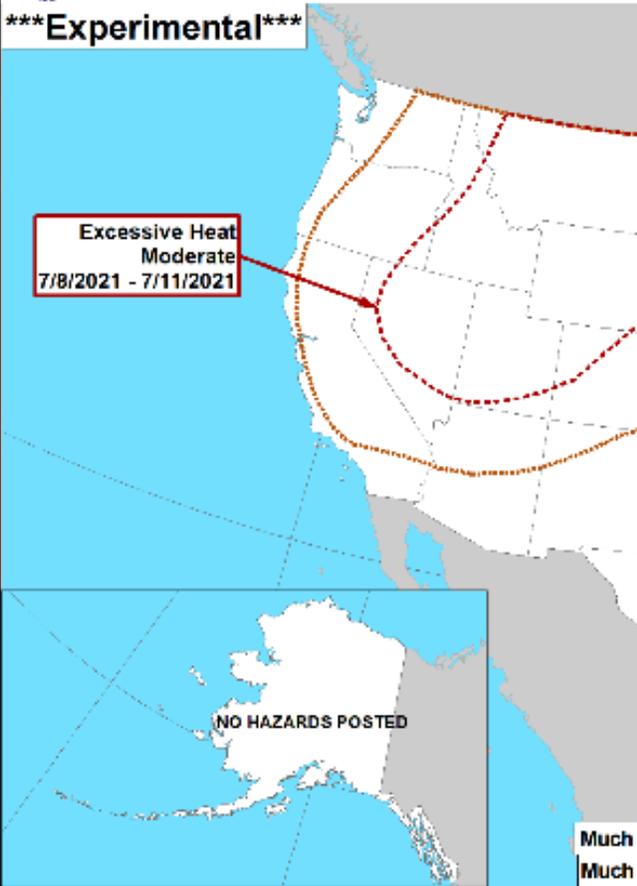


Precipitation



Day 3-7 U.S. Hazards Outlook
Valid: 07/03/2021-07/07/2021

Risk of Hazardous Temperatures
Valid: 07/08/2021-07/14/2021



Climate Prediction Center
Made: 06/30/2021 3PM EDT

Day 3-7 U.S. Hazards Outlook
Valid: 07/03/2021-07/07/2021

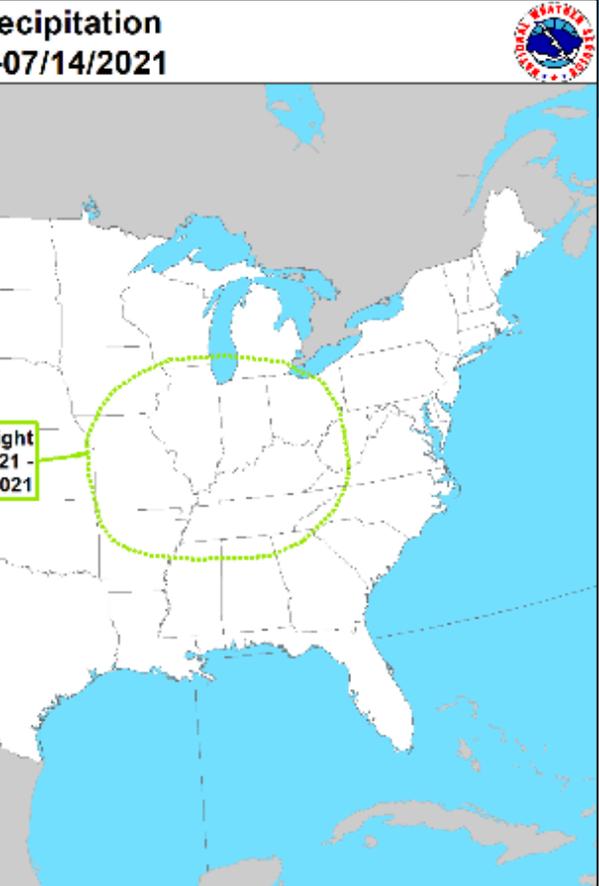
Risk of Heavy Precipitation
Valid: 07/08/2021-07/14/2021



Climate Prediction Center
Made: 06/30/2021 3PM EDT

Day 3-7 U.S. Hazards Outlook
Valid: 07/03/2021-07/07/2021

Risk of Hazardous Temperatures
Valid: 07/08/2021-07/14/2021



Climate Prediction Center
Made: 06/30/2021 3PM EDT

High (60%) Moderate (40%) Slight (20%)

Follow us:  

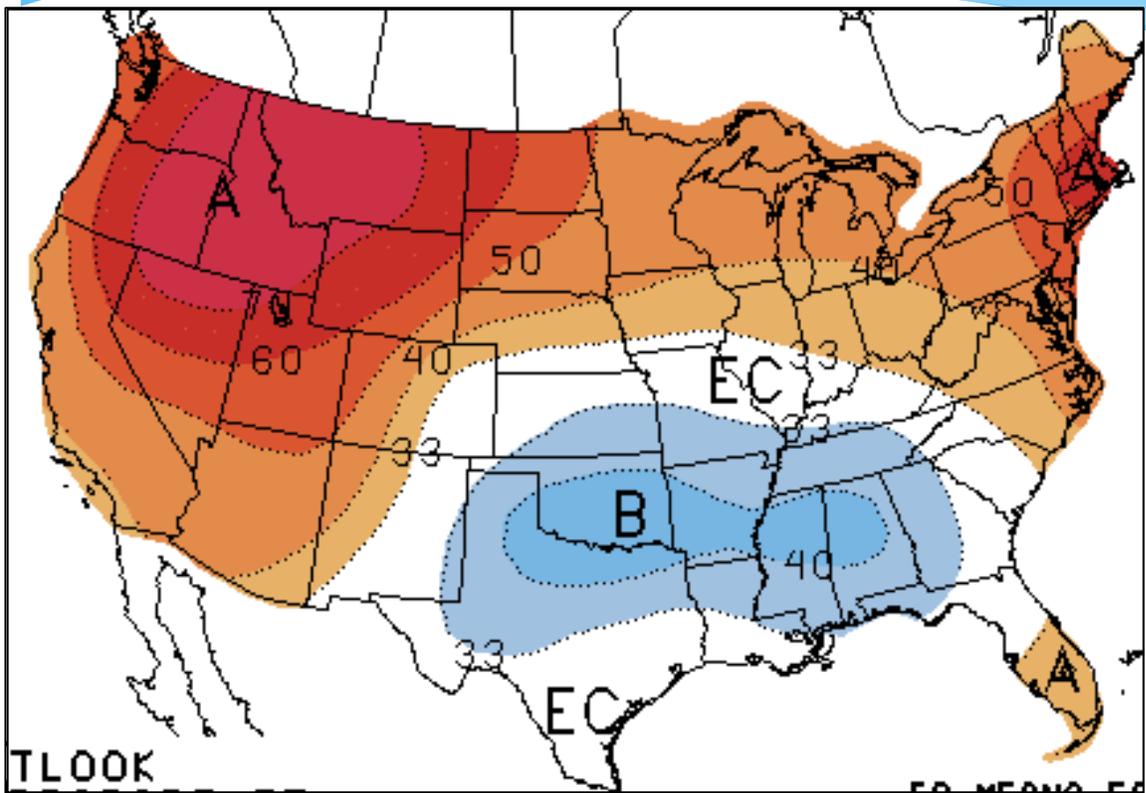
www.cpc.ncep.noaa.gov



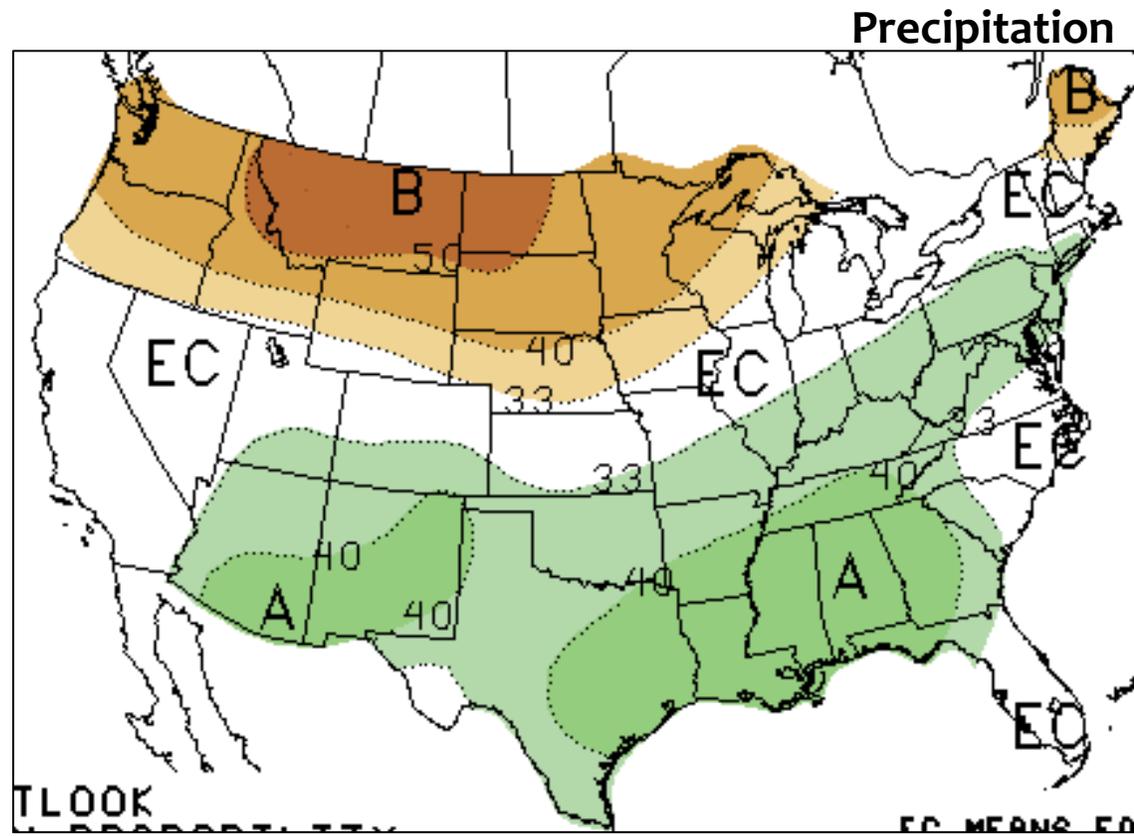
July Temperature & Precipitation Outlook

(issued June 17th & June 30th)

Temperatures: well above normal (esp. Northwest)
Precipitation: below normal north



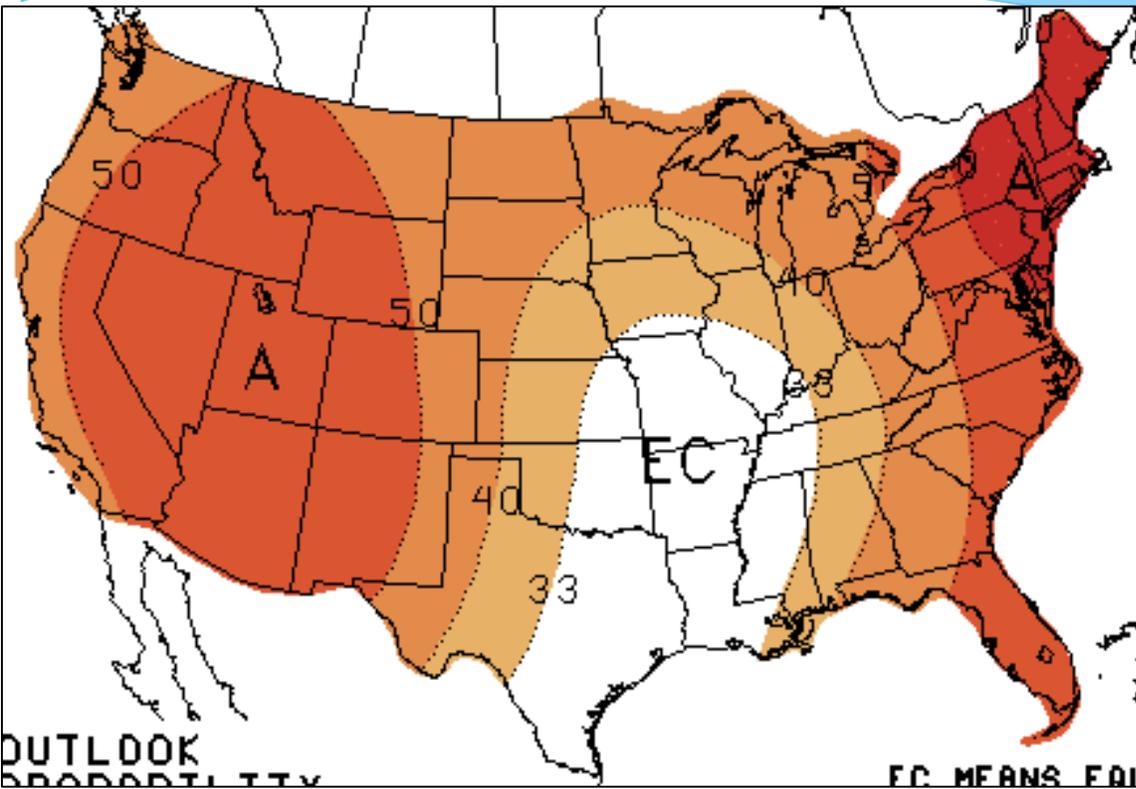
Temperature



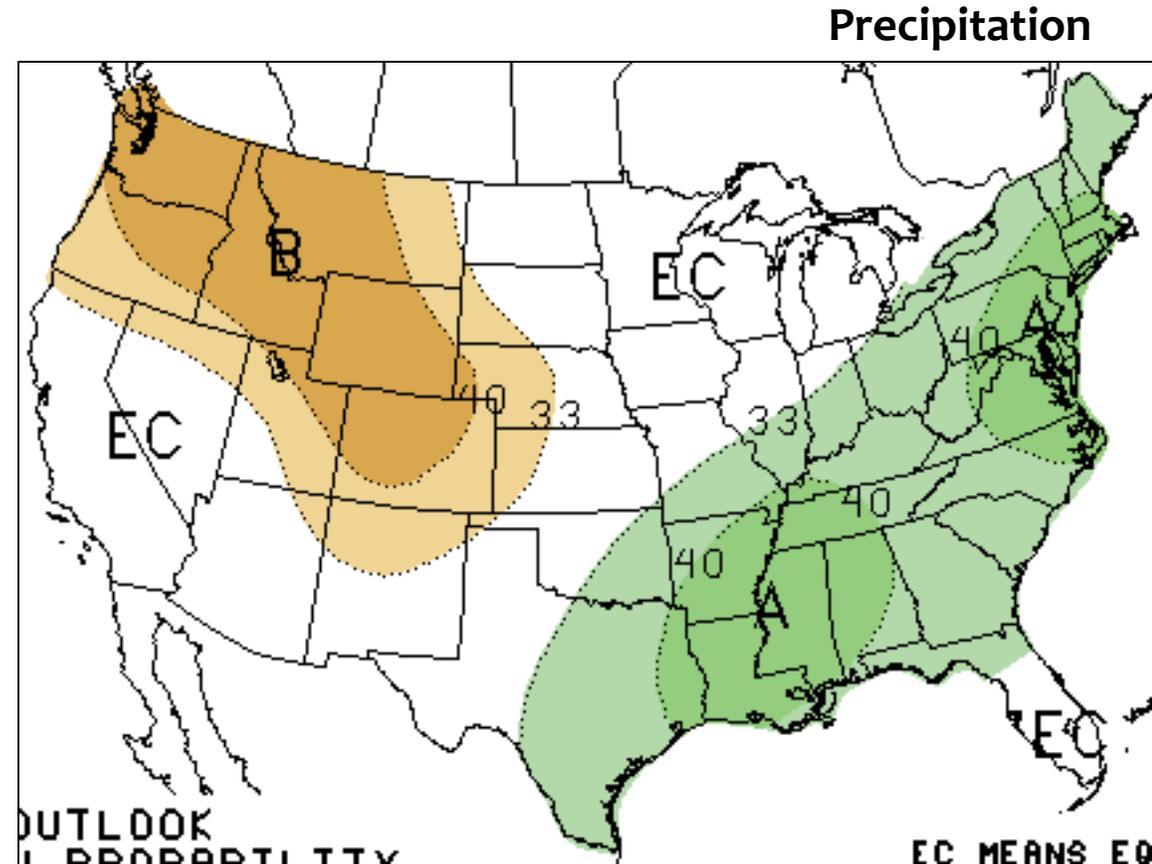
Precipitation

July-September 2021 Temperature & Precipitation Outlook

Temperature leans warmer than normal
Precipitation leans dry west



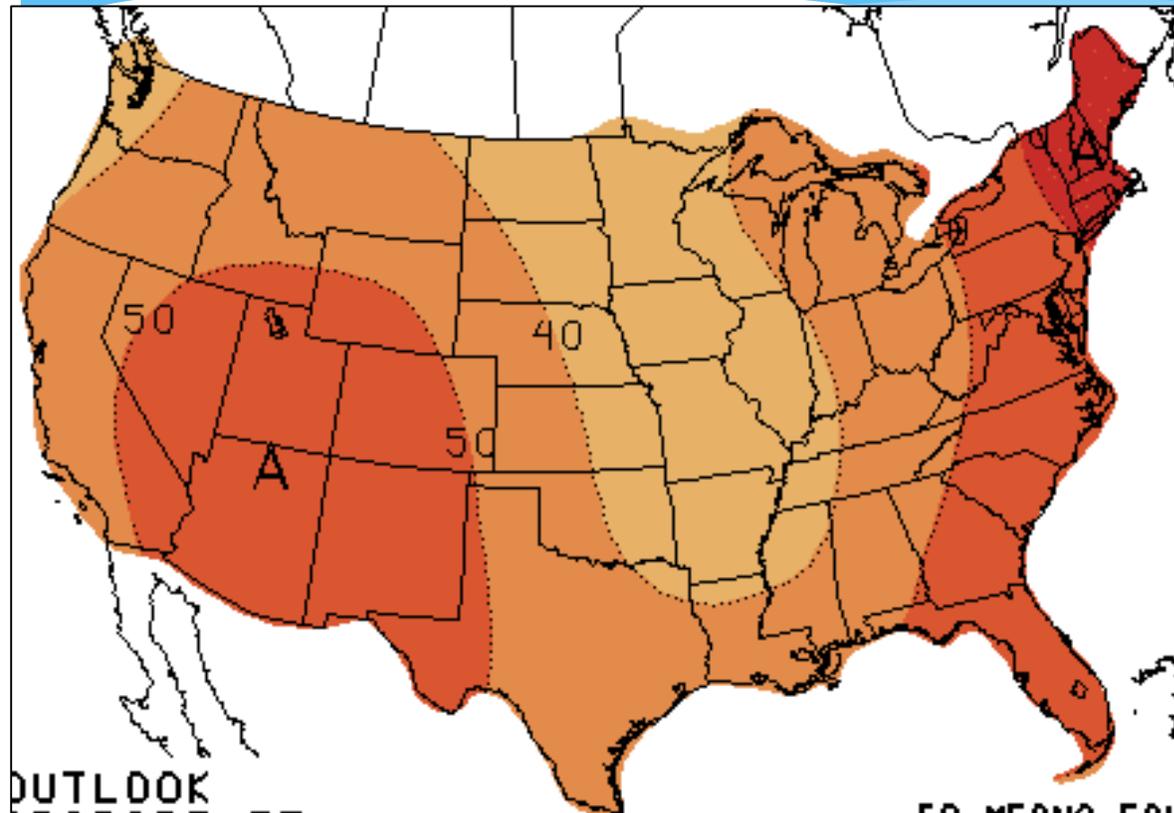
Temperature



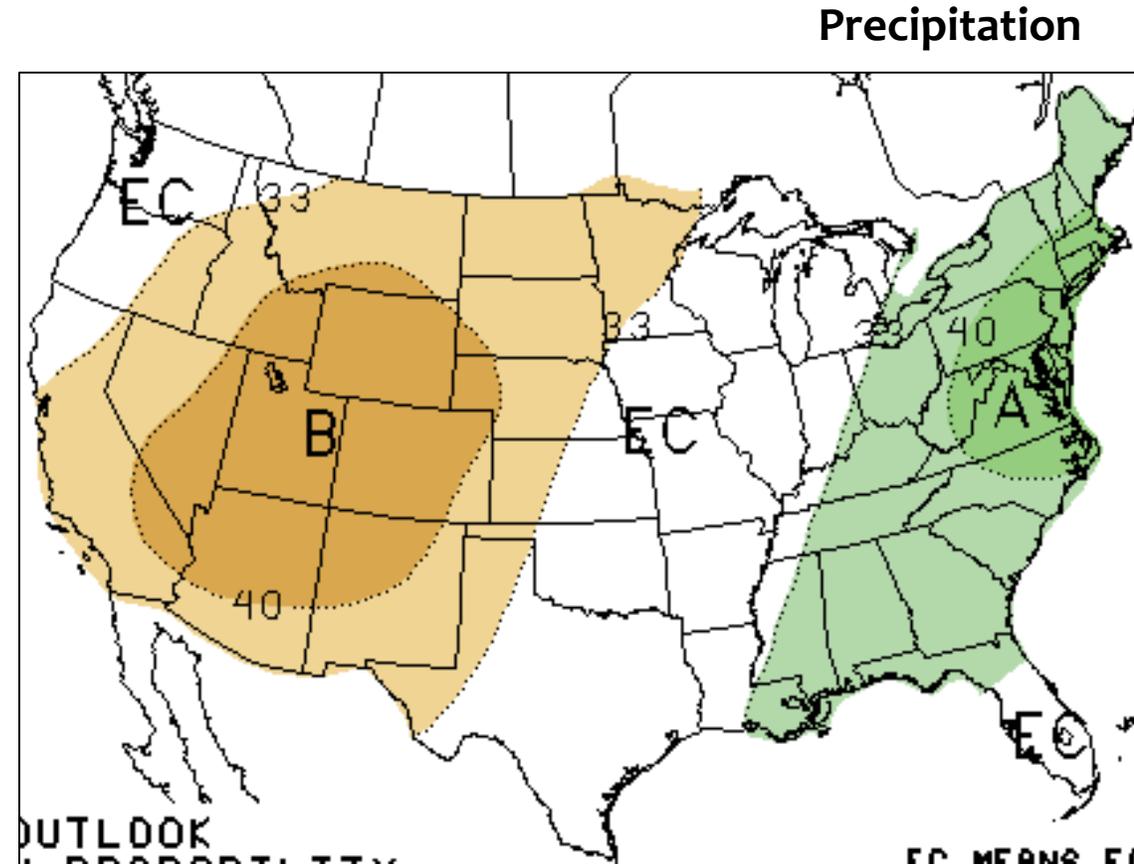
Precipitation

August-October 2021 Temperature & Precipitation Outlook

Temperature leans warmer than normal
Precipitation leans dry west



Temperature

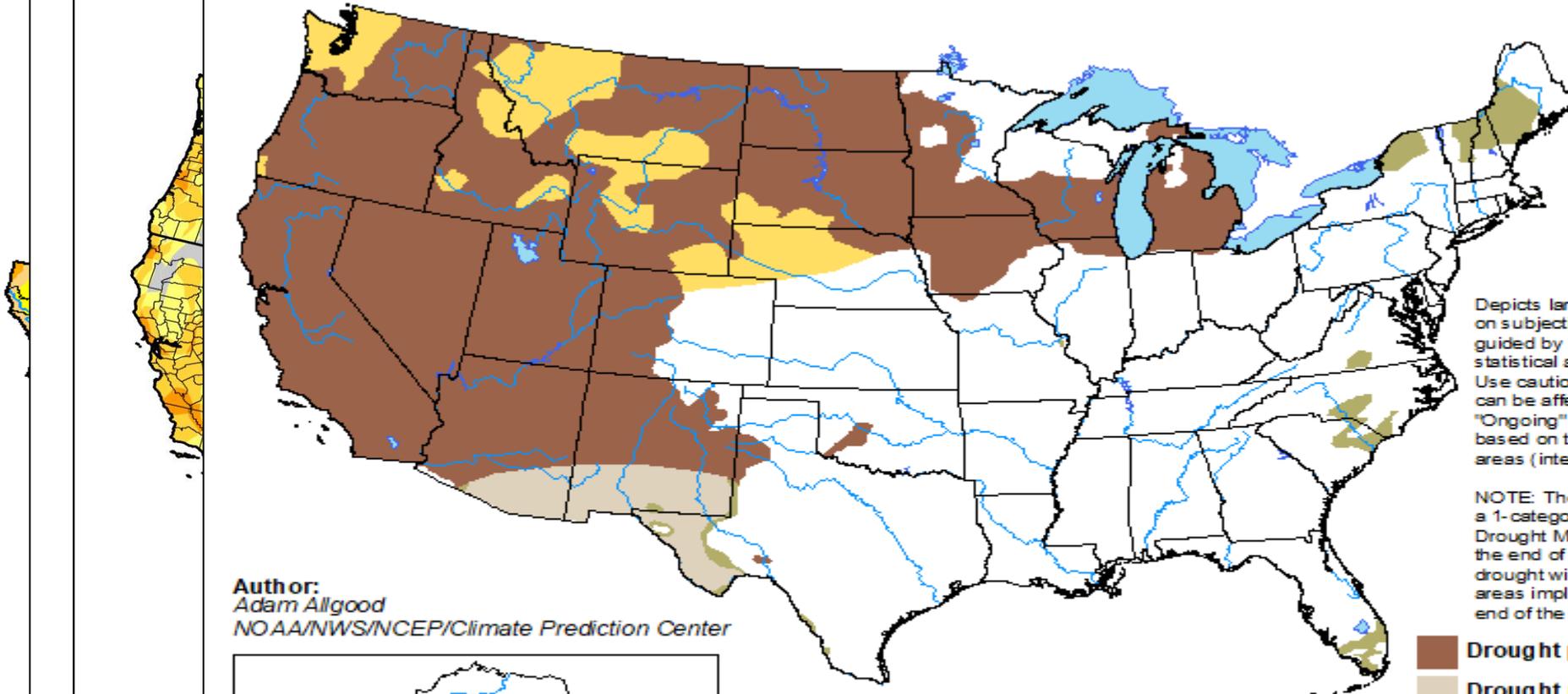


Precipitation

Drought Update and Outlook

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

Valid for June 17 - September 30, 2021
Released June 17

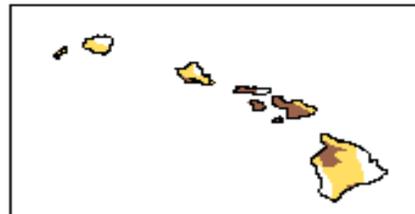
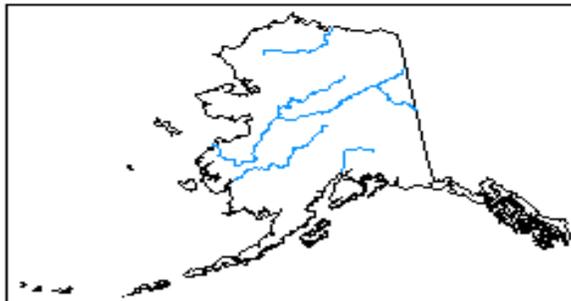


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to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

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



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

June
com
Apri

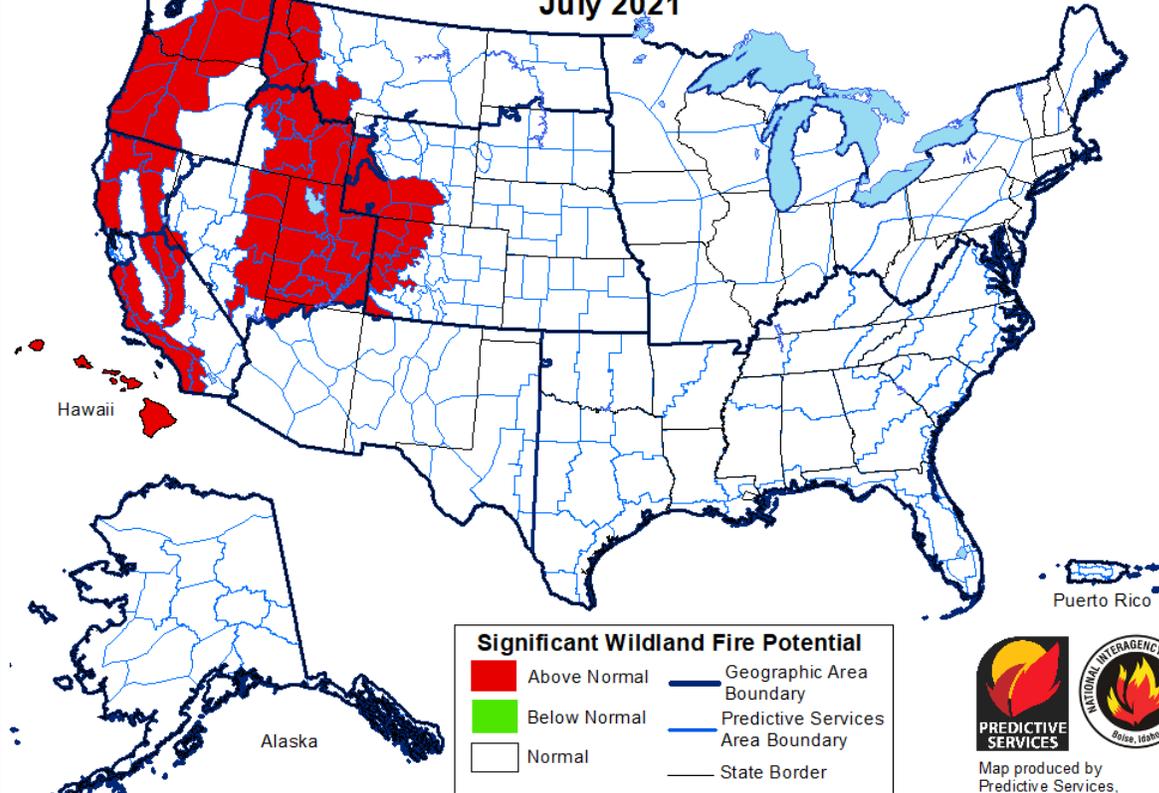


Significant Wildland Fire Outlook

Updated today July 1st

(<https://www.predictiveservices.nifc.gov/outlooks/outlooks.htm>)

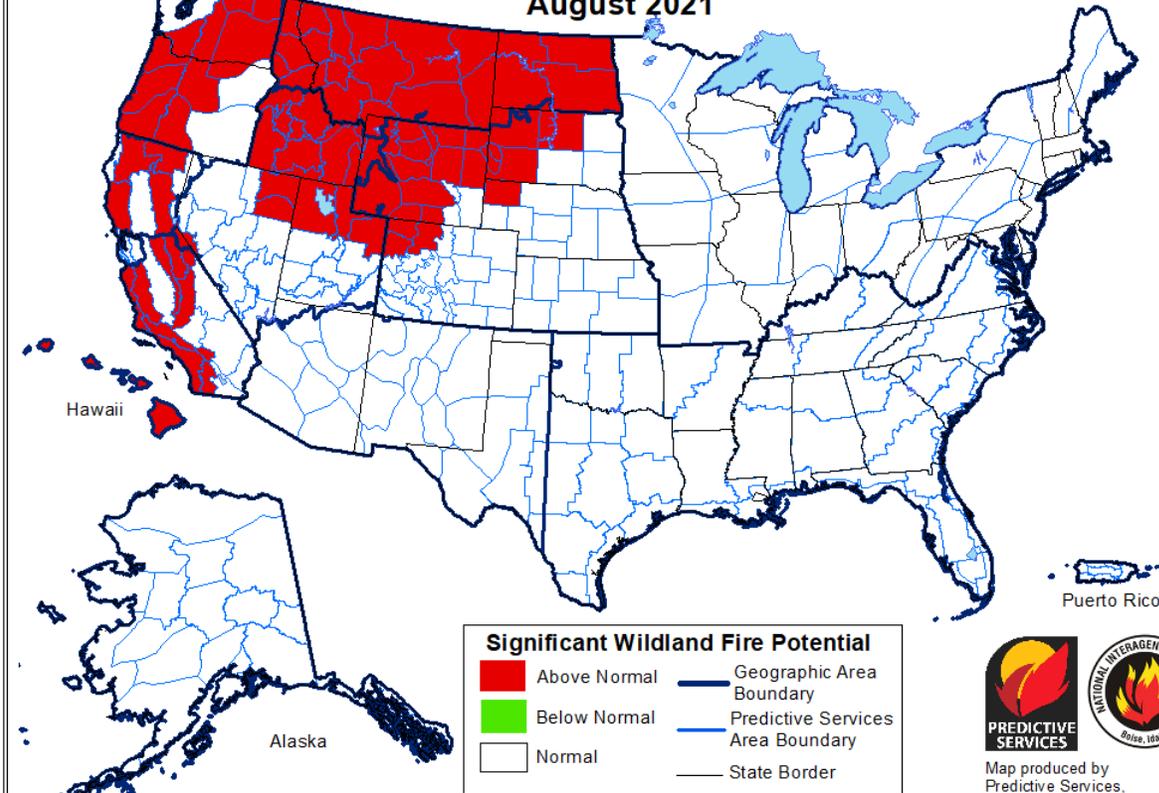
Significant Wildland Fire Potential Outlook July 2021



Map produced by Predictive Services, National Interagency Fire Center Boise, Idaho
Issued June 1, 2021
Next issuance July 1, 2021

Above normal significant wildland fire potential indicates a greater than usual likelihood that significant wildland fires will occur. Significant wildland fires should be expected at typical times and intervals during normal significant wildland fire potential conditions. Significant wildland fires are still possible but less likely than usual during forecasted below normal periods.

Significant Wildland Fire Potential Outlook August 2021



Map produced by Predictive Services, National Interagency Fire Center Boise, Idaho
Issued June 1, 2021
Next issuance July 1, 2021

Above normal significant wildland fire potential indicates a greater than usual likelihood that significant wildland fires will occur. Significant wildland fires should be expected at typical times and intervals during normal significant wildland fire potential conditions. Significant wildland fires are still possible but less likely than usual during forecasted below normal periods.



Key Points

* **Current Conditions**

- * Current ENSO condition – **Neutral (meaning little to no influence)**
- * Generally dry to extreme dryness since last year
- * Some heavy rains e. Kansas through lower Michigan
- * Early record heat (June)

* **Outlook**

- * Short term (next two weeks):
 - * Temperatures: Hot (esp. west), triple digit heat possible
 - * Precipitation: favors below normal Mississippi west
- * Longer term (monthly and seasonal):
 - * Above normal temperatures mostly north and west
 - * Dry mainly across the north (July), all of the west & north July - September

* **Some of the Concerns:**

- * Wildfire, smoke, water quantity & quality, long lasting near to record heat
- * Agriculture (crops/grazing/water), recreation, health (human/livestock),

Next monthly North Central Climate Summary & Outlook Webinar, July 15, 2021
<https://attendee.gotowebinar.com/register/7528179497868100876>

Key Partners and Information

- **Today's and Past Recorded Presentations and :**
 - <https://mrcc.illinois.edu/multimedia/webinars.jsp>
 - <https://hprcc.unl.edu/webinars.php>
- NOAA's National Centers for Environmental Information:
www.ncdc.noaa.gov
 - Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/
- NOAA's Climate Prediction Center: www.cpc.ncep.noaa.gov
- Climate Portal: www.climate.gov
- U.S. Drought Portal: www.drought.gov
- National Drought Mitigation Center: <http://drought.unl.edu/>
- State climatologists
 - <http://www.stateclimate.org>
- Regional climate centers
 - <http://mrcc.isws.illinois.edu>
 - <http://www.hprcc.unl.edu>



Thank You & Questions

- Midwest Climate Hub Director:
Dennis Todey: dennis.todey@usda.gov, 515-294-2013
- Regional Climate Services Director
Doug Kluck: doug.kluck@noaa.gov, 816-564-2417
- **Weather Information:** Weather.gov



Midwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE

A wide-angle photograph of a sunset over a dark field. The sky is filled with vibrant orange and red clouds, with the sun low on the horizon. In the distance, there are silhouettes of utility poles and a small building.

Agricultural Drought Outlook

1 July 2021

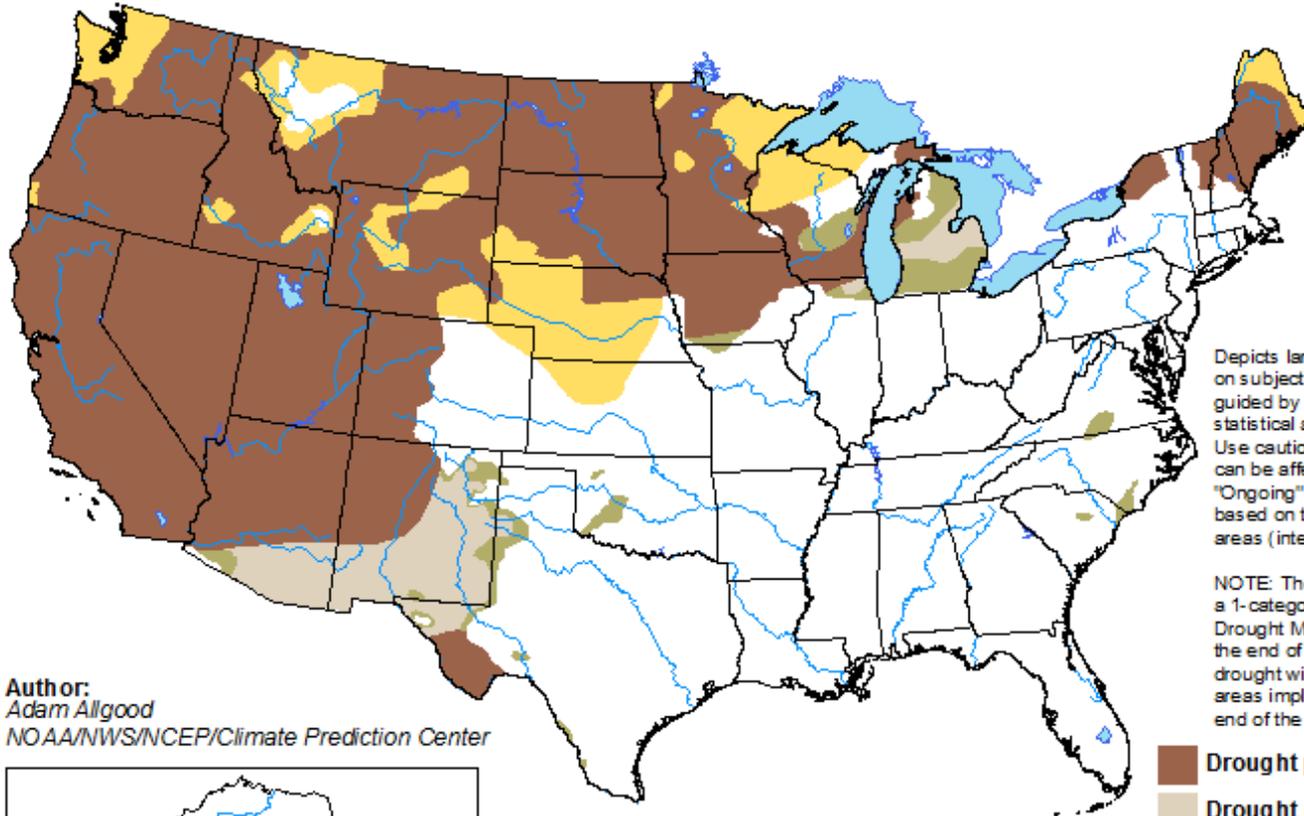
A close-up, slightly blurred photograph of a cornfield. The green leaves of the corn plants are the primary focus, filling the frame.

Dennis Todey
Director, Midwest Climate Hub
Dennis.todey@usda.gov

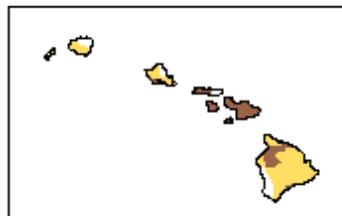
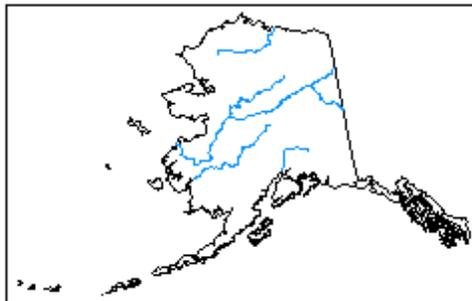
Drought Outlook

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

Valid for July 2021
Released June 30, 2021



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



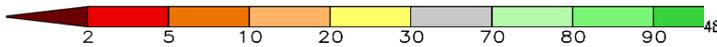
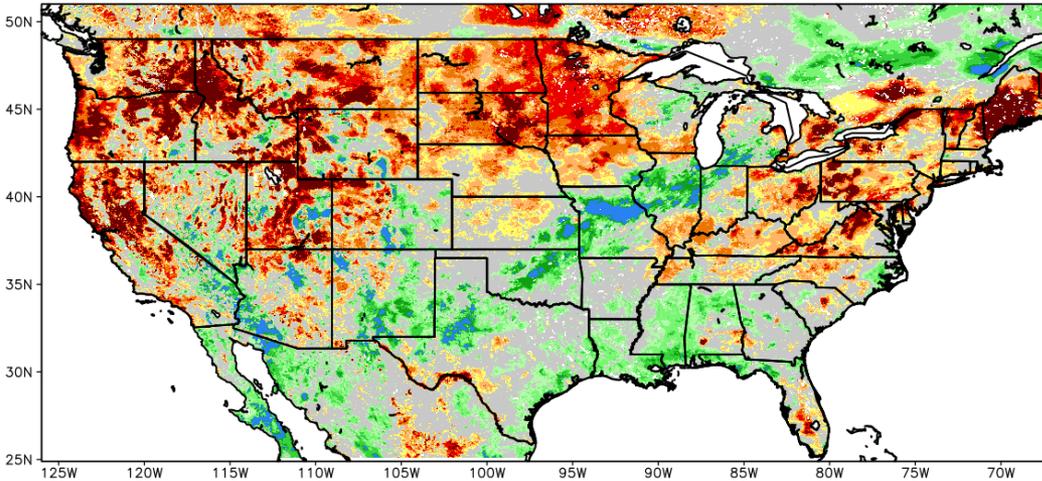
-  Drought persists
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely



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

Modeled Soil Moisture

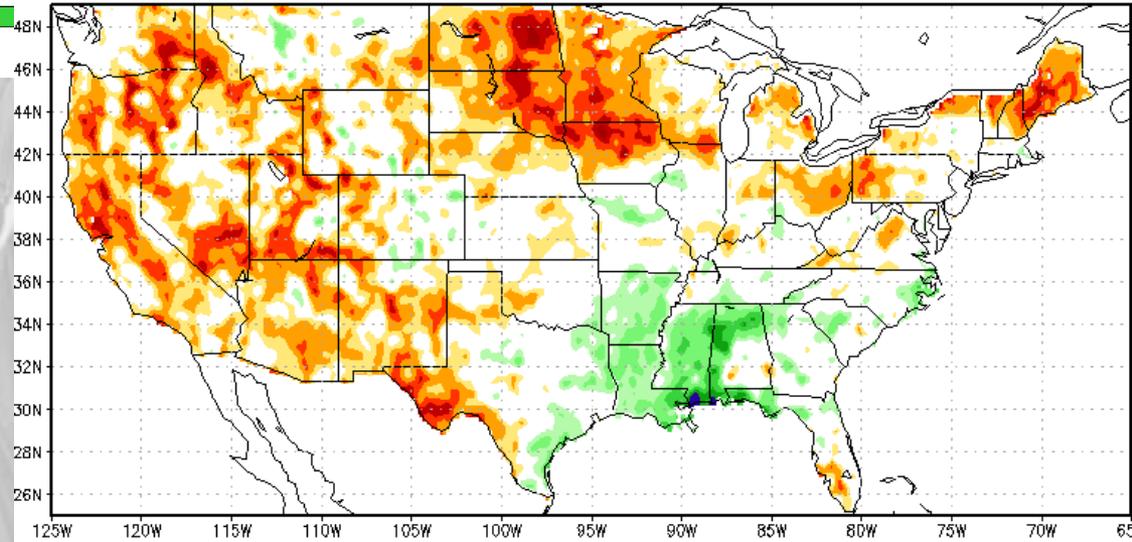
SPoRT-LIS 0-100 cm Soil Moisture percentile valid 01 Jul 2021



Ensemble-Mean

Current SMP

26Jun2021



https://weather.msfc.nasa.gov/sport/case_studies/lis_CO_NUS.html
https://www.cpc.ncep.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml#

Vegetation Health Index

NOAA STAR Vegetation Health Index

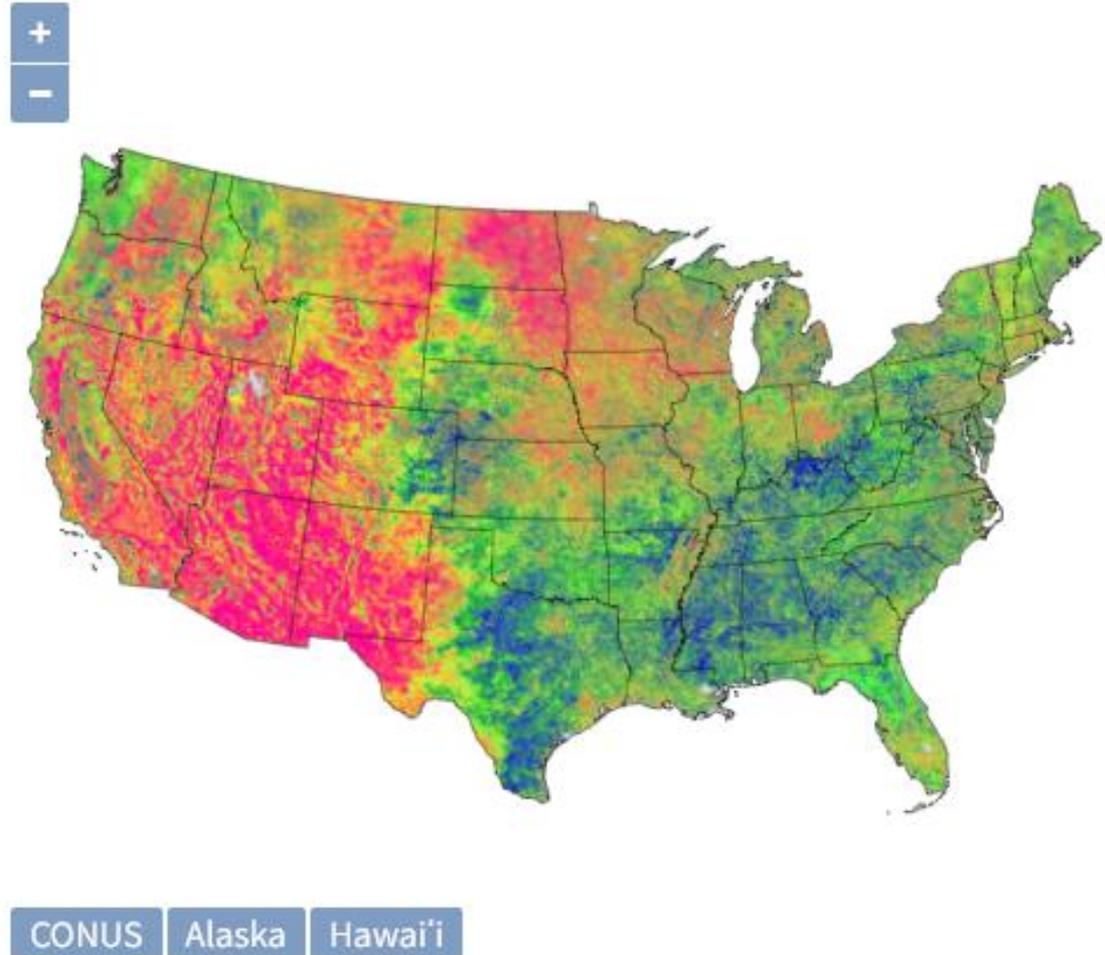
Satellite measured data from surface IR emissions.

Redder areas – more stressed

Unfavorable Conditions



Favorable Conditions



<https://www.drought.gov/topics/vegetation#definition>

Data: NOAA STAR

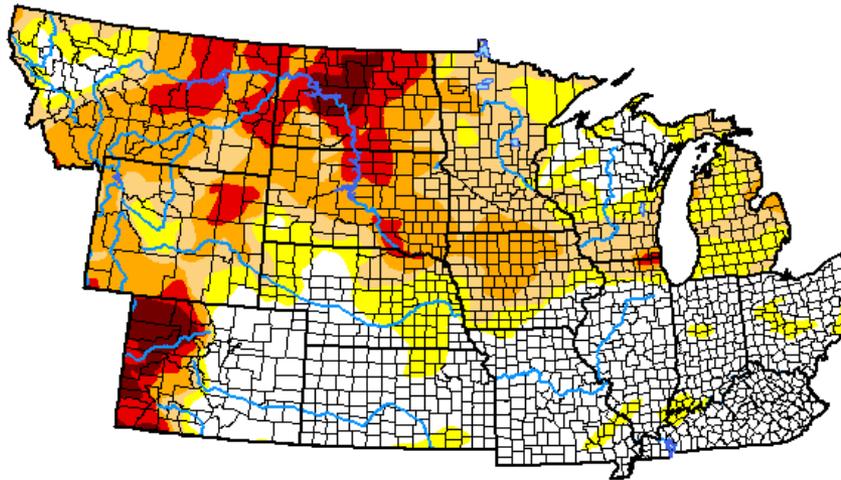
Details

- St. Paul pan evaporation June – highest June since 1988
- Likely top 5-10 warmest Junes north
- Likely top 5 driest parts SD-MN-IA
- Likely top 5-10 wettest parts MO-MI

US Drought Monitor

U.S. Drought Monitor NWS Central

June 29, 2021
(Released Thursday, Jul. 1, 2021)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	37.28	62.72	47.35	29.04	10.73	2.66
Last Week <i>06-22-2021</i>	34.02	65.98	48.21	27.92	10.03	2.68
3 Months Ago <i>03-30-2021</i>	33.38	66.62	38.46	20.57	8.04	1.32
Start of Calendar Year <i>12-29-2020</i>	30.52	69.48	46.07	24.23	12.18	2.52
Start of Water Year <i>09-29-2020</i>	29.60	70.40	37.34	17.96	7.13	0.24
One Year Ago <i>06-30-2020</i>	54.62	45.38	20.97	6.14	3.48	0.19

Intensity:

- None
- 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. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Deborah Bathke
National Drought Mitigation Center



droughtmonitor.unl.edu

Current Fire Incidents

Current Large Incidents June 30, 2021



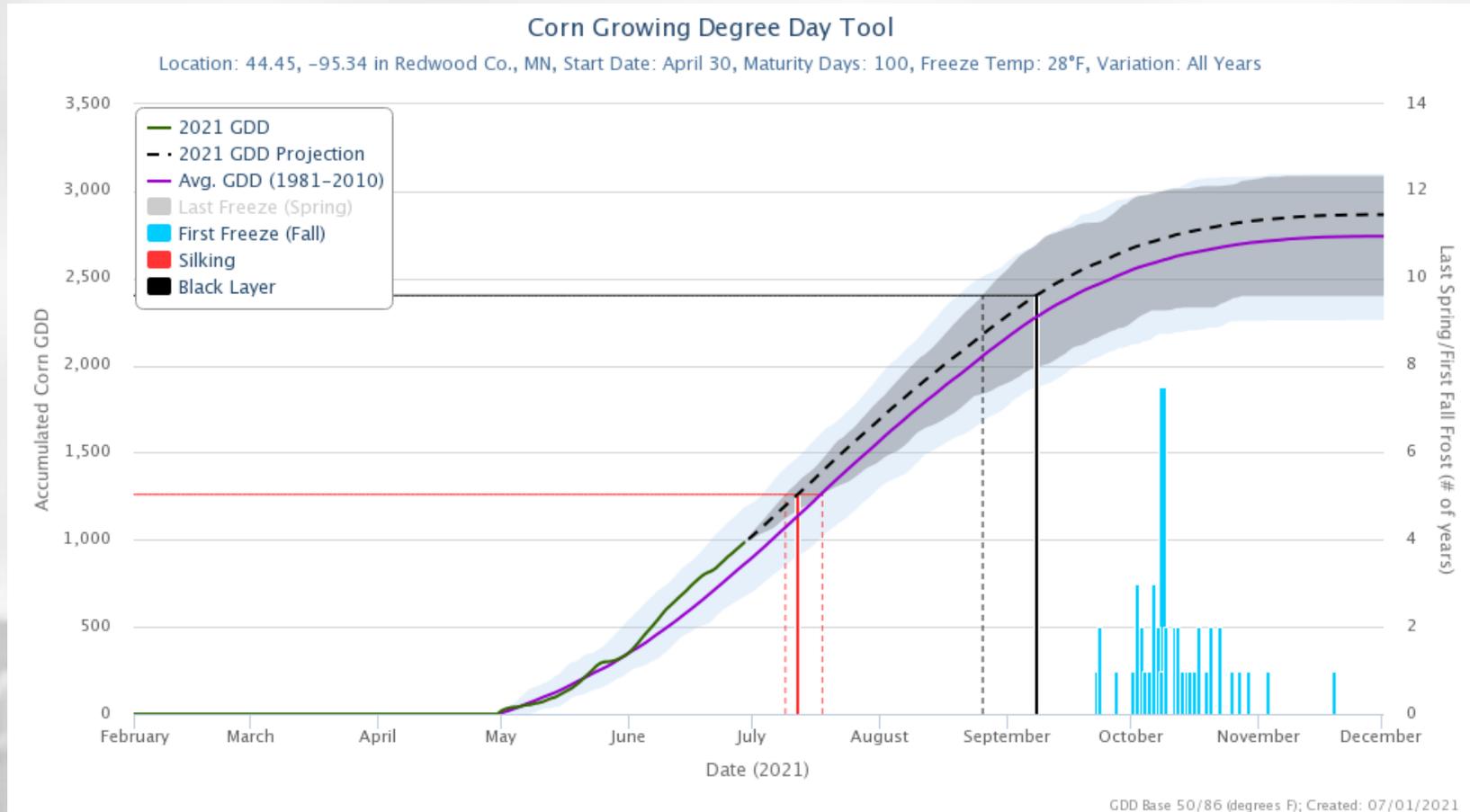
- | | | | |
|----------------|------------------|----------------------|------------------|
| 1 TUTAK CREEK | 14 NETTLE | 27 WEST CHEV | 30 HOBO |
| 2 NOATAK RIVER | 15 INYO CREEK | 28 BENNION CREEK | 31 HORTON |
| 3 DRY CREEK | 16 LITTLE PINE | 29 DEEP CREEK CANYON | 32 WEST |
| 4 OLSONS LAKE | 17 FRITZER | 30 ALAMO | 33 OIL SPRINGS |
| 5 MUNSON CREEK | 18 PLANET RANCH | 31 WYRICK | 34 BULLARD |
| 6 LAVA | 19 WATER SPRINGS | 32 BOTTOM | 35 CROOKED CREEK |
| 7 SKY | 20 MM 25 115 | 33 BEAR | 36 JOHNSON |
| 8 TENNANT | 21 ANDRUS CANYON | 34 PINNACLE | 37 DRUMMOND |
| 9 WILLOW | 22 ROCK BUTTE | 35 WALNUT | 38 MUDDY SLIDE |
| 10 S-503 FIRE | 23 MORGAN CANYON | 36 BEAR | 39 SYLVAN FIRE |
| 11 CUTOFF | 24 RAFAEL | 37 PACK CREEK | 40 RED SPARROW |
| 12 BLUE | 25 BACKBONE | 38 ROBERTSON DRAW | |
| 13 SHELL | 26 TELEGRAPH | 39 MOORE | |

Regional fire incidents:

Western Colorado
Border WY/MT

<https://fsapps.nwgc.gov/afm/index.php>

Redwood County MN GDDs



<https://hprcc.unl.edu/agroclimate/gdd.php>

<https://mrcc.illinois.edu/U2U/gdd/>

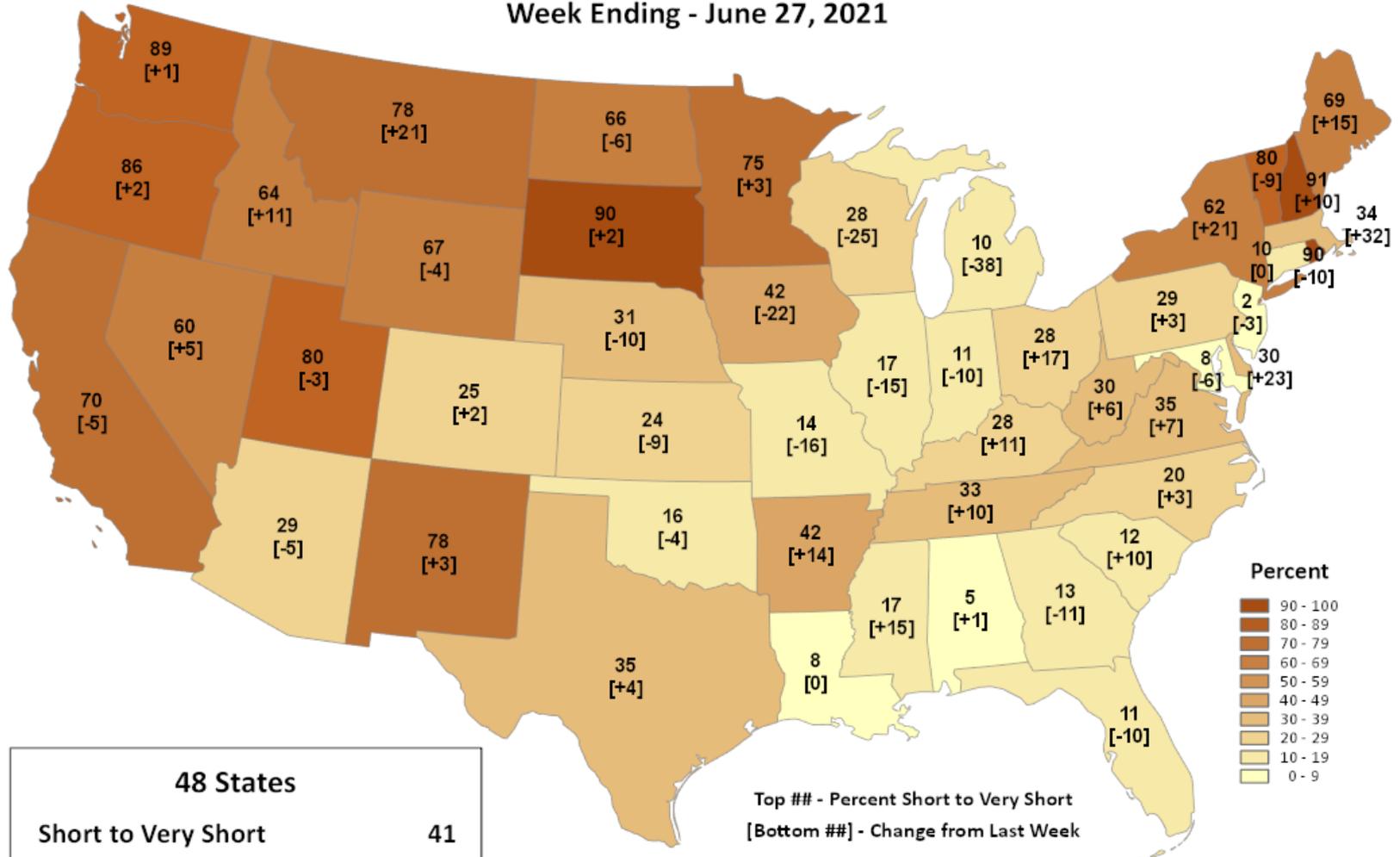
Above average temperatures have pushed GDD accumulation above average – no surprise.

US Drought Monitor



This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Topsoil Moisture Percent Short to Very Short Week Ending - June 27, 2021



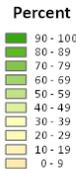
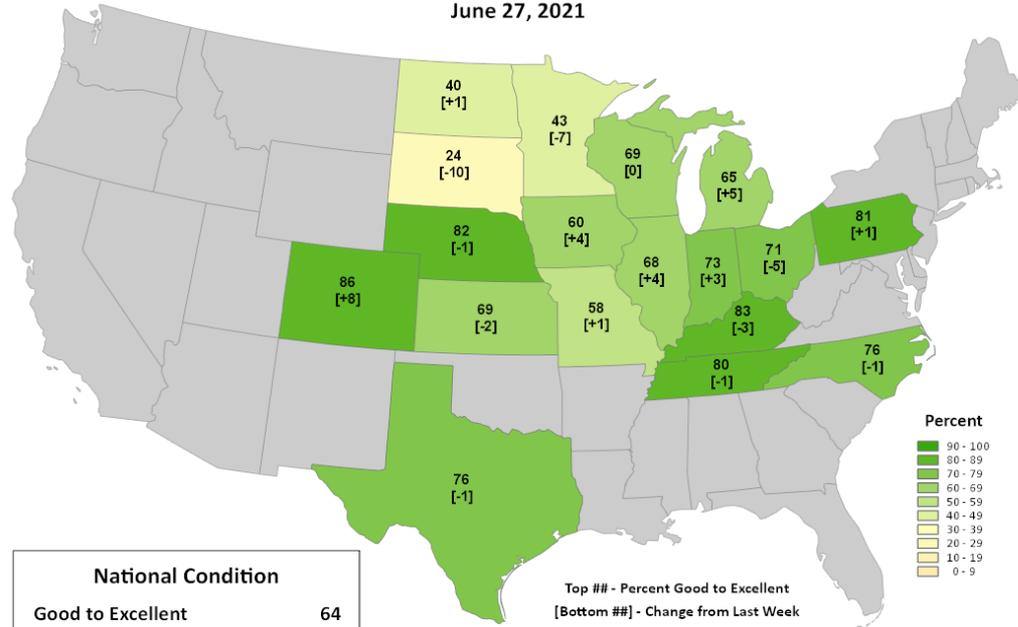
Corn Conditions (NASS)



This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Corn Conditions Percent Good to Excellent

June 27, 2021



National Condition

Good to Excellent **64**
Change from Last Week **-1**

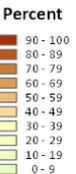
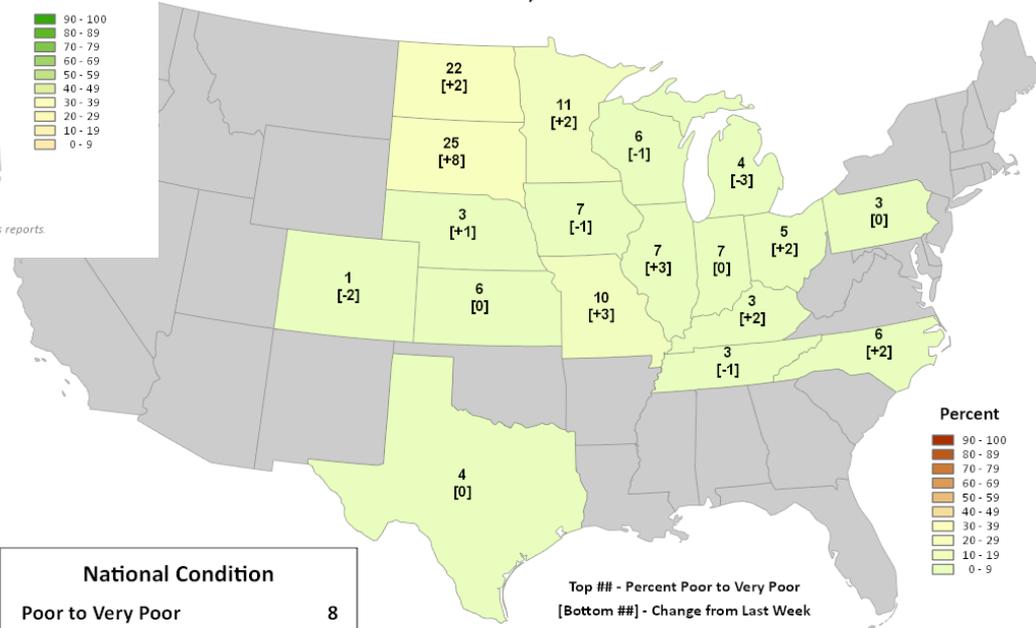
Top ## - Percent Good to Excellent
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

Crop conditions (corn) worsening over NW Corn Belt.

Corn Conditions Percent Poor to Very Poor

June 27, 2021



National Condition

Poor to Very Poor **8**
Change from Last Week **+2**

Top ## - Percent Poor to Very Poor
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

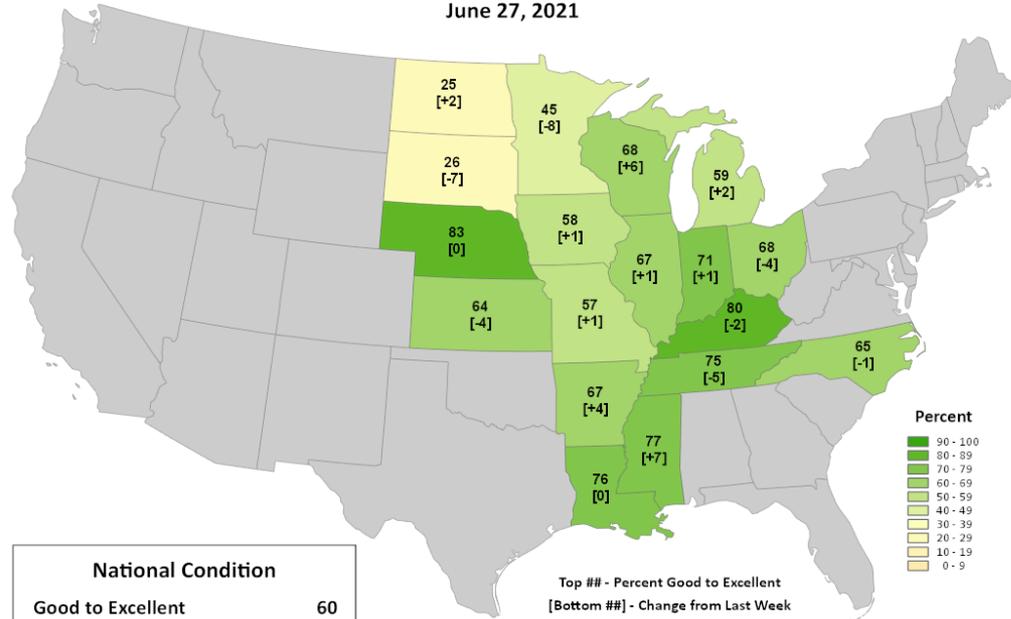
Soybean Conditions (NASS)



Soybean Conditions

Percent Good to Excellent

June 27, 2021



National Condition

Good to Excellent 60

Change from Last Week 0

Top ## - Percent Good to Excellent
[Bottom ##] - Change from Last Week

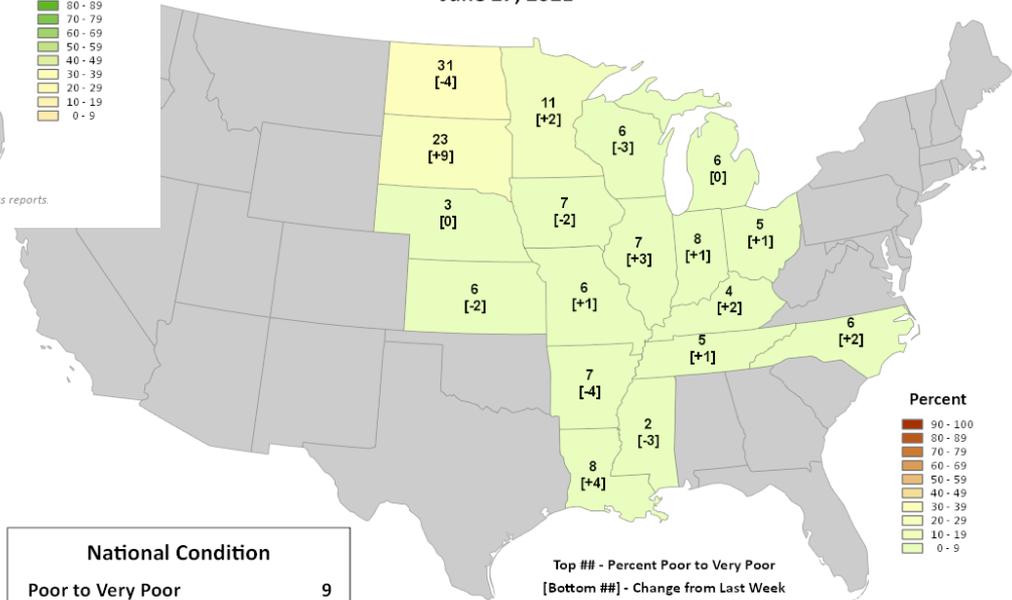
Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

Crop progress (soybean) also worst in NW Corn Belt (Dakotas). Some improvement east.

Soybean Conditions

Percent Poor to Very Poor

June 27, 2021



National Condition

Poor to Very Poor 9

Change from Last Week 0

Top ## - Percent Poor to Very Poor
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

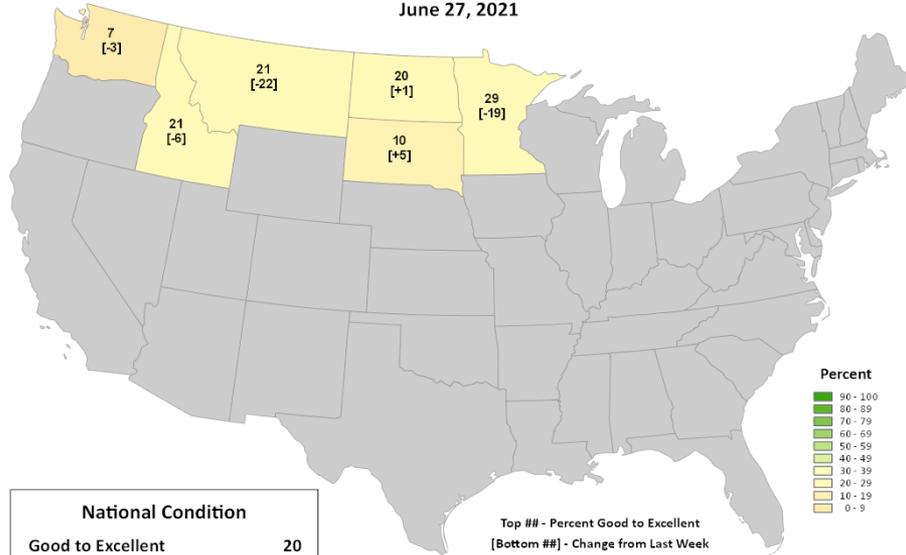
Spring Wheat Conditions (NASS)



Spring Wheat Conditions

Percent Good to Excellent

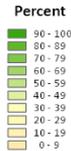
June 27, 2021



National Condition	
Good to Excellent	20
Change from Last Week	-7

Top ## - Percent Good to Excellent
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports

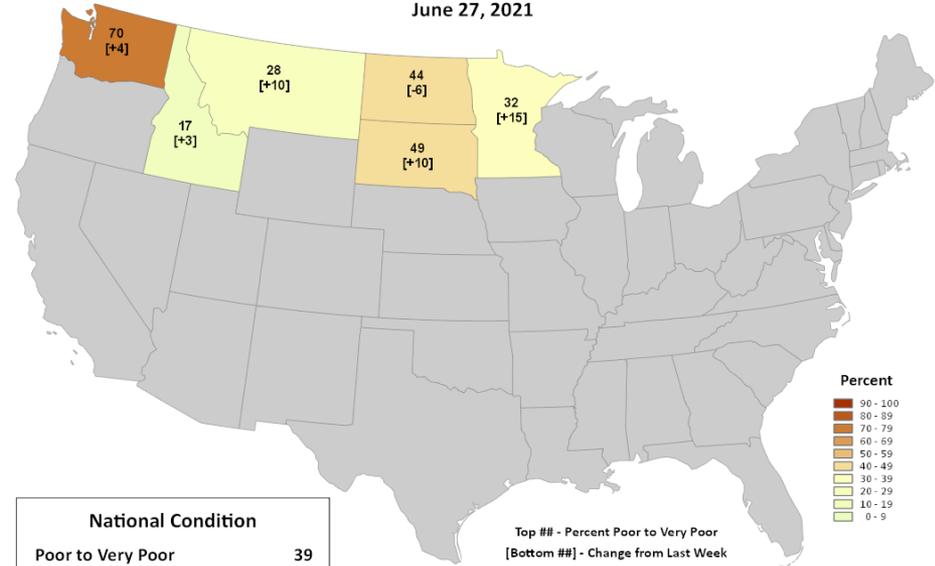


Spring Wheat Conditions

Percent Poor to Very Poor

June 27, 2021

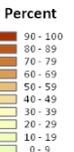
This product was prepared by the USDA Office of the Chief Economist (OCE) World Agricultural Outlook Board (WAOB)



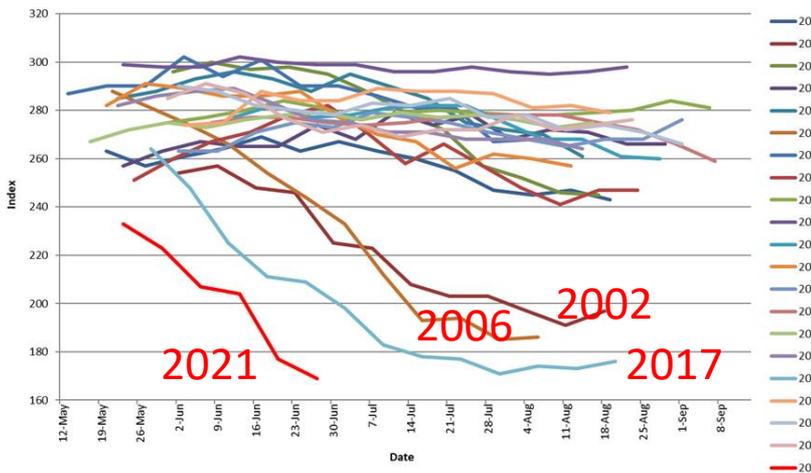
National Condition	
Poor to Very Poor	39
Change from Last Week	+2

Top ## - Percent Poor to Very Poor
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports



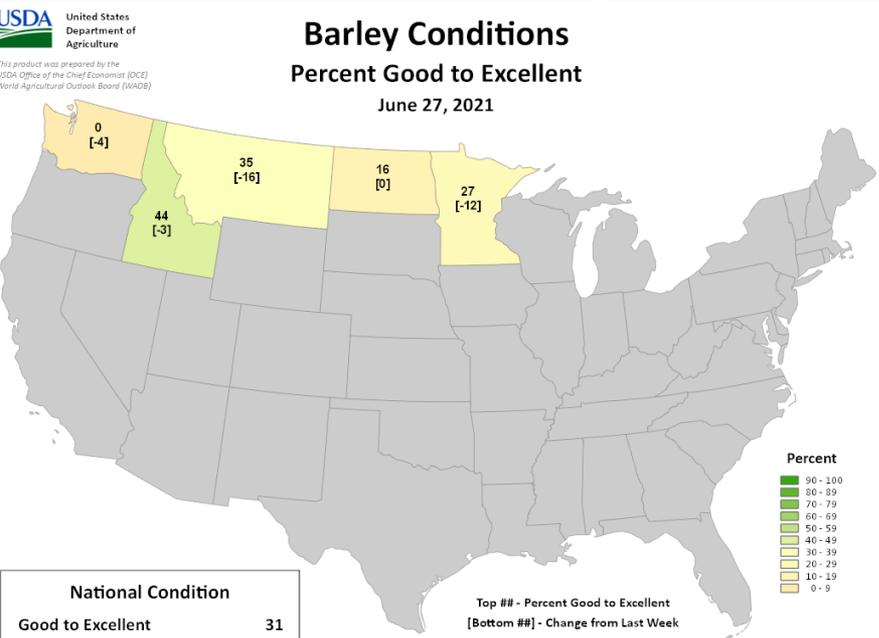
U.S. SPRING WHEAT Condition Index



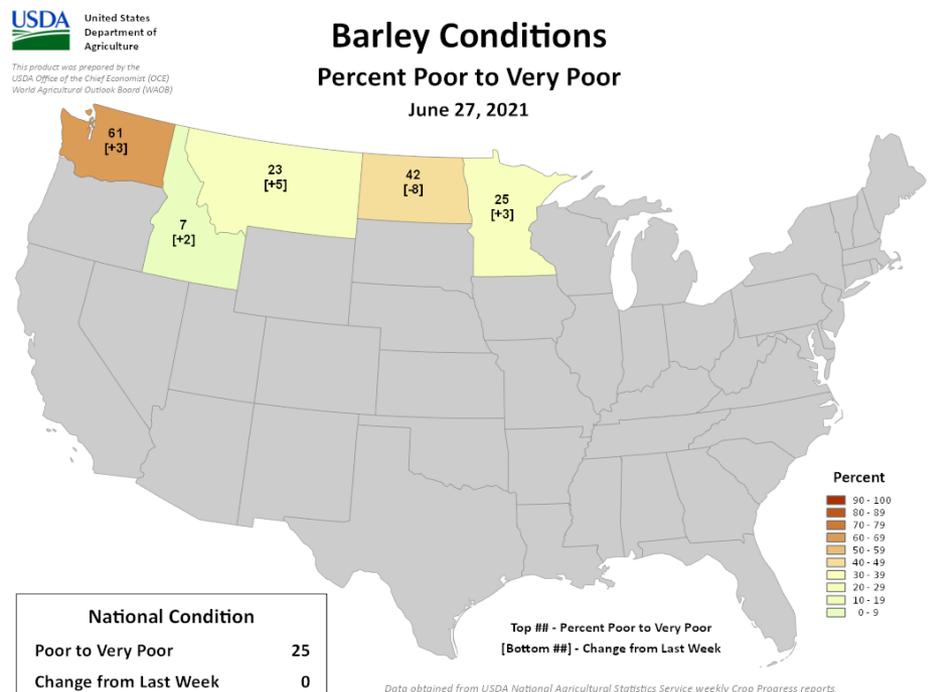
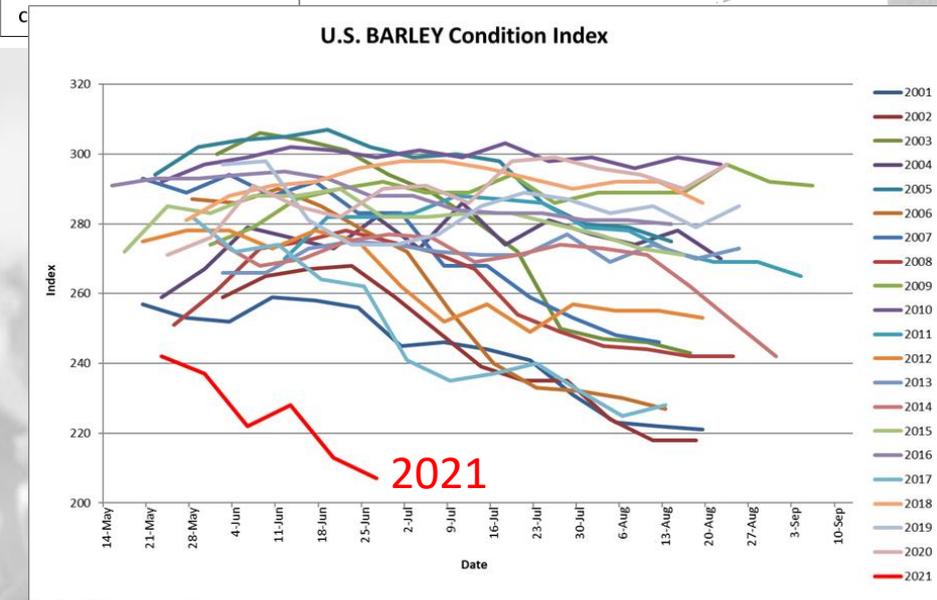
Based on NASS crop progress data

Spring wheat conditions very poor. National conditions worst at this time of year for any year since 2000.

Barley Conditions (NASS)



Barley conditions also very poor. National conditions worst at this time of year for any year since 2000.



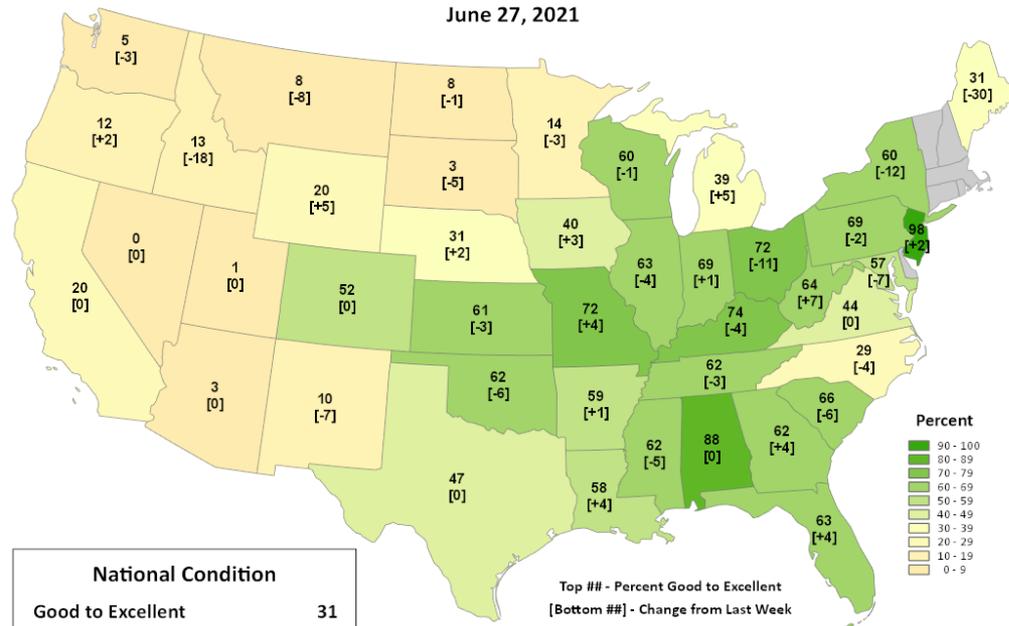
Pasture/Range Conditions (NASS)



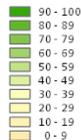
Pasture and Range Conditions

Percent Good to Excellent

June 27, 2021



Percent



National Condition

Good to Excellent 31
Change from Last Week -1

Top ## - Percent Good to Excellent
[Bottom ##] - Change from Last Week

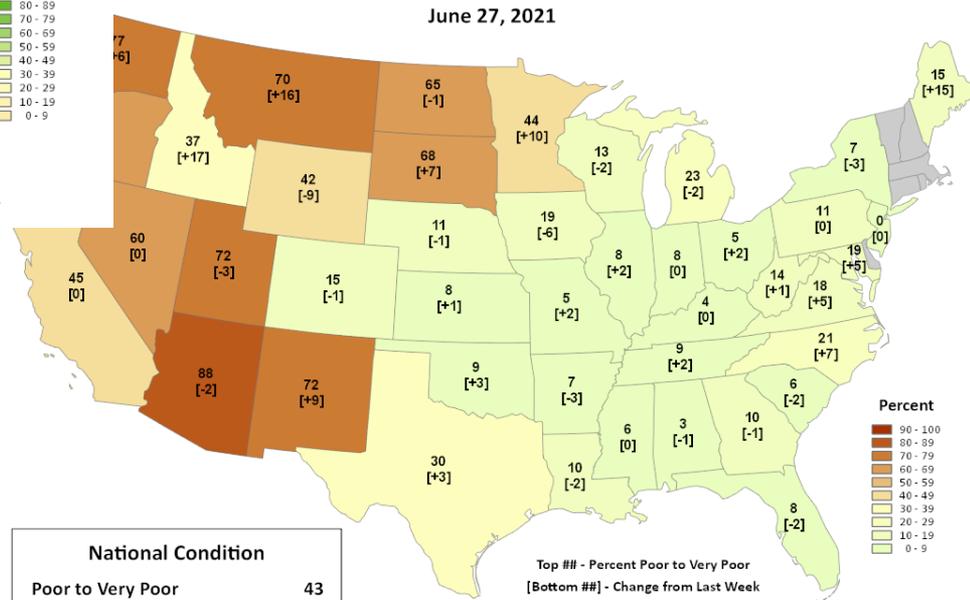
Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports

Pasture and range conditions poor though little national change. Several state changes.

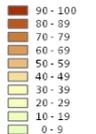
Pasture and Range Conditions

Percent Poor to Very Poor

June 27, 2021



Percent



National Condition

Poor to Very Poor 43
Change from Last Week +4

Top ## - Percent Poor to Very Poor
[Bottom ##] - Change from Last Week

Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports

Take Home

- **Current conditions:**

- Recent rains have helped eastern Corn Belt
- And a little further west
- Poor crop conditions nrn Plains

- **Outlook:**

- Outlooks and climatology working against crops and pasture/range in nrn Plains
- Central Plains and MN/IA additional areas of concern
- Rest of Corn Belt less immediate risk and outlooks seem better

For More Information



@dennistoday



<https://www.climatehubs.usda.gov/hubs/midwest>



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