

MAC-T Monthly Call

Midwest Agriculture and Climate Team

1 November 2023

For more information:

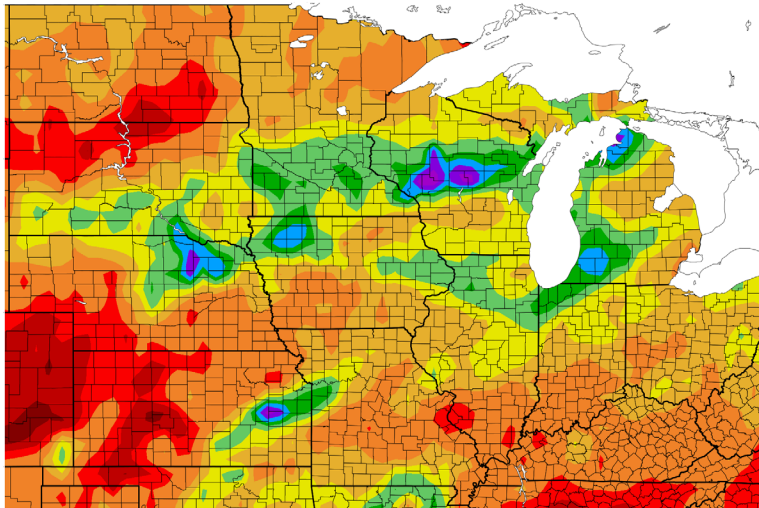
Dennis.todey@usda.gov



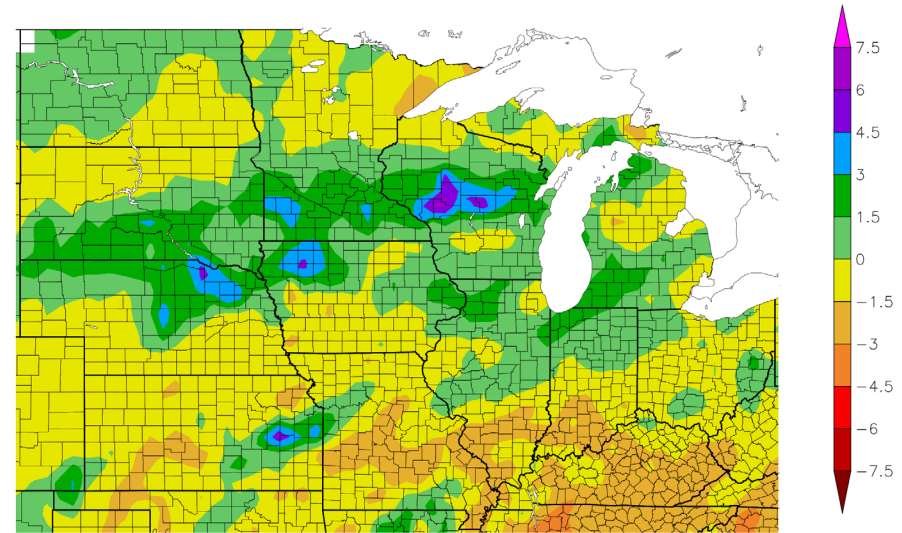
Midwest Climate Hub
U.S. DEPARTMENT OF AGRICULTURE



Precipitation (in)
10/1/2023 – 10/30/2023



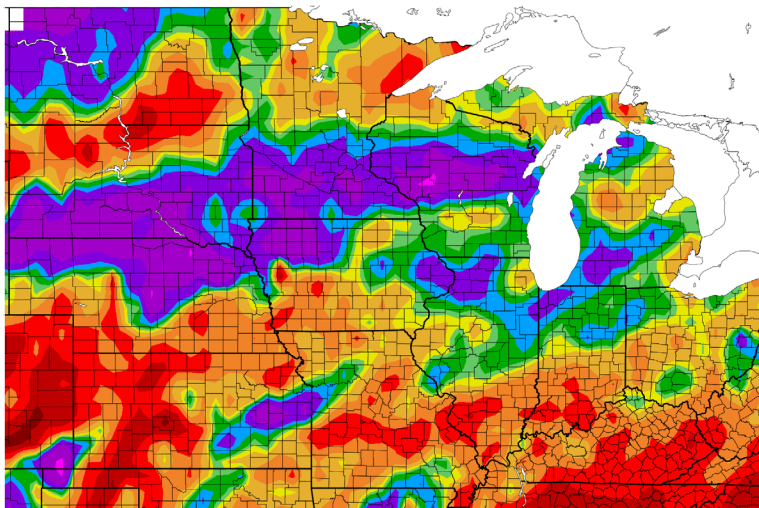
Departure from Normal Precipitation (in)
10/1/2023 – 10/30/2023



Generated 10/31/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
10/1/2023 – 10/30/2023



Generated 10/31/2023 at HPRCC using provisional data.

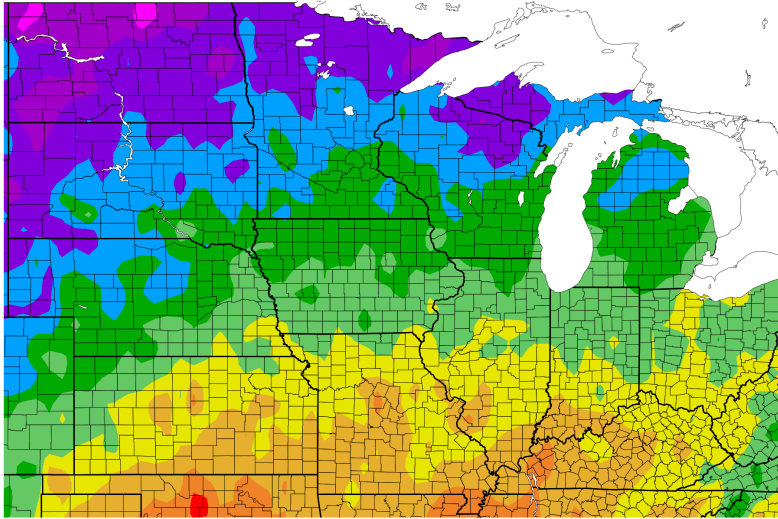
NOAA Regional Climate Centers

Generated 10/31/2023 at HPRCC using provisional data.

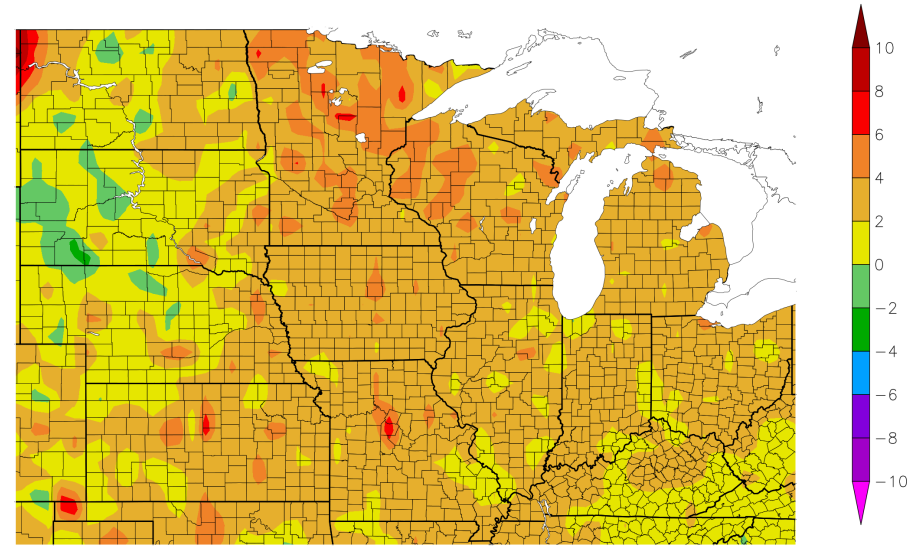
NOAA Regional Climate Centers

- A number of systems swept across the region over the past month, bringing much-needed precipitation
- The northern states saw the most relief, particularly WI
- The southern states and parts of the northern states still lacked, with areas totaling < 1" of precip all month
- Snow arrived at the end of the month

Temperature (F)
10/1/2023 – 10/30/2023



Departure from Normal Temperature (F)
10/1/2023 – 10/30/2023

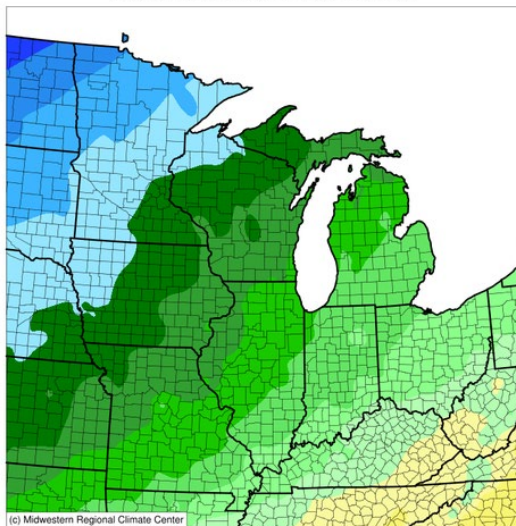


Generated 10/31/2023 at HPRCC using provisional data.

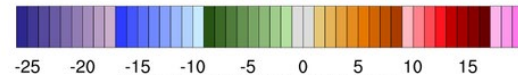
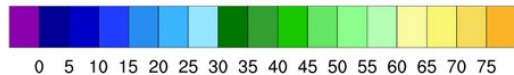
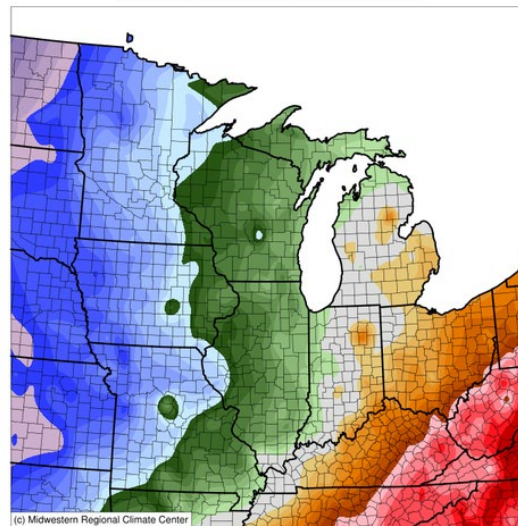
NOAA Regional Climate Centers Generated 10/31/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

Average Temperature (°F)
October 28, 2023 to October 31, 2023



Average Temperature (°F): Departure from 1991-2020 Normals
October 28, 2023 to October 31, 2023

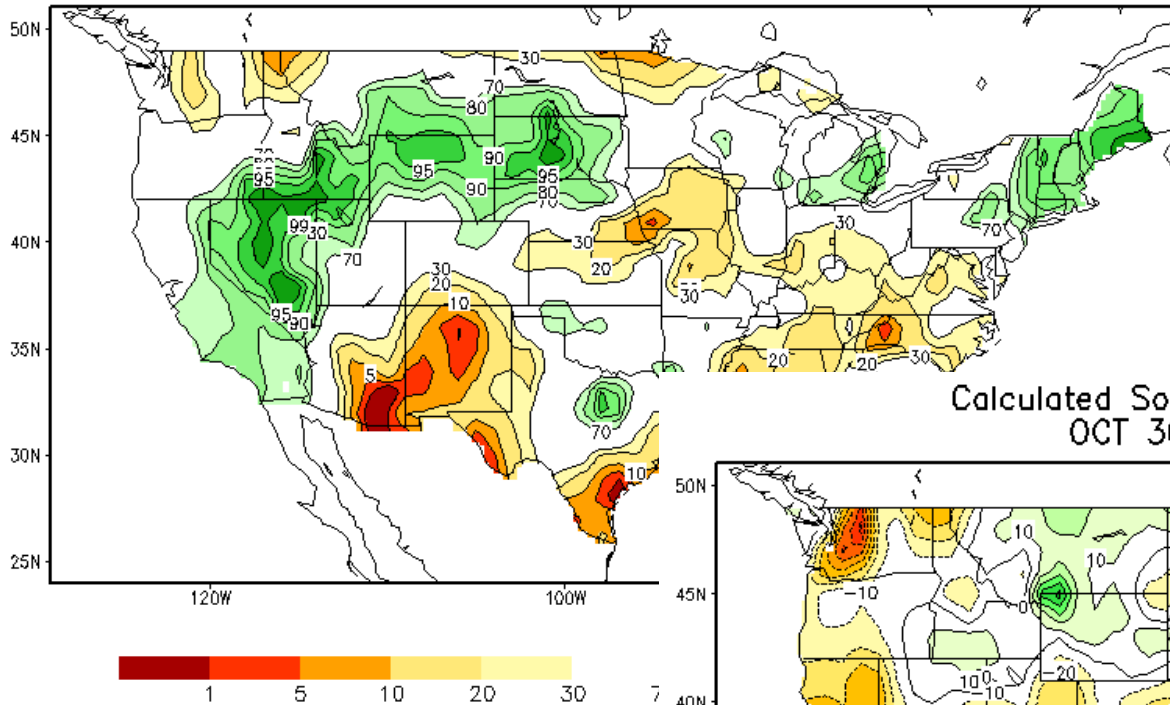


- Temperatures were mostly above-normal for the region, up until the end of the month when significantly colder temperatures invaded the region
- Bottom maps show the post-cold front average temps and departure from normal

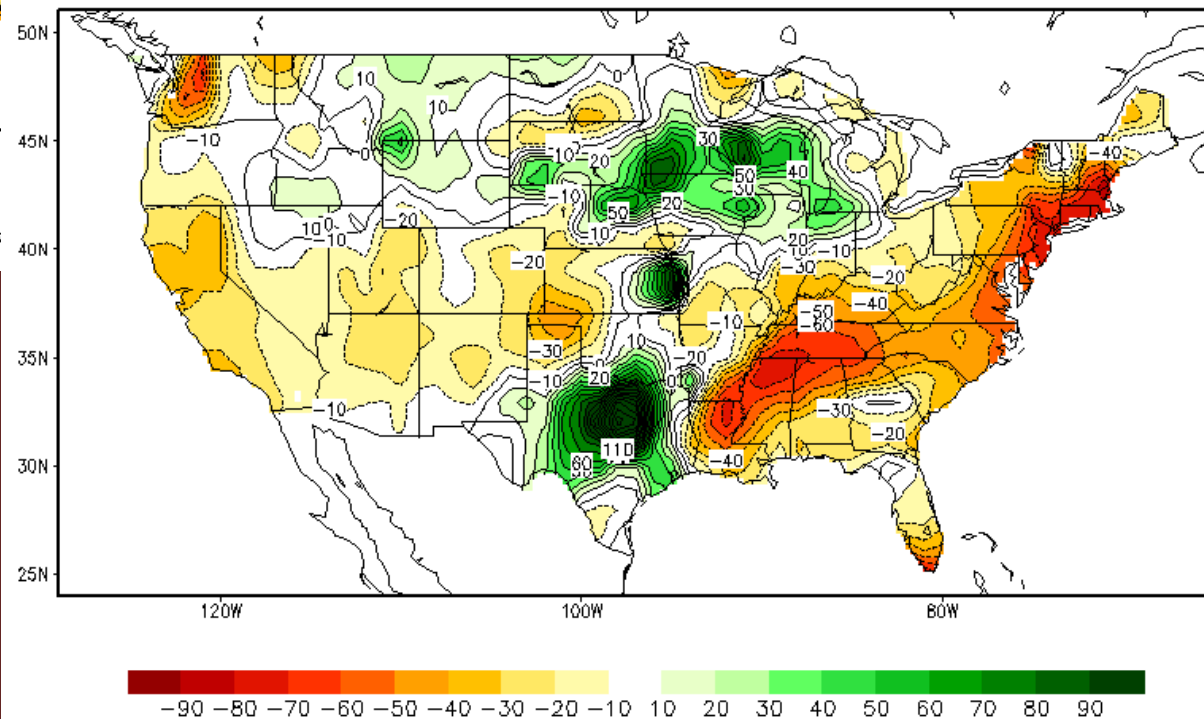
<https://hprcc.unl.edu/maps.php?map=ACISClimateMaps>
cli-MATE: MRCC Application Tools Environment (purdue.edu)

Soil Moisture

Calculated Soil Moisture Ranking Percentile
OCT 30, 2023



Calculated Soil Moisture Anomaly Change
OCT 30, 2023 from SEP.30



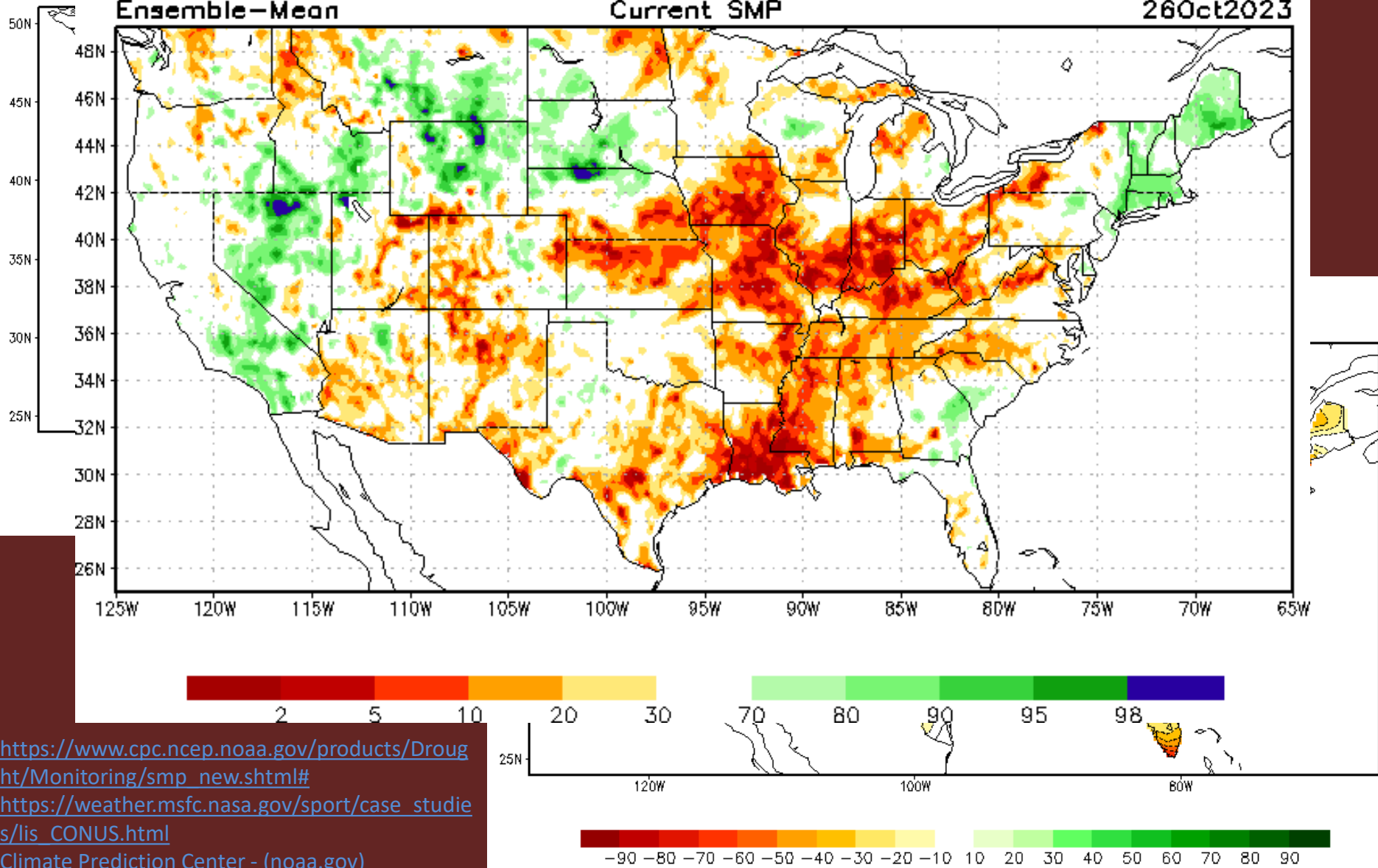
Soil Moisture

Calculated Soil Moisture Ranking Percentile
OCT 30, 2023

Ensemble-Mean

Current SMP

26Oct2023



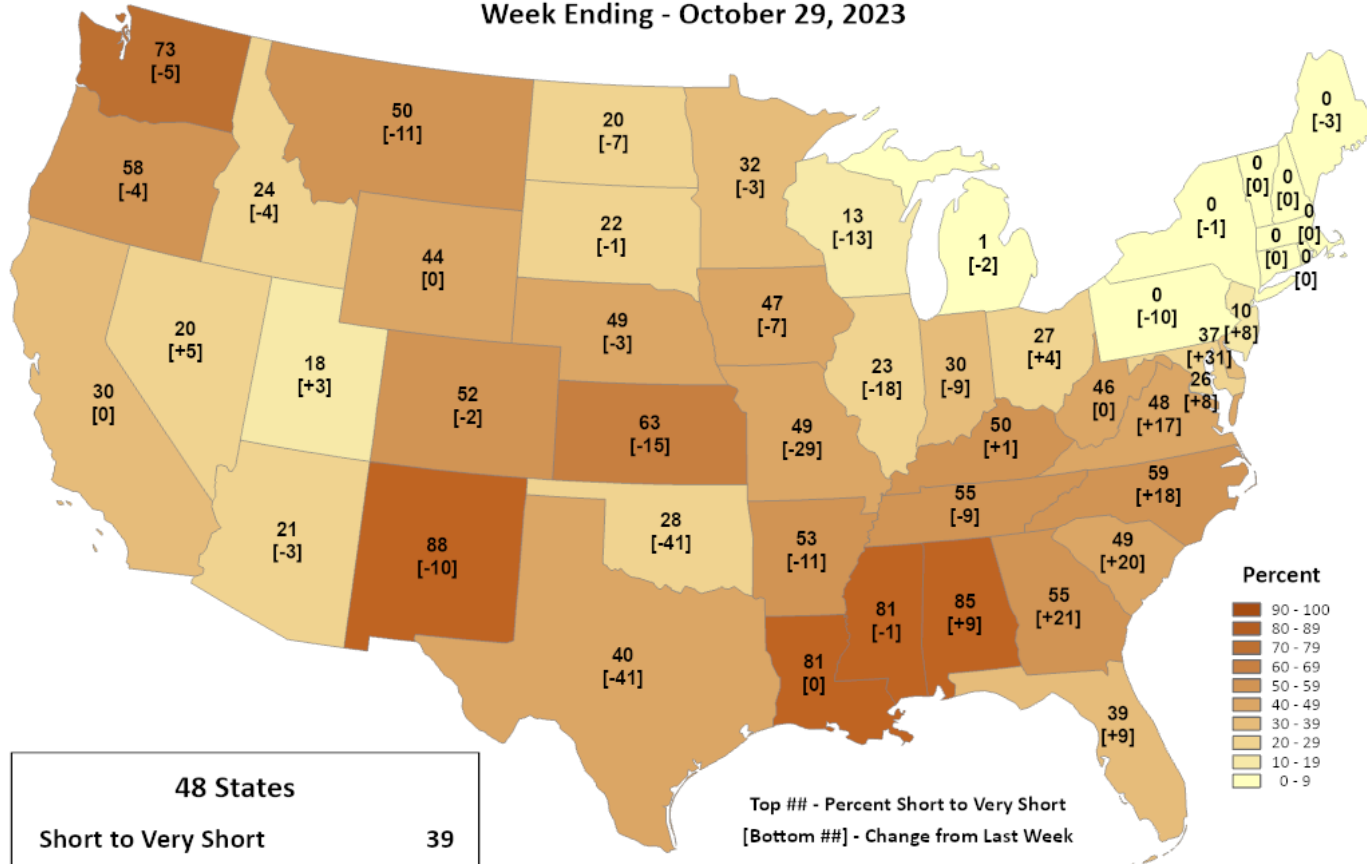
https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml#
https://weather.msfc.nasa.gov/sport/case_studies/lis_CONUS.html
Climate Prediction Center - (noaa.gov)

Soil Moisture (NASS)



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 - October 29, 2023



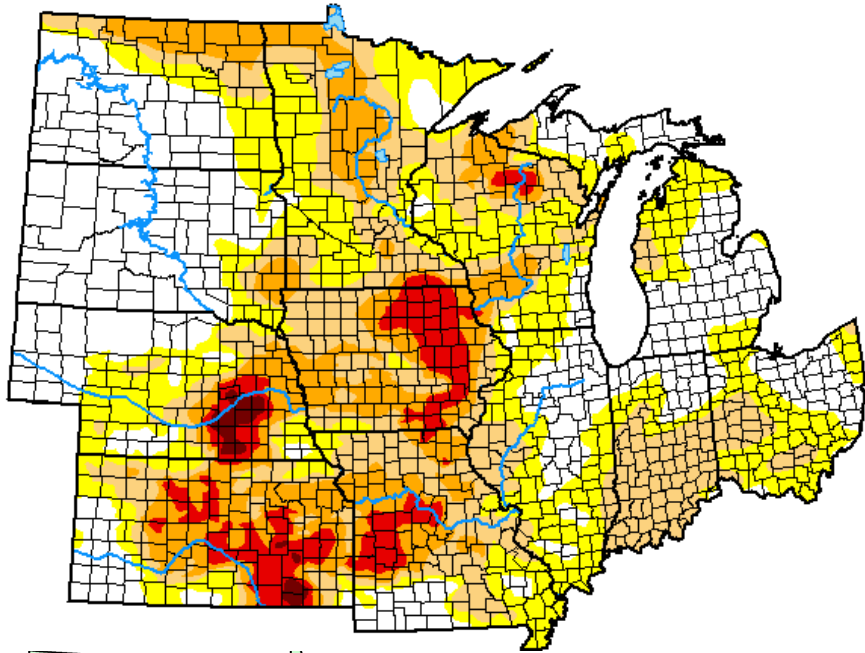
48 States	
Short to Very Short	39
Change from Last Week	-10

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

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

- Improvement over the last week in all Midwestern and Plains states, except Ohio, thanks to the much-needed precipitation

US Drought Monitor



October 24, 2023
 (Released Thursday, Oct. 26, 2023)
 Valid 8 a.m. EDT

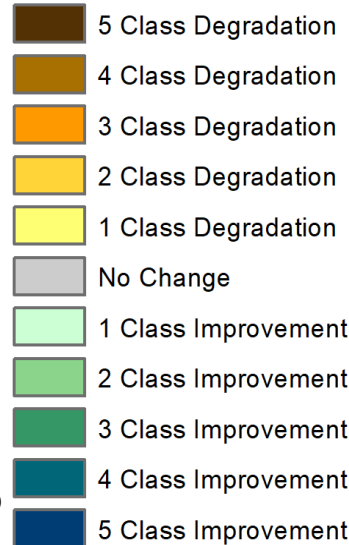
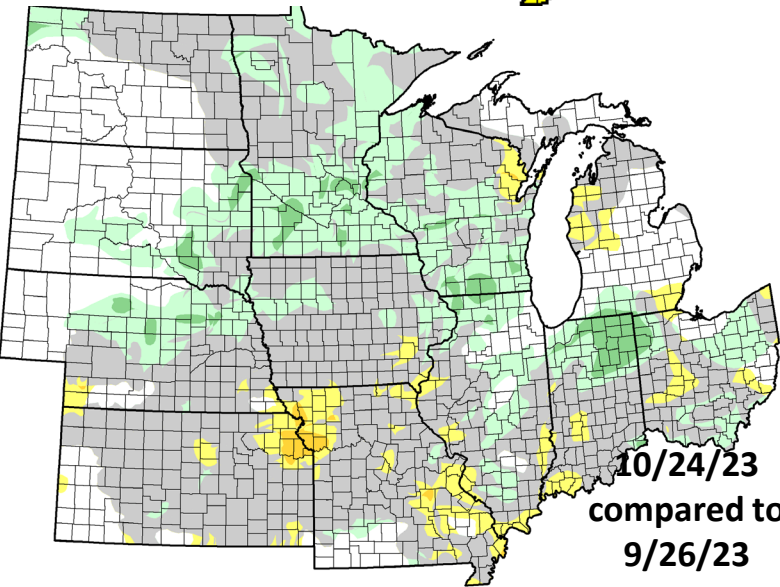
Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	31.65	68.35	42.06	20.82	6.33	0.65
Last Week <i>10-17-2023</i>	29.38	70.62	44.16	21.06	6.33	0.65
3 Months Ago <i>07-25-2023</i>	20.00	80.00	55.09	23.83	8.33	0.66
Start of Calendar Year <i>01-03-2023</i>	23.51	76.49	51.22	24.39	11.79	5.25
Start of Water Year <i>09-26-2023</i>	25.87	74.13	49.98	25.16	7.67	0.73
One Year Ago <i>10-25-2022</i>	11.51	88.49	64.44	31.07	14.68	4.89

Intensity:



- Drought conditions improved slowly over the last month as groundwater and streamflow have been slow to respond due to significant deficits
- Large areas of 1-to-2 class improvements
- Unfortunately, still areas of D4 and areas that have seen 1-2 class degradations



10/24/23
 compared to
9/26/23

Corn Progress (NASS)

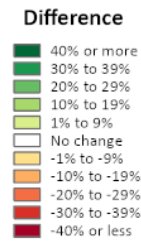
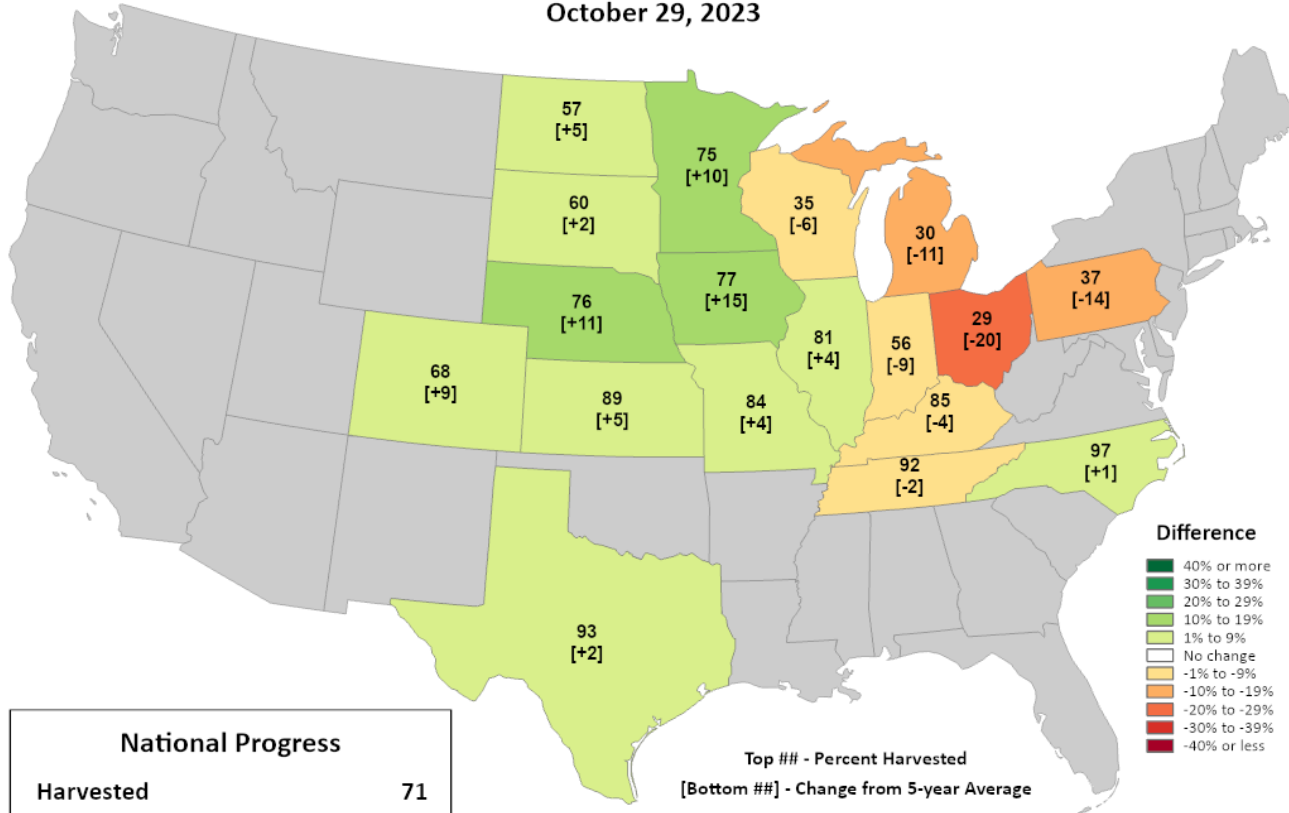


This product was prepared by the
USDA Office of the Chief Economist (OCE)
World Agricultural Outlook Board (WAOB)

Corn Progress

Percent Harvested

October 29, 2023



National Progress	
Harvested	71
Change from 5-year Average	+5

Top ### - Percent Harvested
[Bottom ###] - Change from 5-year Average

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

- Nationally, we were at 23% harvested on October 1. We are now at 71%.
- Harvest progressing nicely across the western states
- Unfortunately, behind the 5-year average in the east, with Ohio falling significantly behind

<https://agindrought.unl.edu/Other.aspx>

Soybean Progress (NASS)

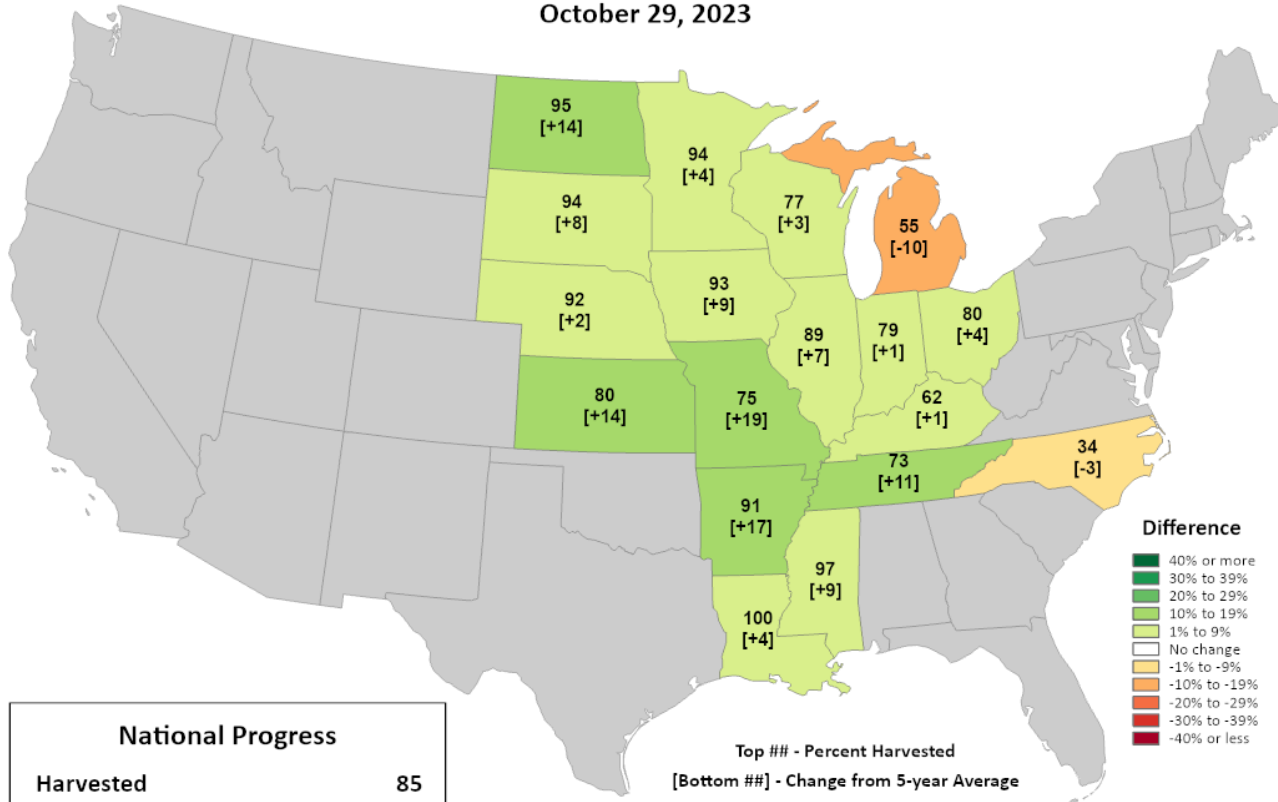


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Soybeans Progress

Percent Harvested

October 29, 2023

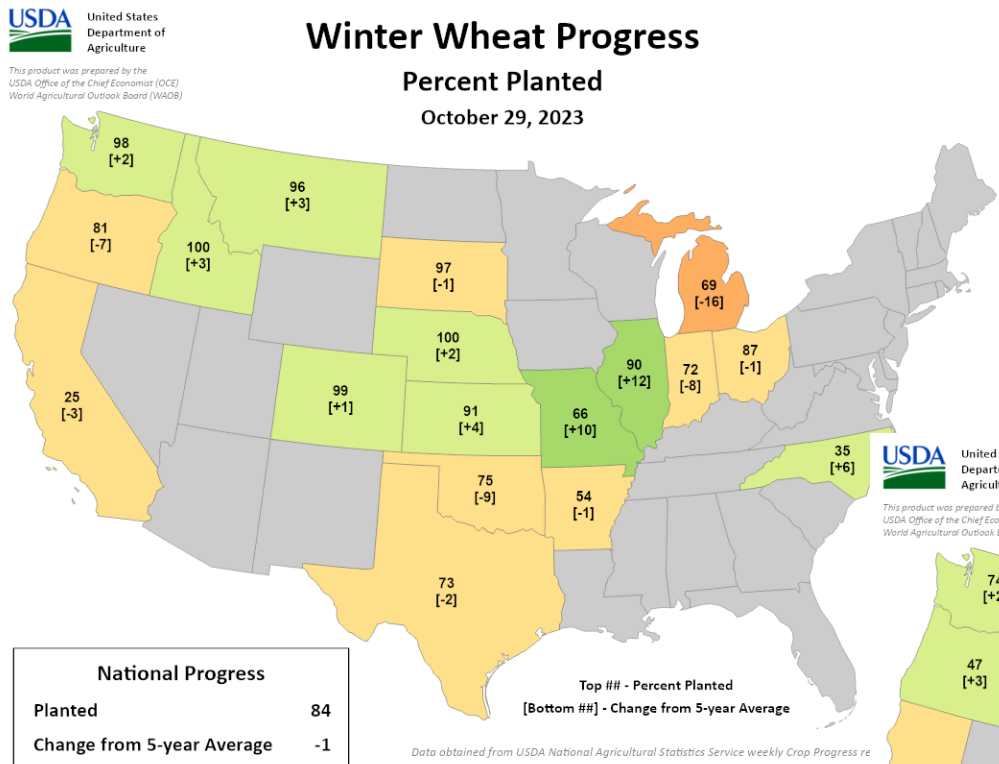


National Progress	
Harvested	85
Change from 5-year Average	+7

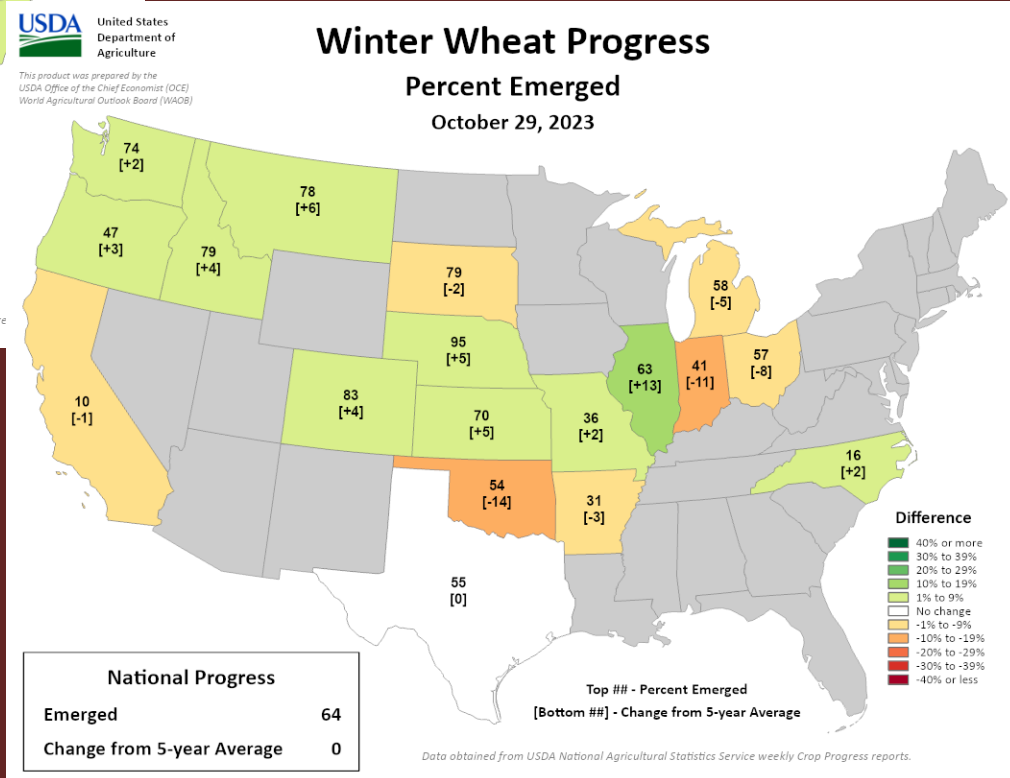
Data obtained from USDA National Agricultural Statistics Service weekly Crop Progress reports.

- Nationally, we were at 23% harvested on October 1. We are now at 85%.
- Harvest progressing nicely across the region, except for Michigan

Winter Wheat (NASS)



- Winter wheat planting nearing the end, with a mix of states ahead of and behind the 5-year average
- Emergence following the planting progress, with the west mostly ahead and east behind



<https://agindrought.unl.edu/Other.aspx>

Pasture/Range Conditions (NASS)

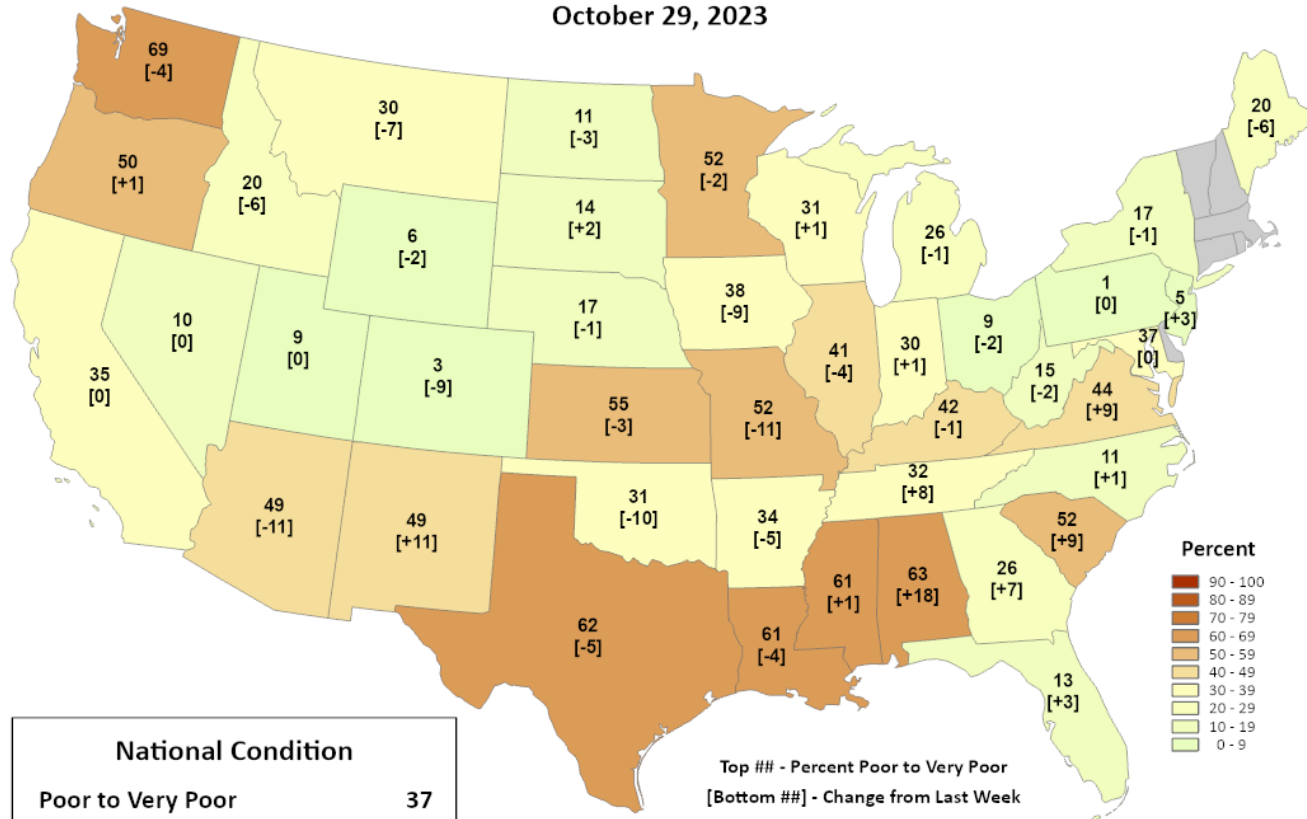


Pasture and Range Conditions

Percent Poor to Very Poor

October 29, 2023

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



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

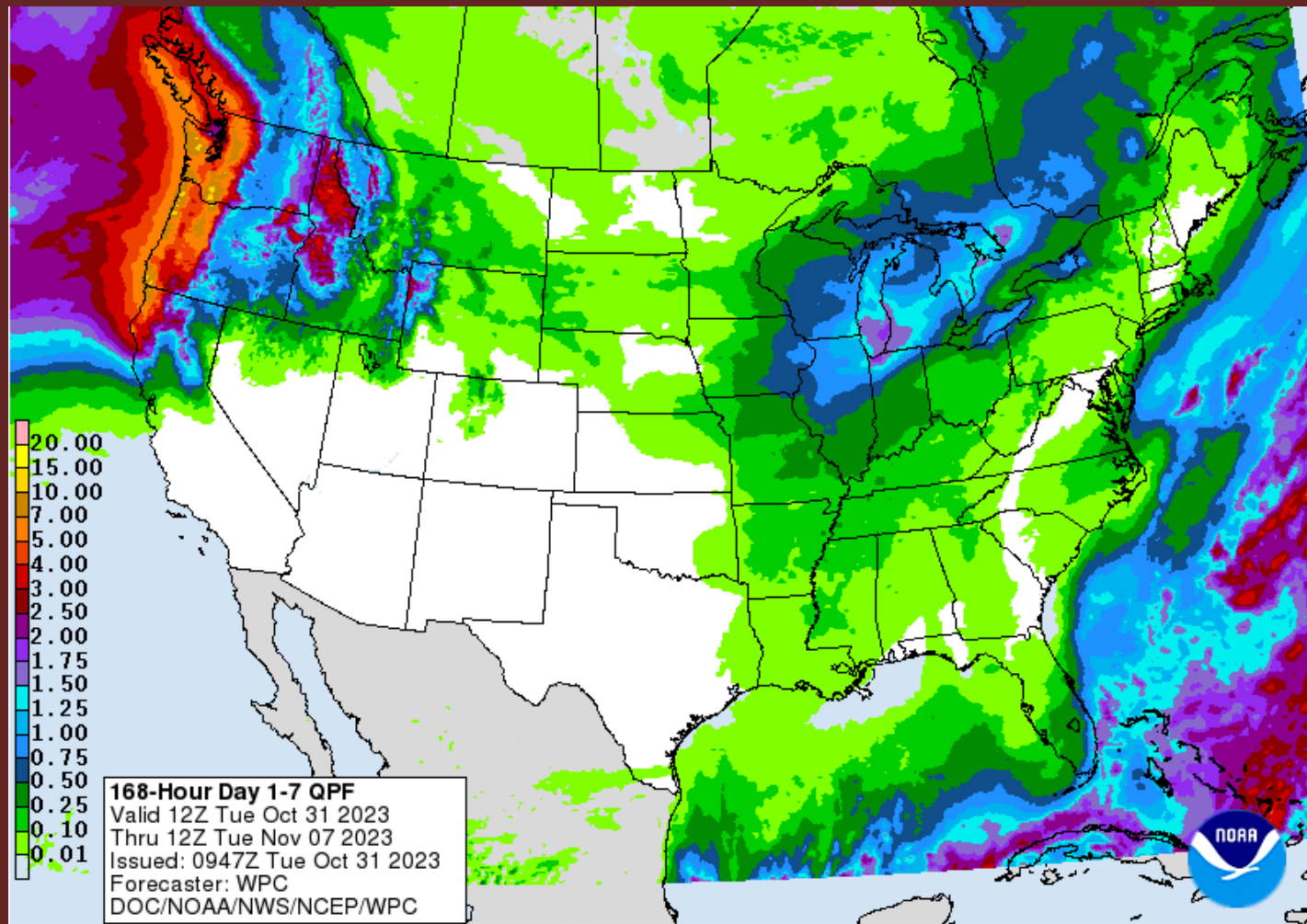
- Nationally, not much has changed over the last month
 - Oct 1: 35%
 - Oct 29: 37%
- Most of the Midwest and Plains are near normal

<https://agindrought.unl.edu/Other.aspx>

Assorted AG Issues

- While soil moisture has improved, soils remain dry through much of the region due to significant deficits
- Significant amount of corn and soybean harvest done
- Precip aided in winter wheat emergence; however, there are concerns about impacts of the cold blast
- Also concerns for livestock health – e.g., pneumonia – with the drastic change in temperature
- Slight increase in lower Mississippi River levels
- Fire is still a very legitimate concern

Forecasted Precip Oct 31 – Nov 7



- At least some precip forecasted for almost the entire region over the next week
- Potentially heavier precip this weekend over the Great Lakes region

<http://www.wpc.ncep.noaa.gov/qpf/day1-7.shtml>

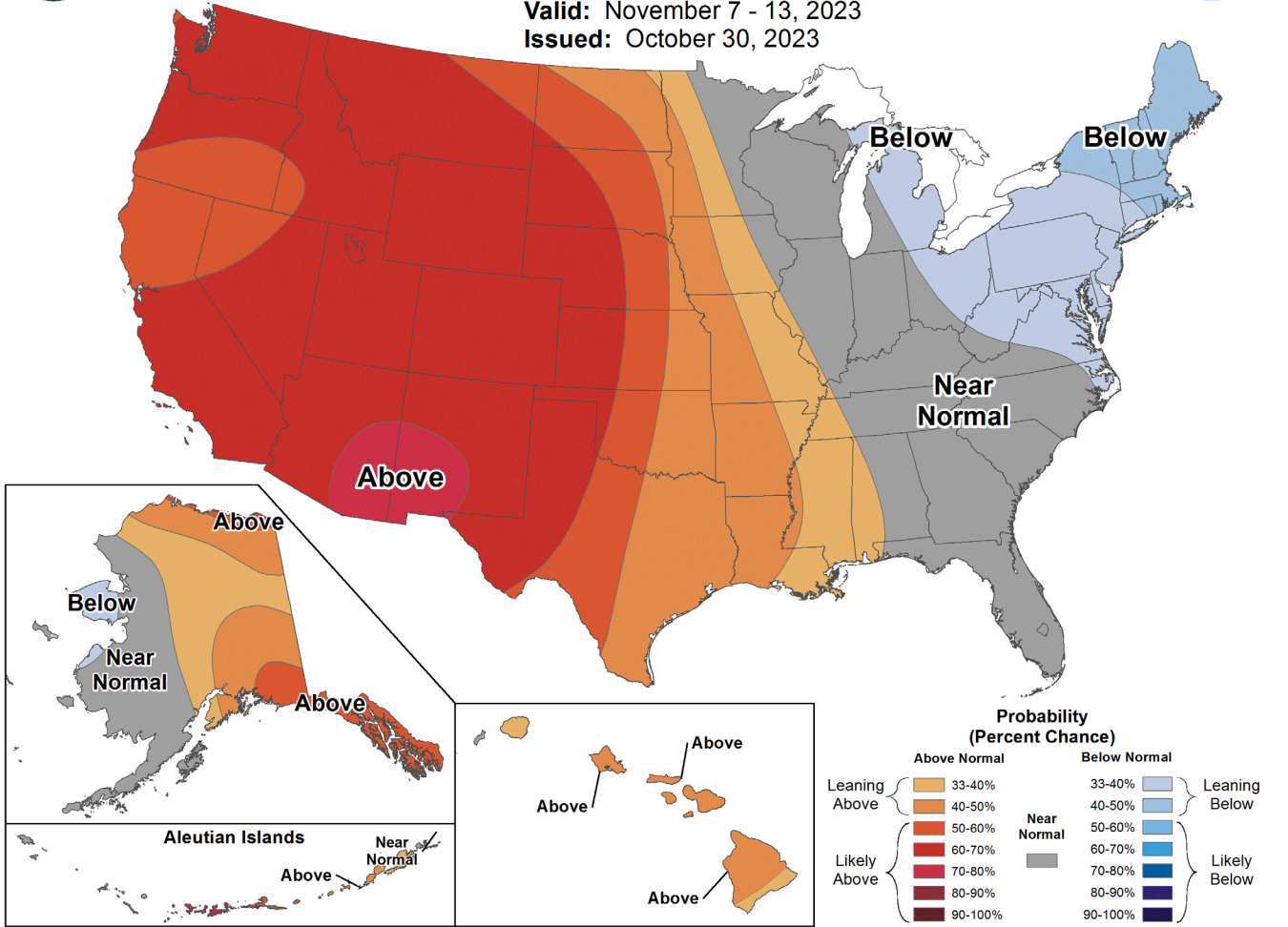
8-14 Day Temperature Outlook



8-14 Day Temperature Outlook



Valid: November 7 - 13, 2023
 Issued: October 30, 2023



- A change in temperature patterns in the next 8-14 days
- The western half of the region has the potential to see above-normal temperatures
- Michigan and Ohio may see below-normal temperatures
- Near-normal temperatures for the central states

<http://www.cpc.ncep.noaa.gov/>

8-14 Day Precipitation Outlook



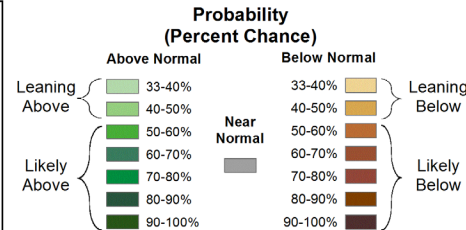
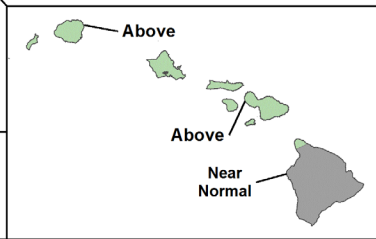
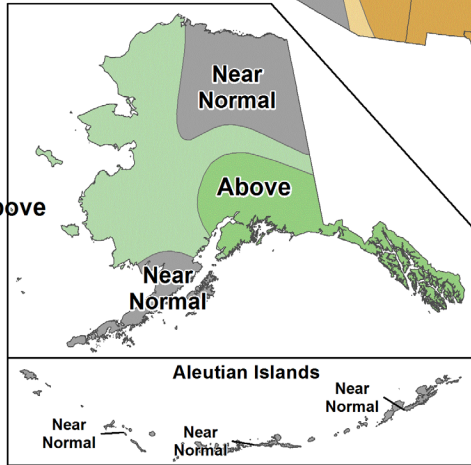
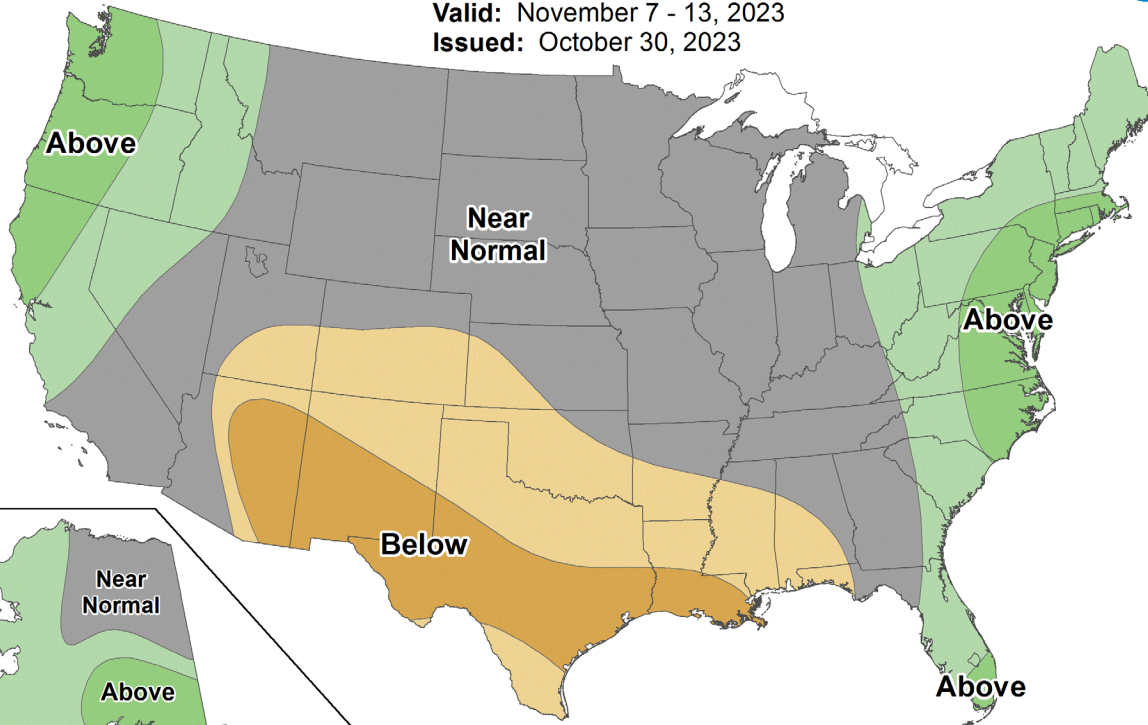
8-14 Day Precipitation Outlook



Valid: November 7 - 13, 2023

Issued: October 30, 2023

- Near-normal precipitation for most of the region
- Slight chance wetter for eastern Ohio



<http://www.cpc.ncep.noaa.gov/>

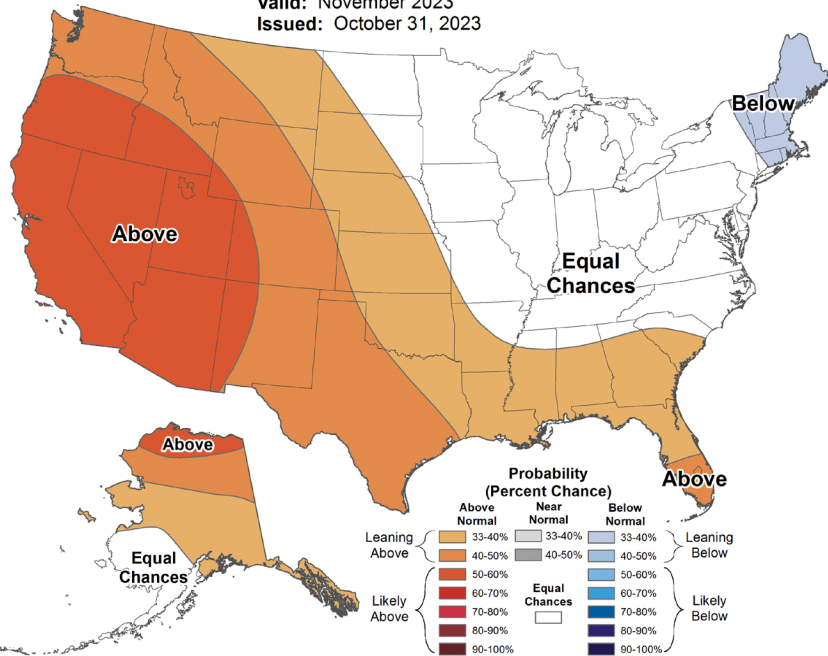
1-Month Temperature Outlook



Monthly Temperature Outlook



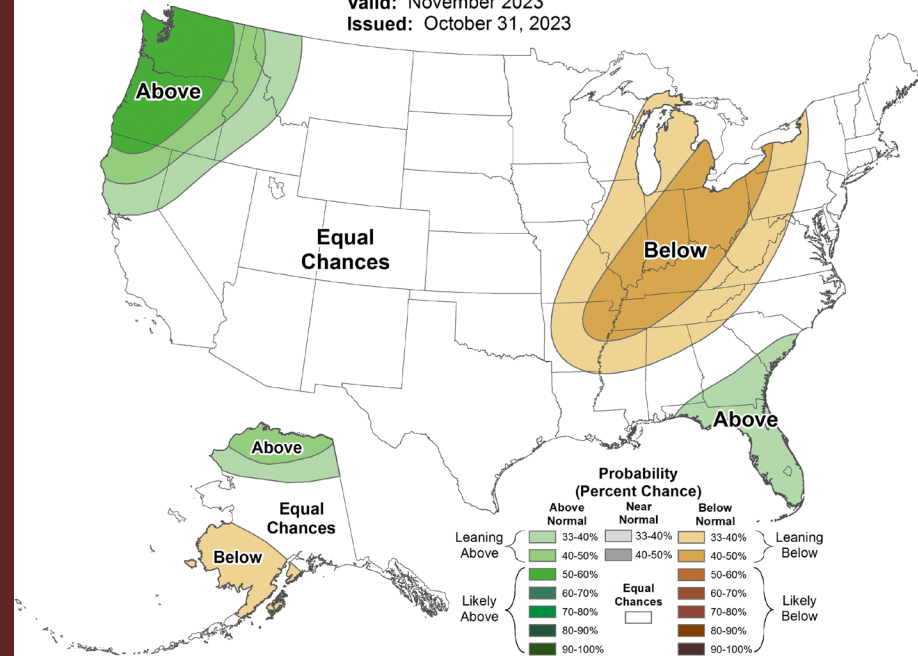
Valid: November 2023
Issued: October 31, 2023



Monthly Precipitation Outlook



Valid: November 2023
Issued: October 31, 2023



- There is an equal chance of the odds tilting in any direction (above, below, or near normal) for temperatures in the Midwest over the next month
- Leaning above normal for some of the Plains

- There is an equal chance of the odds tilting in any direction (above, below, or near normal) for precipitation in the western Midwest states and the Plains
- Leaning below normal for the eastern Midwest states

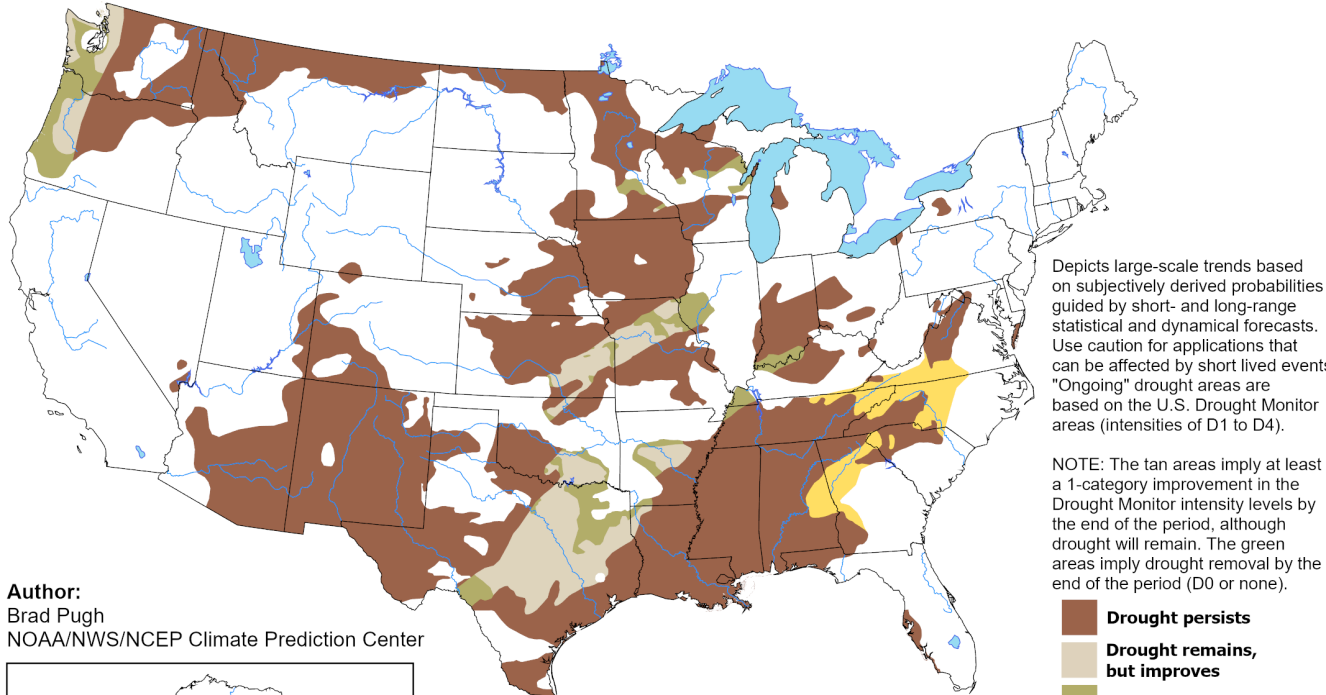
<http://www.cpc.ncep.noaa.gov/>

Drought in the Midwest/Plains

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

Valid for November 2023
Released October 31, 2023

- Drought will likely persist for many over the next month, but will hopefully see improvements where subseasonal events bring precipitation

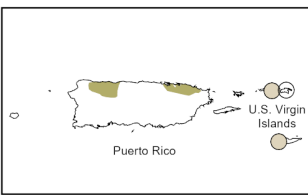
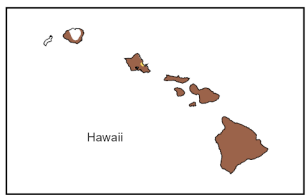
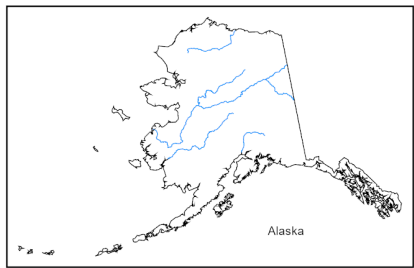


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to 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**
- No drought**

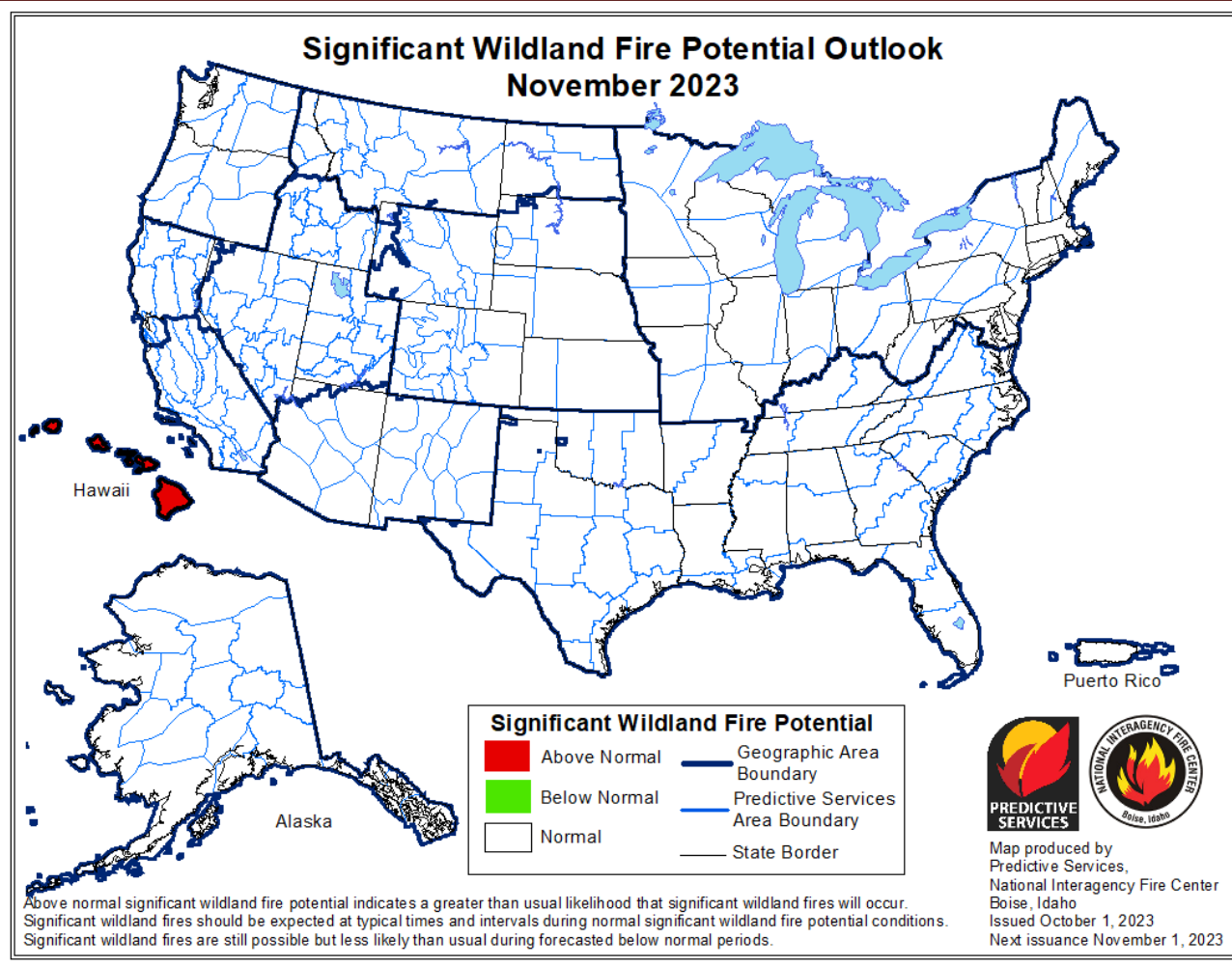
Author:
Brad Pugh
NOAA/NWS/NCEP Climate Prediction Center



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

[Climate Prediction Center - United States Drought Information \(noaa.gov\)](https://www.noaa.gov/drought)

Fire in the Midwest/Plains



- Fire risk is considered “normal” for the month of November according to NIFC

https://www.nifc.gov/nicc-files/predictive/outlooks/month1_outlook.png

Summary

- Drought persists, with some improvement due to late-October precipitation
- Corn and soybean harvest nearly finished
- Concerns for winter crop and livestock health with the cold
- El Niño-esque winter set-up, with influences from subseasonal events

Next MAC-T Monthly Call

Next Call
?