

Midwest Climate Hub  
U.S. DEPARTMENT OF AGRICULTURE



**Wisconsin State Climatology Office**  
Nelson Institute for Environmental Studies



Extension  
University of Wisconsin-Madison

# Wisconsin Ag Climate Weekly Outlook

*Updated October 24, 2023*

## **Dennis Todey**

Director, Midwest Climate Hub

[dennis.todey@usda.gov](mailto:dennis.todey@usda.gov)

## **Josh Bendorf**

ORISE Fellow, Midwest Climate Hub

[joshua.bendorf@usda.gov](mailto:joshua.bendorf@usda.gov)

## **Bridgette Mason**

ORISE Fellow, Midwest Climate Hub

[bridgette.mason@usda.gov](mailto:bridgette.mason@usda.gov)

## **Natasha Paris**

Crops Educator – Adams, Green Lake,  
Marquette, Waushara Cos.

[natasha.paris@wisc.edu](mailto:natasha.paris@wisc.edu)

## **Kristin Foehringer**

NRCS State Working Lands Climate  
Smart Specialist

[kristin.foehringer@usda.gov](mailto:kristin.foehringer@usda.gov)

## **Steve Vavrus**

State Climatologist of Wisconsin

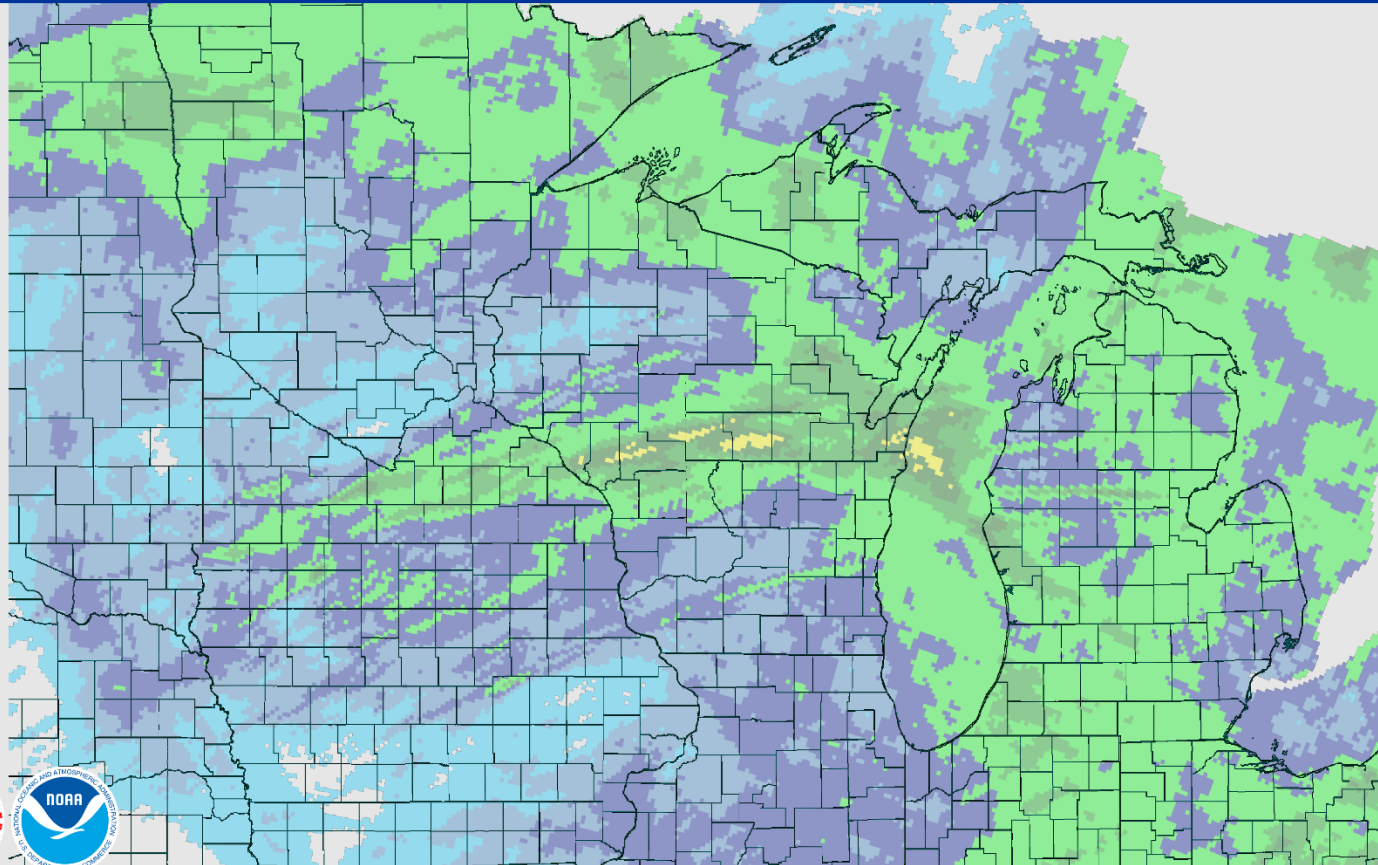
[sjvavrus@wisc.edu](mailto:sjvavrus@wisc.edu)

# Last Week Precip

## October 24, 2023 7-Day Observed Precipitation

Created on: October 24, 2023 - 13:56 UTC

Valid on: October 24, 2023 12:00 UTC



<https://water.weather.gov/precip/>

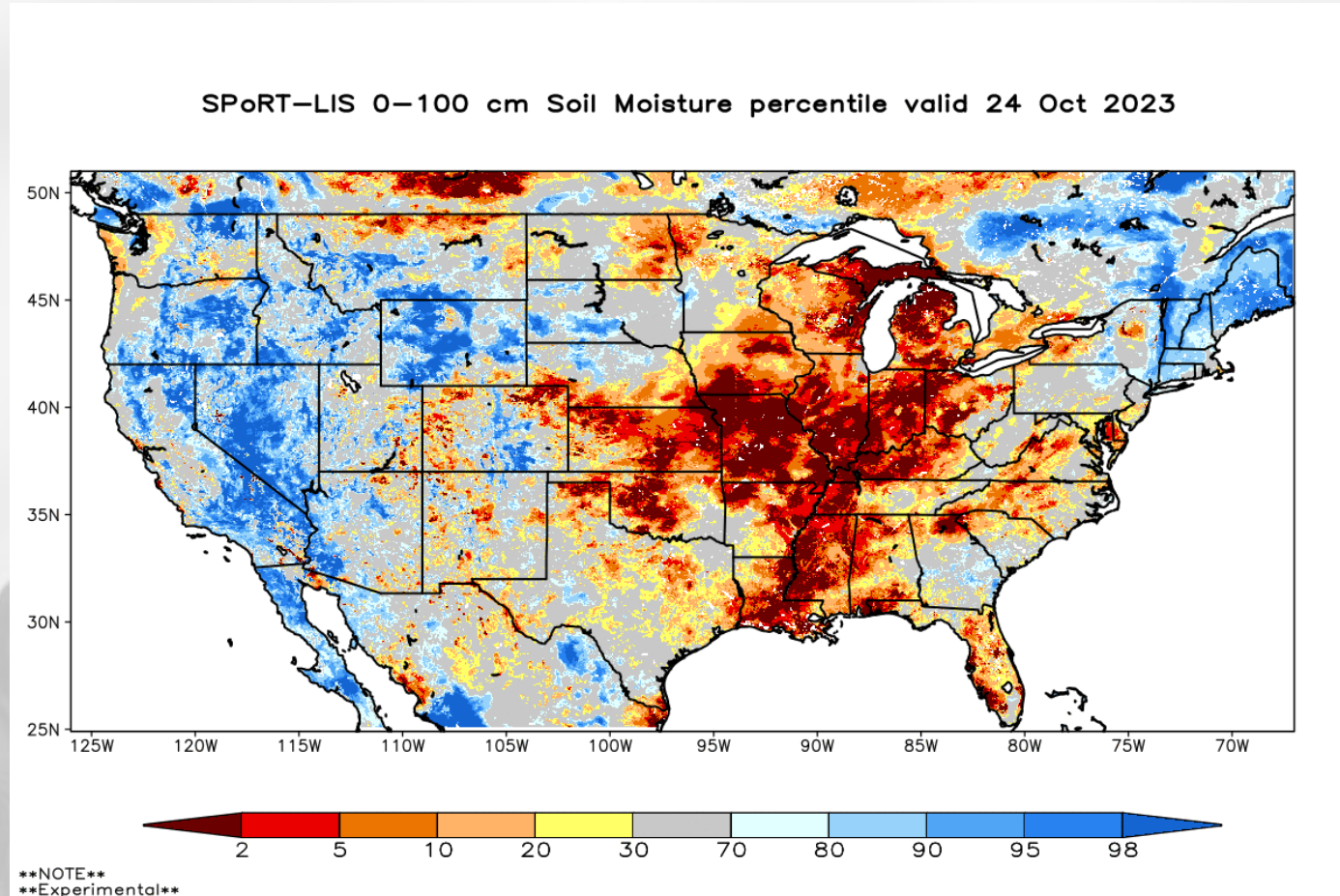
- Central part of the state received the most precip last week (1-3").
- Lowest totals in the NW and SC regions.

# Modeled Soil Moisture

- Dry soils showing across the entire Midwest Region.
- In WI, soils are driest in the E and NE.

Model Notes:

Red areas would be top 5 driest in 100 years. Dark red = top 2 driest.



[https://weather.msfc.nasa.gov/sport/case\\_studies/lis\\_CONUS.html](https://weather.msfc.nasa.gov/sport/case_studies/lis_CONUS.html)  
[https://www.cpc.ncep.noaa.gov/products/Soilmst\\_Monitoring/US/Soilmst/Soilmst.shtml](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#](https://www.cpc.ncep.noaa.gov/products/Drought/Monitoring/smp_new.shtml#)

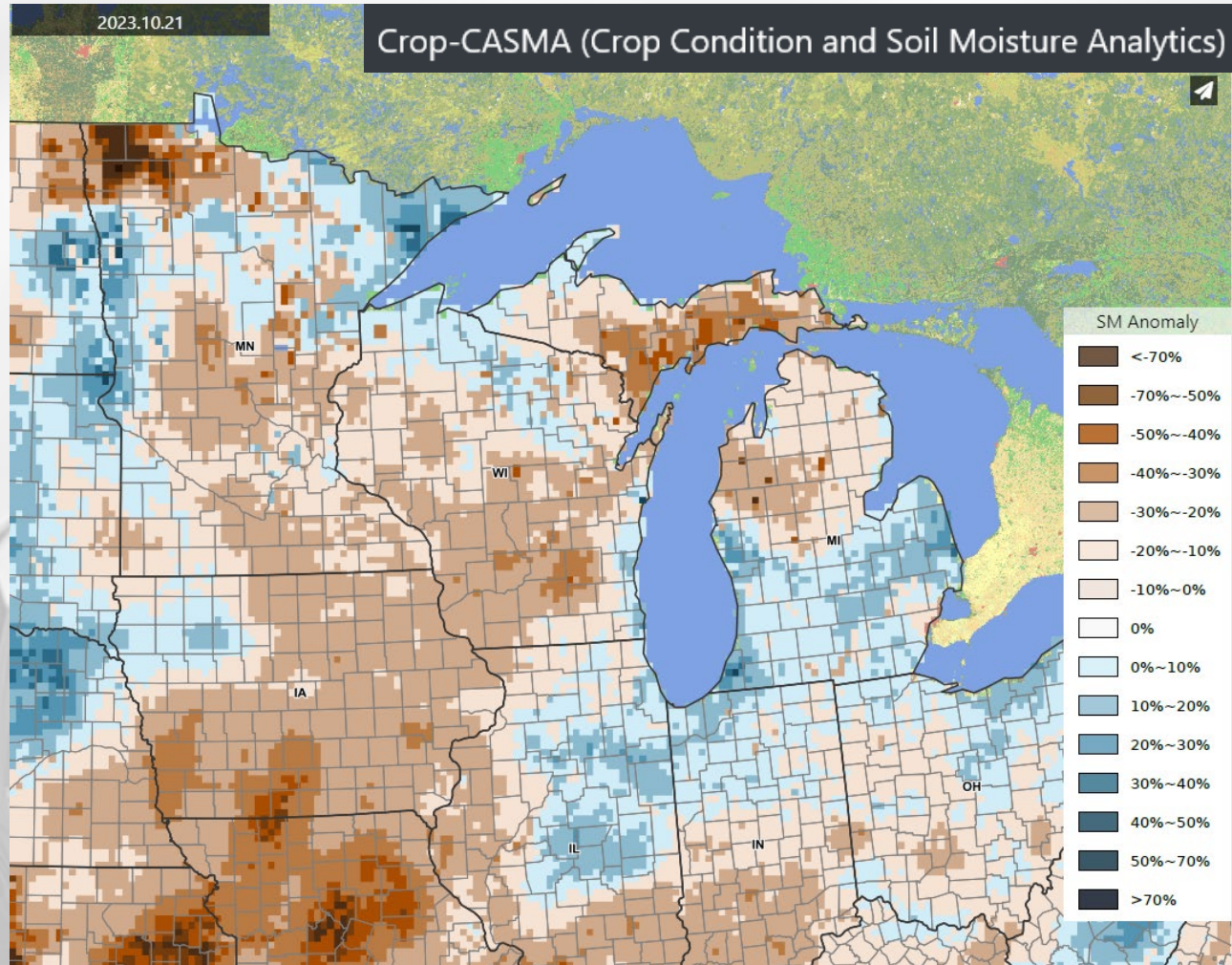
# Modeled Soil Moisture

*Alternate product from GMU and partners.*

- Some disagreement with SPoRT-LIS (last slide) in the E; this model suggests abnormal wetness in the E.
- Abnormally dry across most of the state; most dry in SC WI.
- Variable conditions across the Corn Belt.

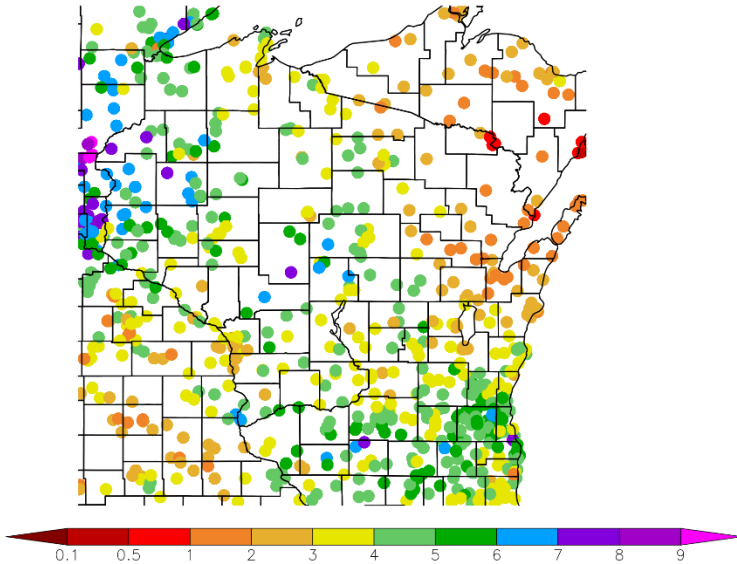
*Model Notes:*

*Model compares to time of year – suggests that soils are drier/wetter than is typical for this time of the season.*



# 30 Day Precip Total/% Avg.

Precipitation (in)  
9/24/2023 - 10/23/2023

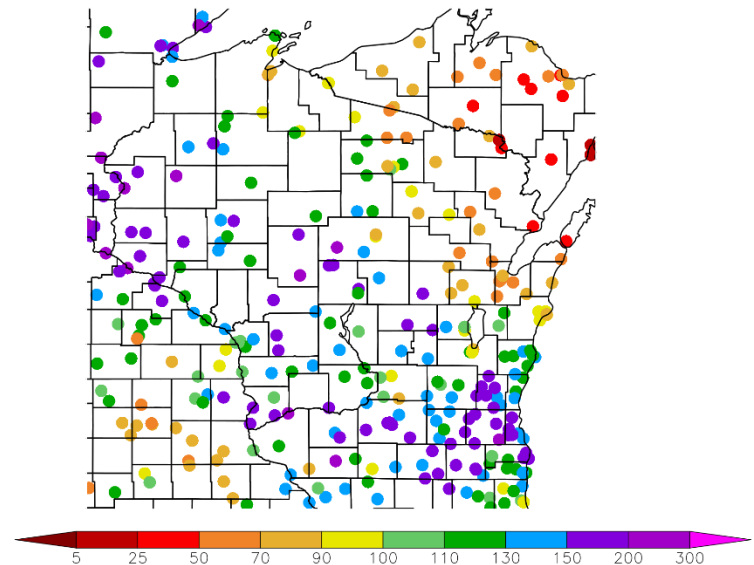


Generated 10/24/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Monthly totals  $\geq 3$ " common across the state, with some stations reporting  $\geq 6$ "
- Totals  $\leq 2$ " common in NE WI.
- 110%+ of normal precip across the state (except for NE).

Percent of Normal Precipitation (%)  
9/24/2023 - 10/23/2023



Generated 10/24/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

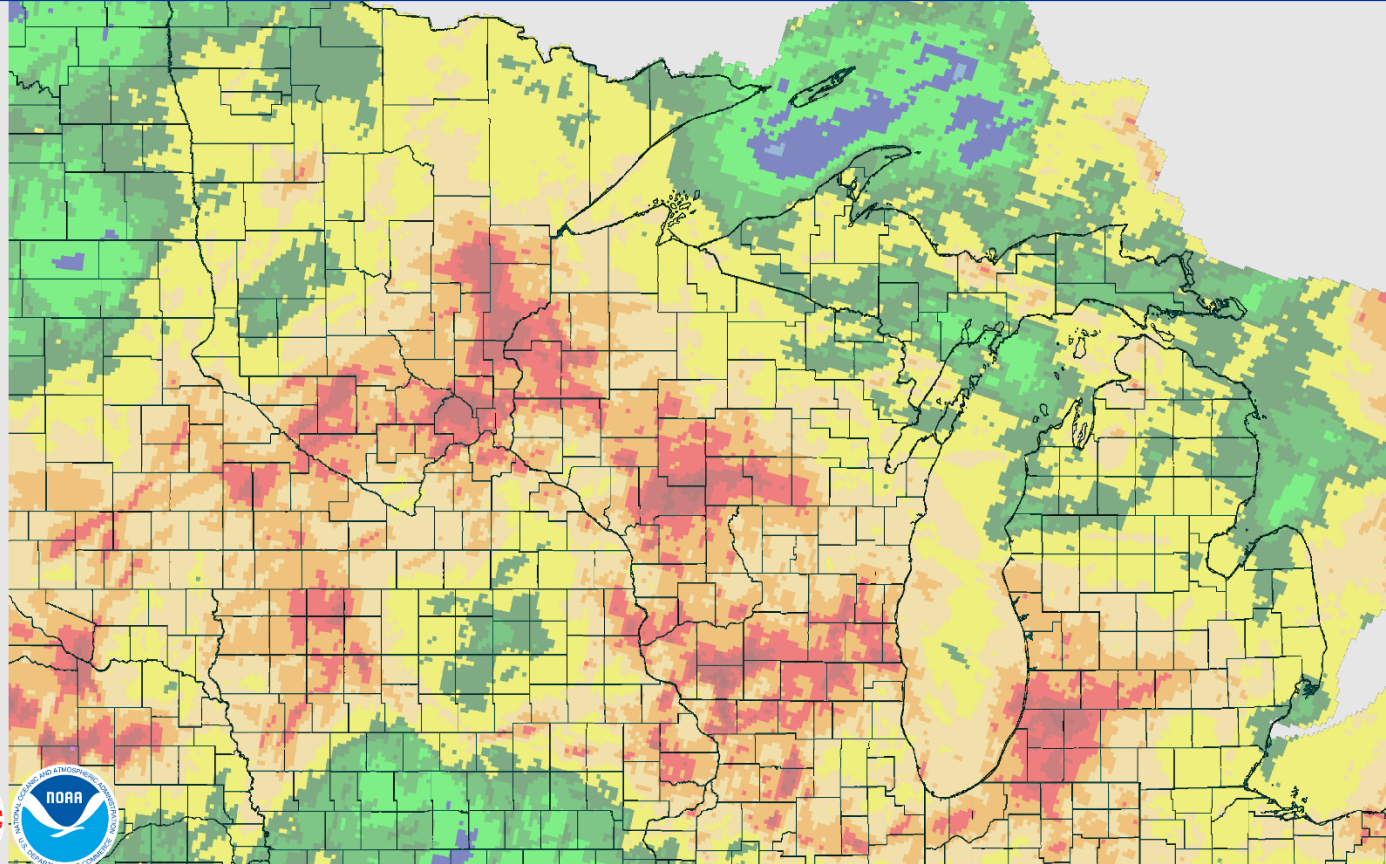
<https://hprcc.unl.edu/maps.php?map=ACISClimateMaps>

# 30 Day Precip – NOAA/NWS

October 24, 2023 30-Day Observed Precipitation

Created on: October 24, 2023 - 20:45 UTC

Valid on: October 24, 2023 12:00 UTC

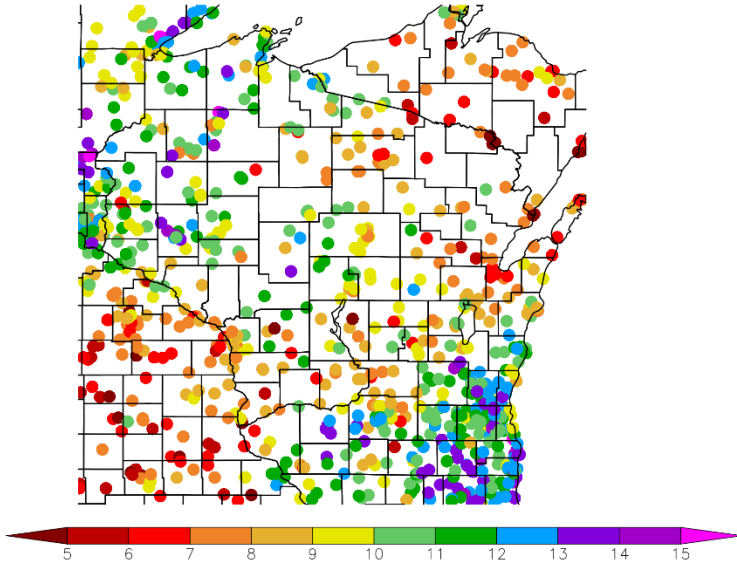


<https://water.weather.gov/precip/>

*Note: this map is created using both measured precipitation at ground sites and radar estimates of total precipitation.*

# 90 Day Precip Total/% Avg.

Precipitation (in)  
7/26/2023 - 10/23/2023

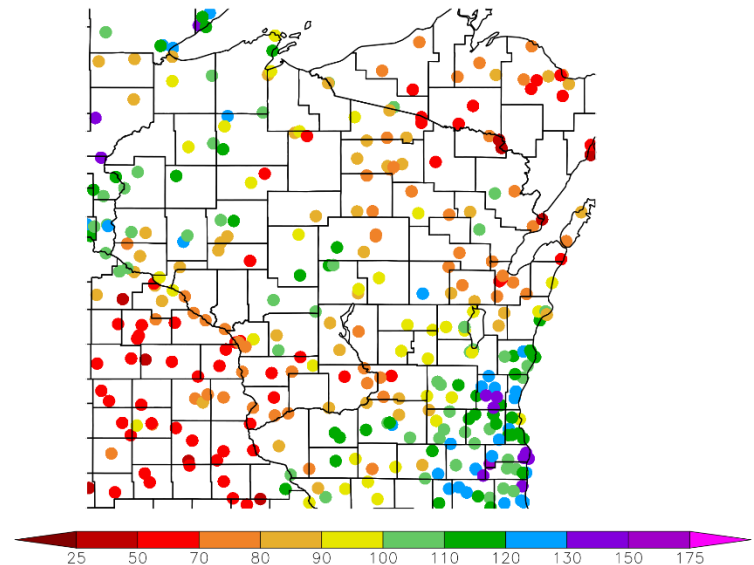


Generated 10/24/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

- Total range from <5" at stations in the SW and NE to >12" in the SE and NW.
- Percentages are a mixed bag
  - <70% of normal in SW and NE
  - >100% of normal in NW and SE

Percent of Normal Precipitation (%)  
7/26/2023 - 10/23/2023



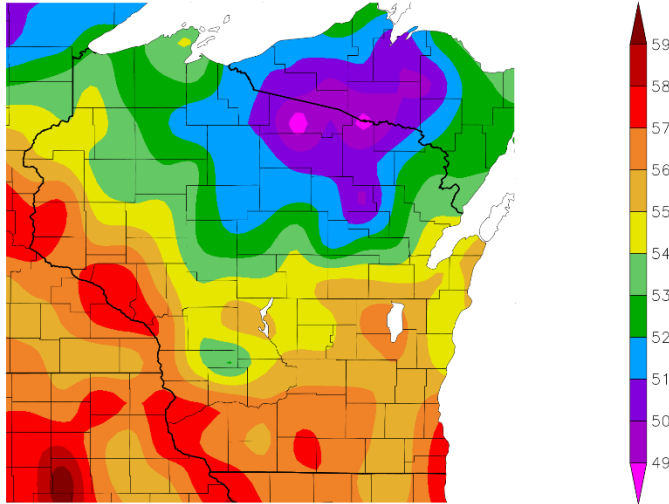
Generated 10/24/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

<https://hprcc.unl.edu/maps.php?map=ACISClimateMaps>

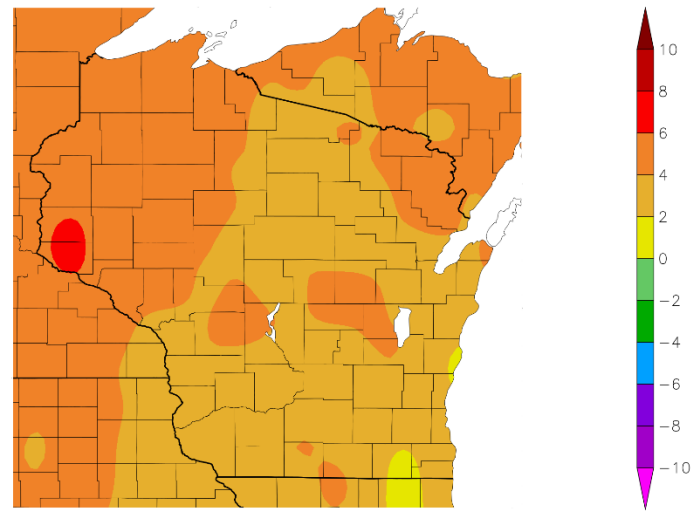
# 30 Day Temperatures

Temperature (F)  
9/24/2023 - 10/23/2023



- Highest average T along the Mississippi River and SE/SC (mid to upper 50's).
- $\leq 50^{\circ}\text{F}$  in far NC WI.
- Monthly averages were 2-4°F above normal across most of the state.

Departure from Normal Temperature (F)  
9/24/2023 - 10/23/2023

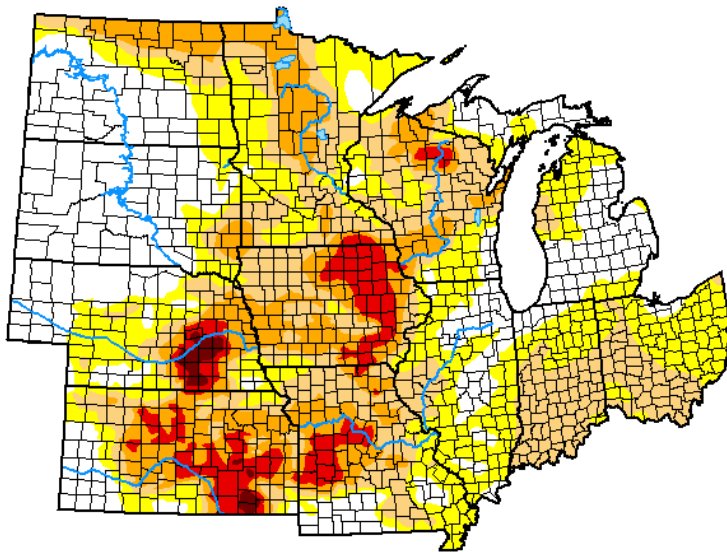


<https://hprcc.unl.edu/maps.php?map=ACISClimateMaps>



# US Drought Monitor

## U.S. Drought Monitor North Central States



**October 17, 2023**

(Released Thursday, Oct. 19, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	29.38	70.62	44.16	21.06	6.33	0.65
<b>Last Week</b> 10-10-2023	26.69	73.31	49.87	23.84	7.62	0.87
<b>3 Months Ago</b> 07-18-2023	19.24	80.76	54.16	23.73	8.64	0.98
<b>Start of Calendar Year</b> 01-03-2023	23.51	76.49	51.22	24.39	11.79	5.25
<b>Start of Water Year</b> 09-26-2023	25.87	74.13	49.98	25.16	7.67	0.73
<b>One Year Ago</b> 10-18-2022	13.67	86.33	59.65	30.84	14.05	4.73

Intensity:



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:

Rocky Bilotta  
NCEI/NOAA



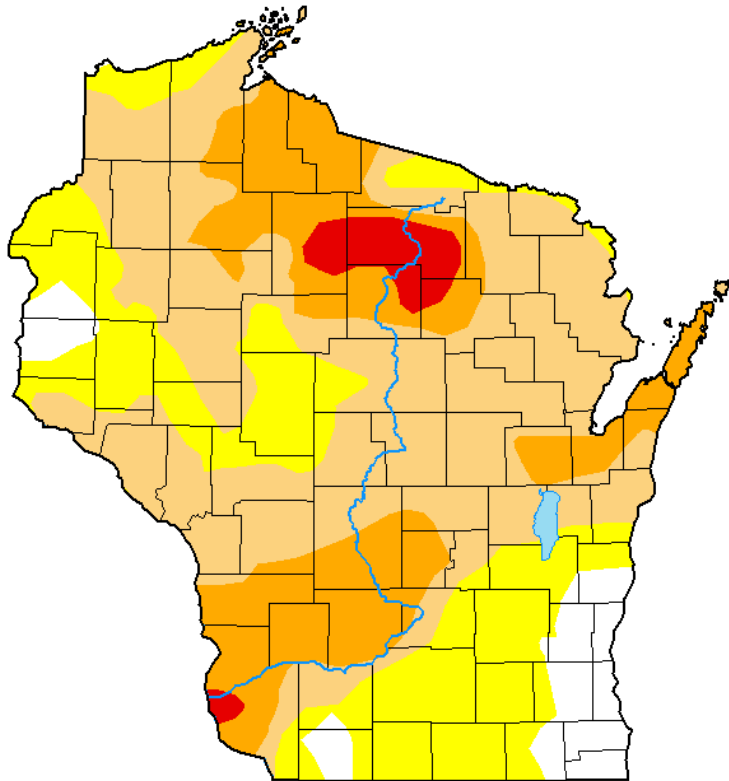
[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

- Continued improvement across the region.
- See current percent area compared to previous periods.
- Areas of D3 have been reduced in SW WI but remain in/near Oneida Co. and far NW Grant Co.

*Note: D0 is not considered drought.*

# US Drought Monitor

## U.S. Drought Monitor Wisconsin



**October 17, 2023**

(Released Thursday, Oct. 19, 2023)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	6.49	93.51	68.19	23.65	3.04	0.00
<b>Last Week</b> 10-10-2023	0.01	99.99	74.40	30.44	6.77	0.00
<b>3 Months Ago</b> 07-18-2023	0.00	100.00	82.02	42.05	8.68	0.00
<b>Start of Calendar Year</b> 01-03-2023	67.99	32.01	5.71	1.84	0.00	0.00
<b>Start of Water Year</b> 09-26-2023	2.04	97.96	80.86	37.74	6.77	0.00
<b>One Year Ago</b> 10-18-2022	35.65	64.35	24.91	3.95	0.00	0.00

Intensity:



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:

Rocky Bilotta  
NCEI/NOAA



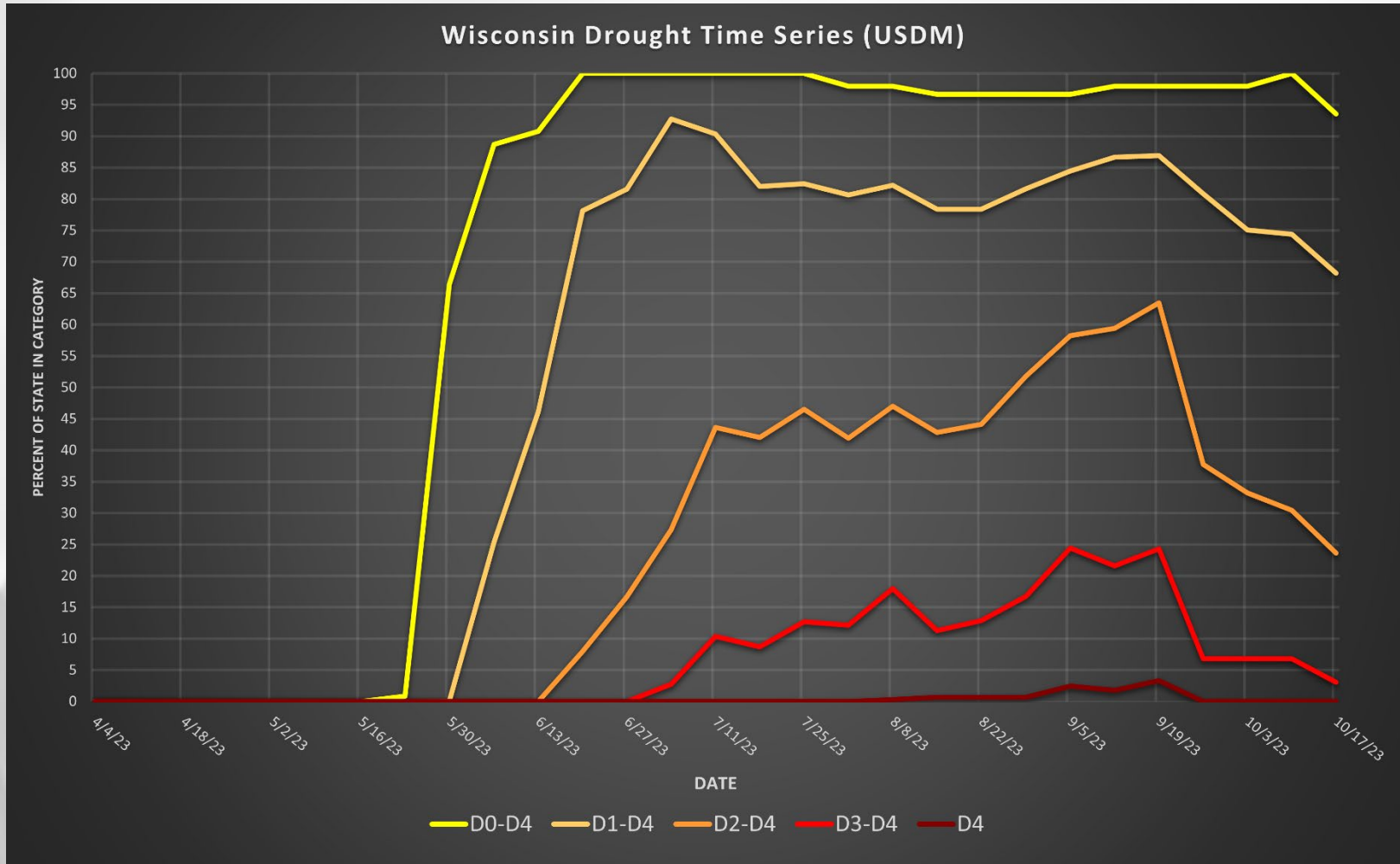
[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

Amount of state in:

- **D1-D4** – 68.2% ↓
- **D2-D4** – 23.7% ↓
- **D3-D4** – 3.4% ↓
- **D4** – 0.0% --

*Note:* ↑ ↓ indicate change from the previous week. Red up arrows indicate increase in drought area; vice-versa for green arrows.

# Drought in WI – Last 6 months





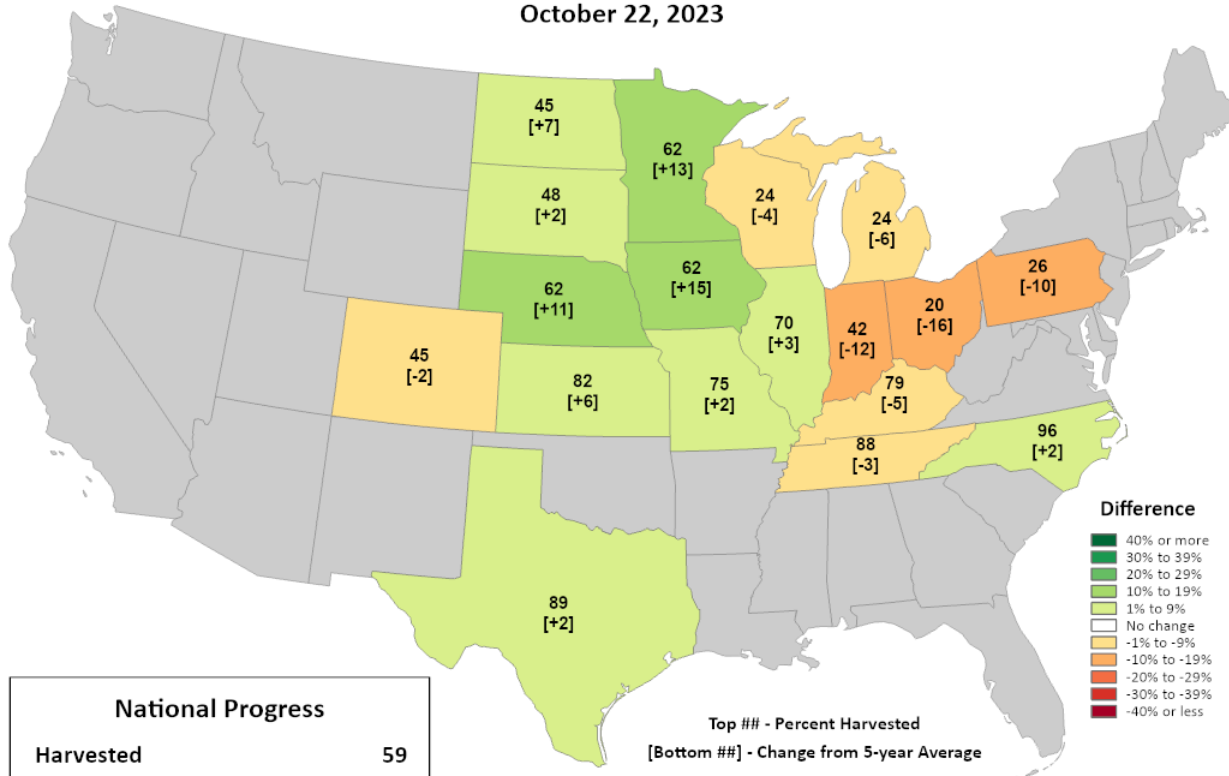
# Corn Progress (NASS)



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

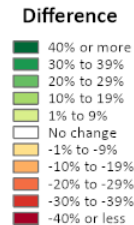
## Corn Progress Percent Harvested

October 22, 2023



National Progress	
Harvested	59
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.

## Corn Harvested (NASS):

- Wisconsin: 24% (-4%)
- National: 59% (+5%)

Corn harvest running behind the 5-year average in WI and states to the E. Trending ahead of average to the S and W.

# Soybean Progress (NASS)

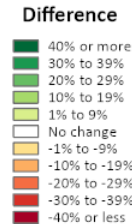
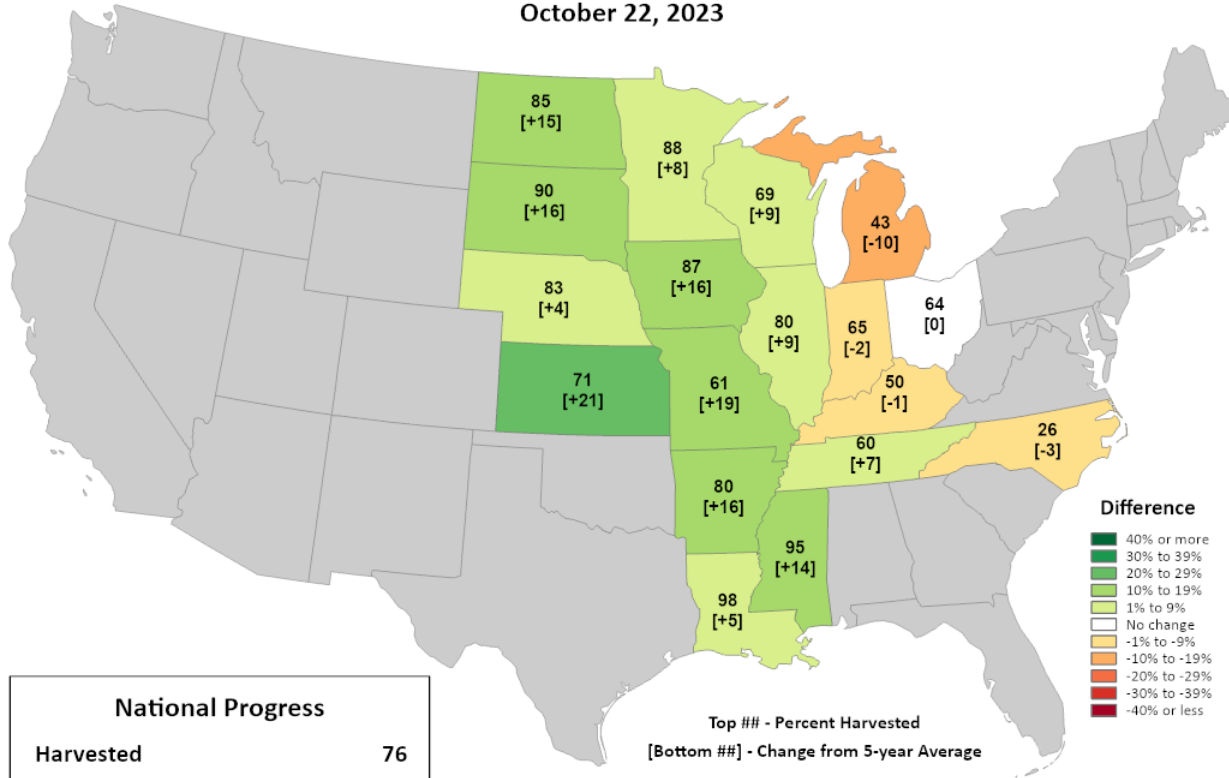


This product was prepared by the  
USDA Office of the Chief Economist (OCE)  
World Agricultural Outlook Board (WAOB)

## Soybeans Progress

### Percent Harvested

October 22, 2023



National Progress	
Harvested	76
Change from 5-year Average	+9

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

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

## Soybean Harvested (NASS):

- Wisconsin: 69% (+9%)
- National: 76% (+9%)

Soybeans still ahead of the 5-year average nationally and in WI. Trending behind average to the E.

# Pasture Conditions (NASS)

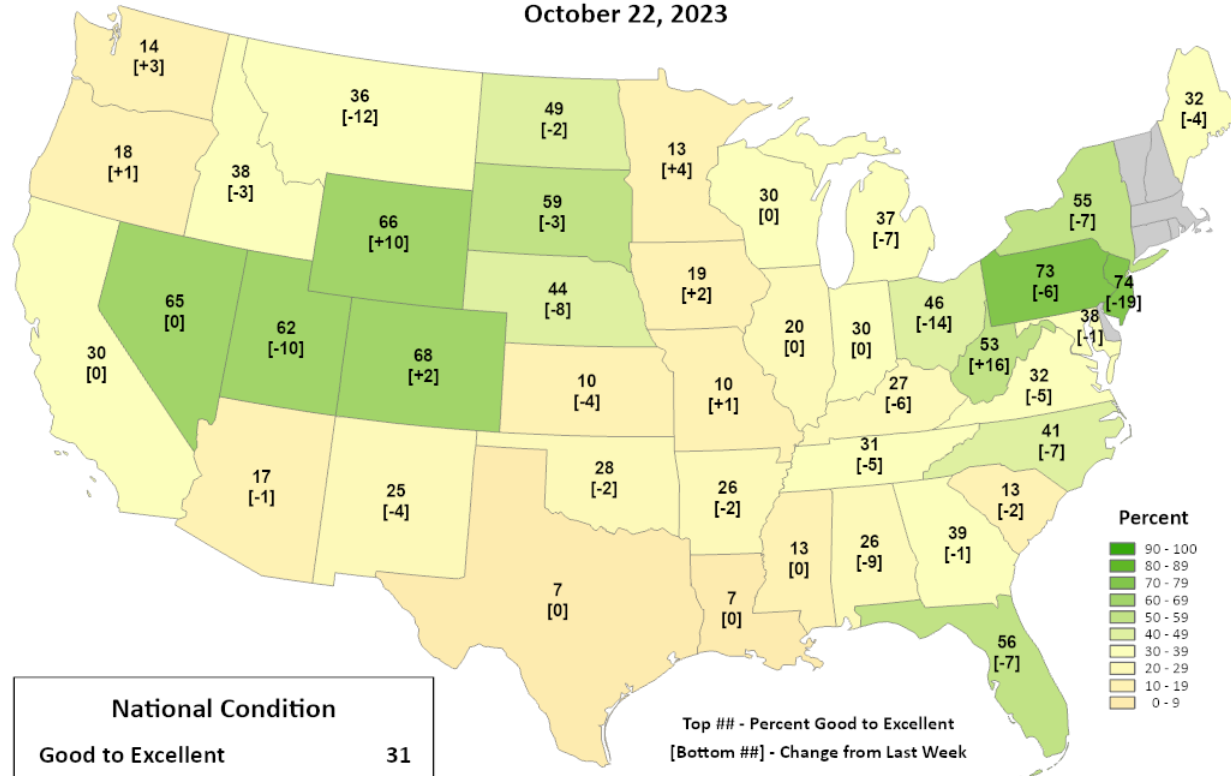


## Pasture and Range Conditions

Percent Good to Excellent

October 22, 2023

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



National Condition	
Good to Excellent	31
Change from Last Week	-2

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 (NASS):

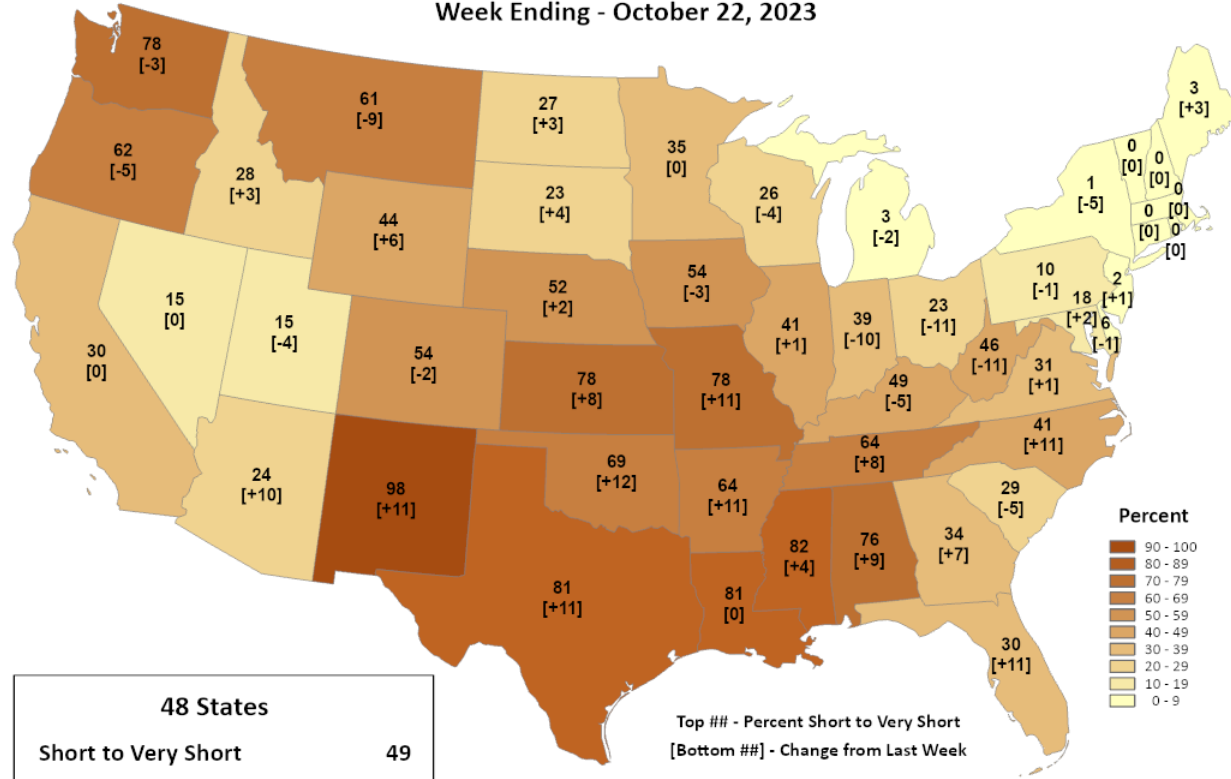
- Conditions show minimal changes across the region. Challenges persist in the central Midwest.
- Wisconsin: 30% (0%)
- National: 31% (-2%)

# Soil Moisture Conditions (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 22, 2023



<b>48 States</b>	
Short to Very Short	49
Change from Last Week	+2

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

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

### Soil moisture S-VS (NASS):

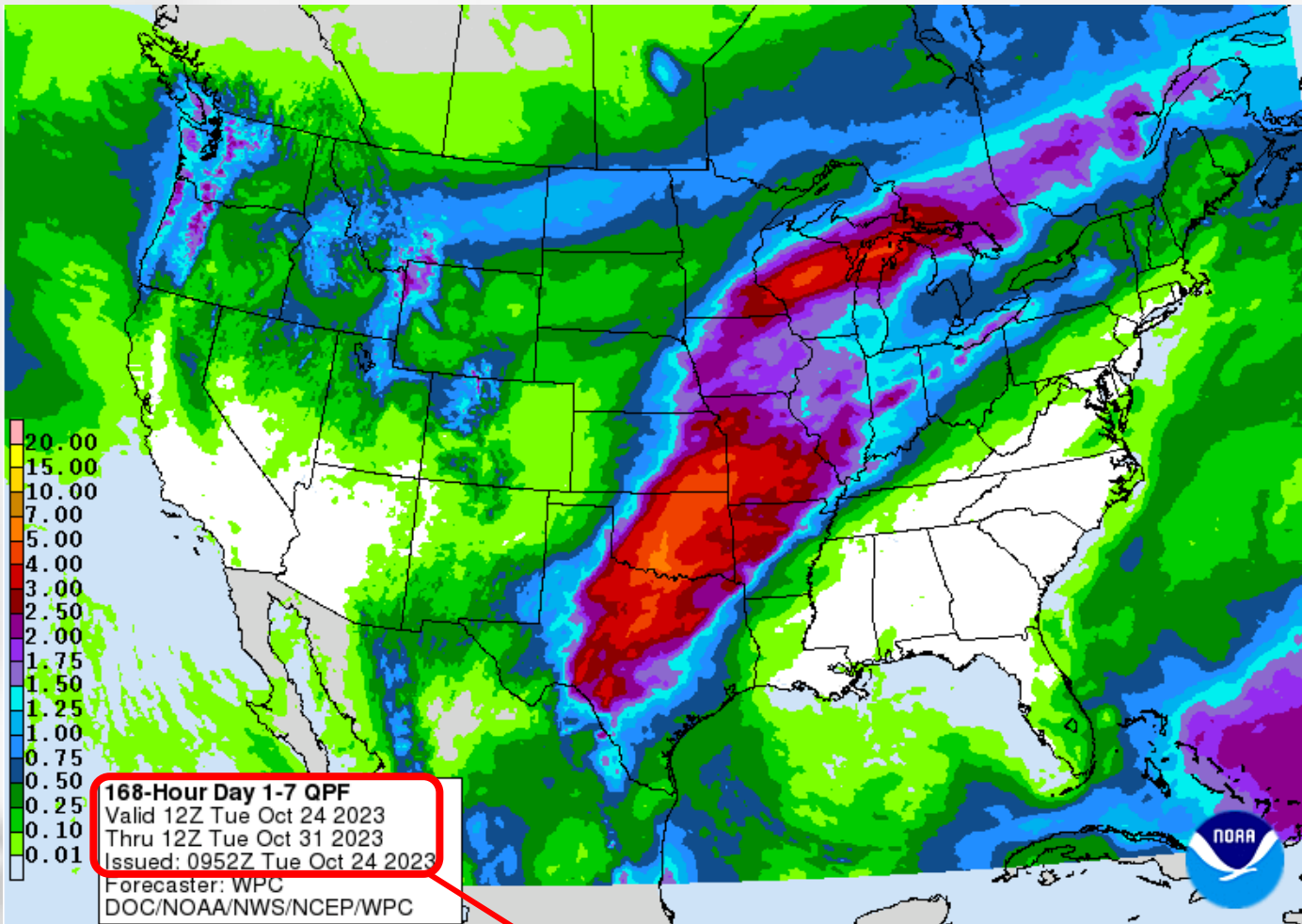
- Wisconsin: 26% (-4%)
- National: 49% (+2%)

Conditions improving slightly in WI and areas to the E. Areas to the SW of the state are getting worse.



# 7 Day Forecast Precip

- Chances for precipitation expected to continue throughout the week.
- The highest totals are forecasted across central WI.
- All areas in WI are forecasted to get some rain.



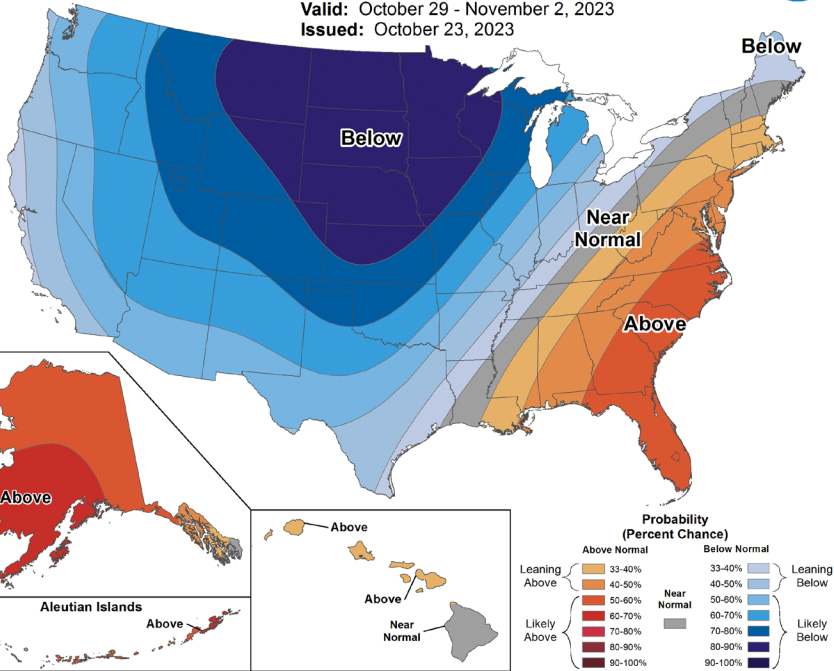
Forecast for 10/24/23 thru 10/30/23

# 6-10 Day Temp Outlook

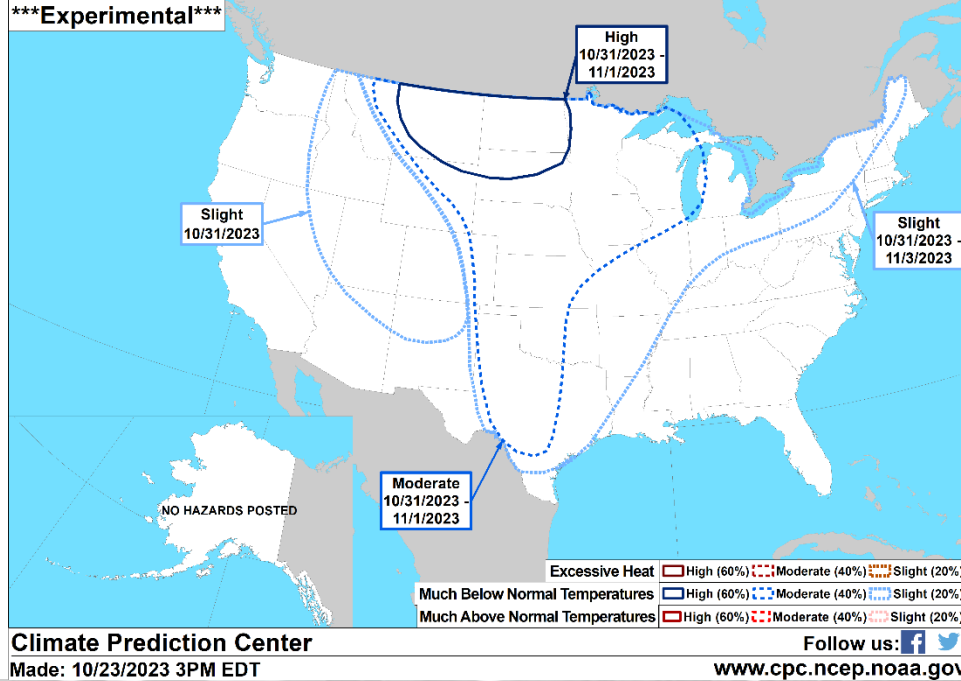


## 6-10 Day Temperature Outlook

Valid: October 29 - November 2, 2023  
 Issued: October 23, 2023

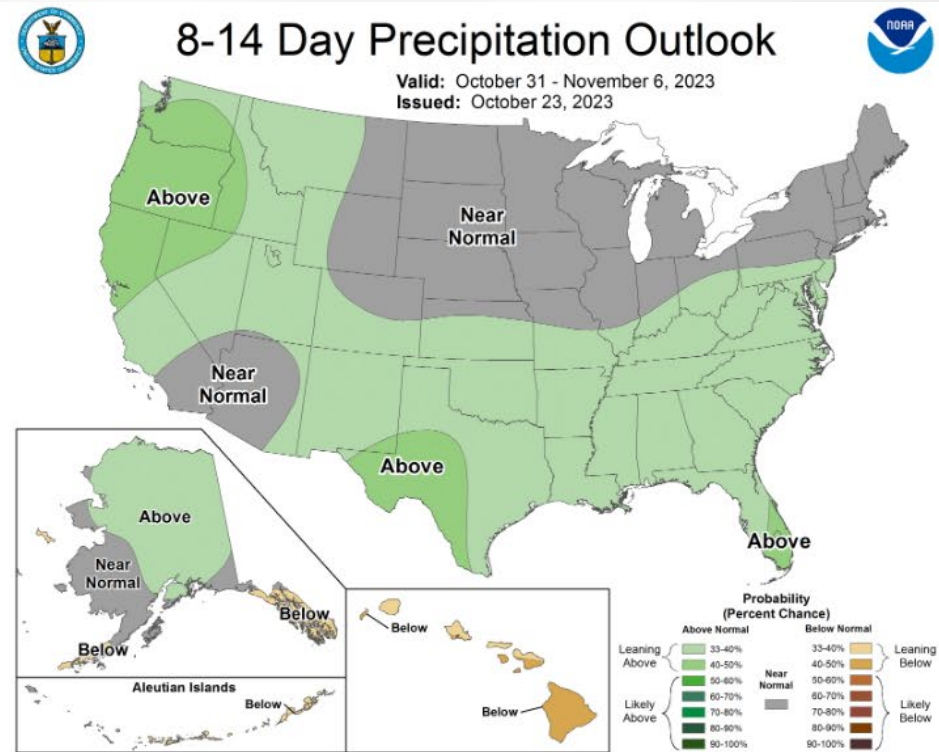
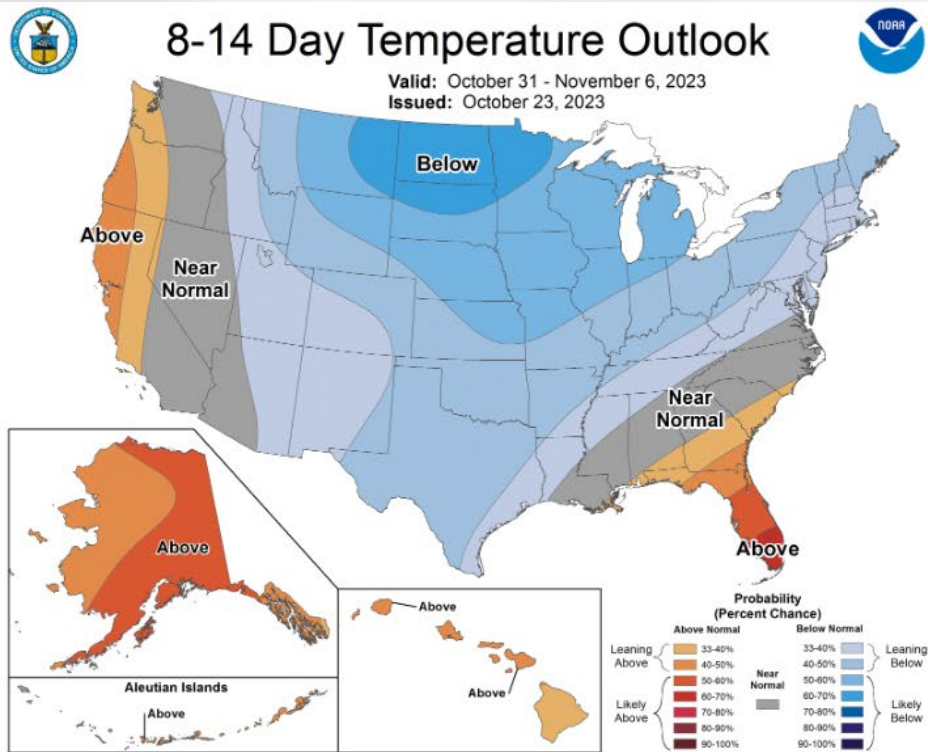


## Risk of Hazardous Temperatures Valid: 10/31/2023-11/06/2023



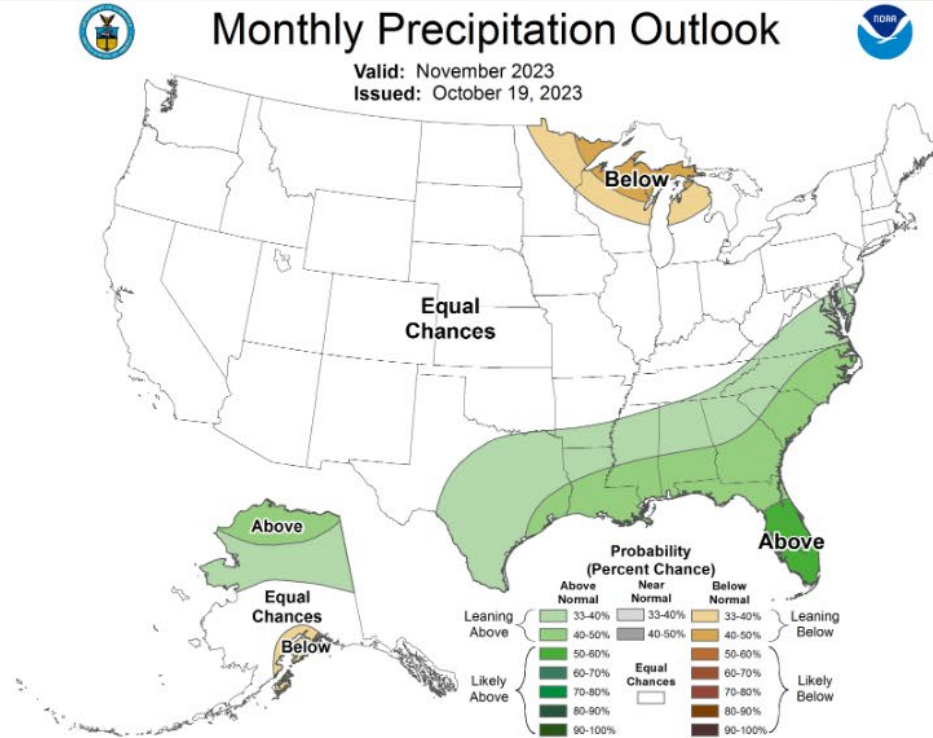
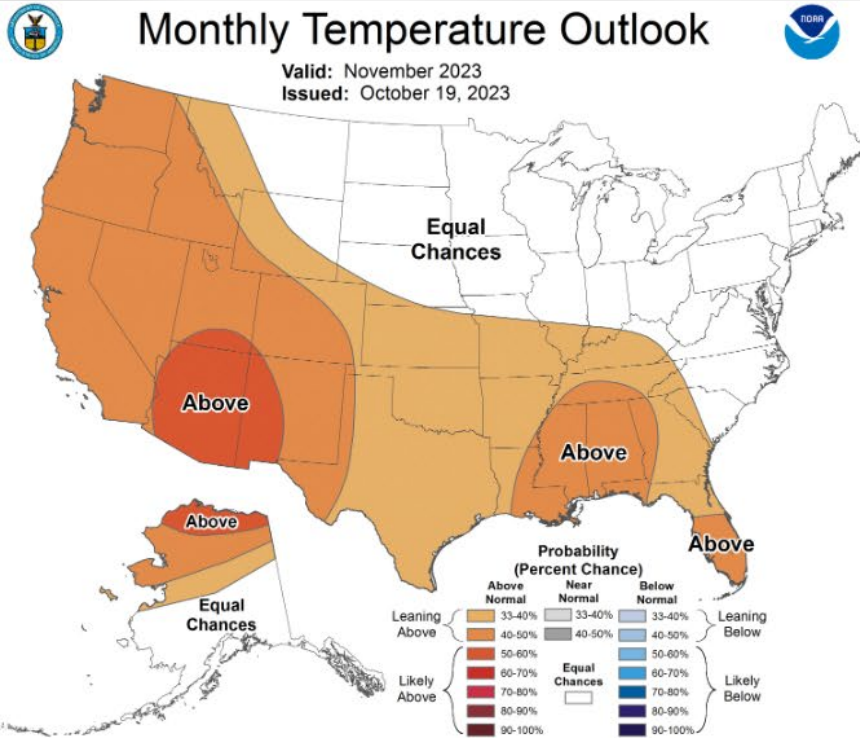
The weekend into early next week: Temperatures very likely below average. Be aware of frost/freeze.

# 8-14 Day Temp & Precip Outlook



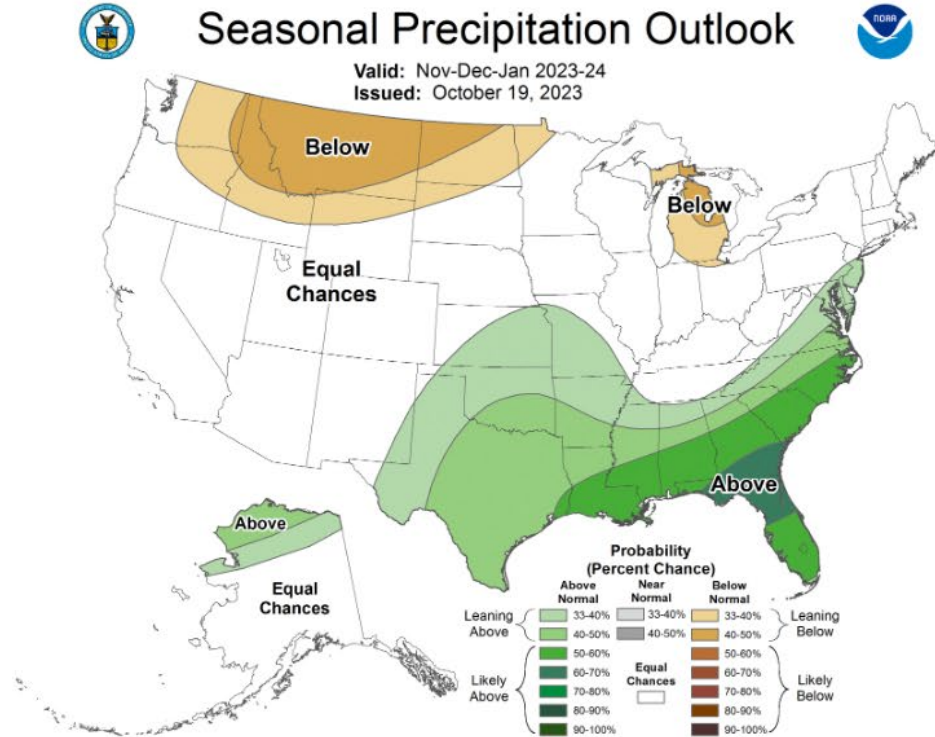
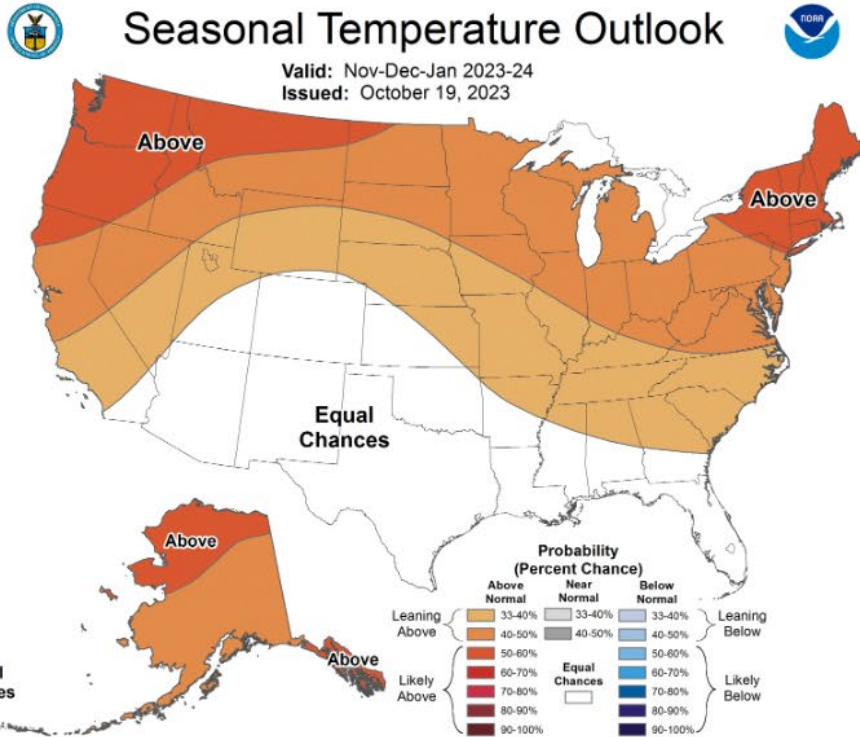
**The first week of November:** Temperatures likely to be below average. Precipitation forecasted to be near normal.

# 30 Day Temp & Precip Outlook



**The month of November:** No strong indicators for temperature for this period (“equal chances”). Precipitation forecasted to be below normal in the N/NE; no indication elsewhere.

# 90 Day Temp & Precip Outlook



**November – January:** Temperatures likely to be above average. No indication on precipitation departure from average. El Nino is a major driver of these conditions.

# Take Home

- **Current conditions:**
  - Some recent rains helped alleviate dryness regionally. Overall, drought persists across most of the state.
  - Temperatures mostly moderate.
- **Impact:**
  - Drought conditions have been improving with recent rains.
  - Recent rains have slowed down corn harvest for some (trending behind 5 yr. avg.)
  - Expected rains could help for cover crops, pastures/grass, and start of soil moisture recharge. Rains may cause some harvest delays.
- **Outlook:**
  - Much colder temperatures heading into the weekend and next week.
  - Cool down forecasted to continue into the first week of November.
  - Precipitation chances increasing for the upcoming week, especially in central WI.
    - *However, there is still a ways to go on improving dry conditions.*

# Blank

- Fill me in

# For More Information



**Dennis Todey, Director**

515-294-2013

[dennis.todey@usda.gov](mailto:dennis.todey@usda.gov)

Laurie Nowatzke

Coordinator, Midwest Climate Hub

[laurie.nowatzke@usda.gov](mailto:laurie.nowatzke@usda.gov)

Steve Vavrus

State Climatologist of Wisconsin

[svavrus@wisc.edu](mailto:svavrus@wisc.edu)

**National Laboratory for Agriculture and the Environment**

Attn: Midwest Climate Hub

1015 N University Blvd

Ames, Iowa 50011-3611