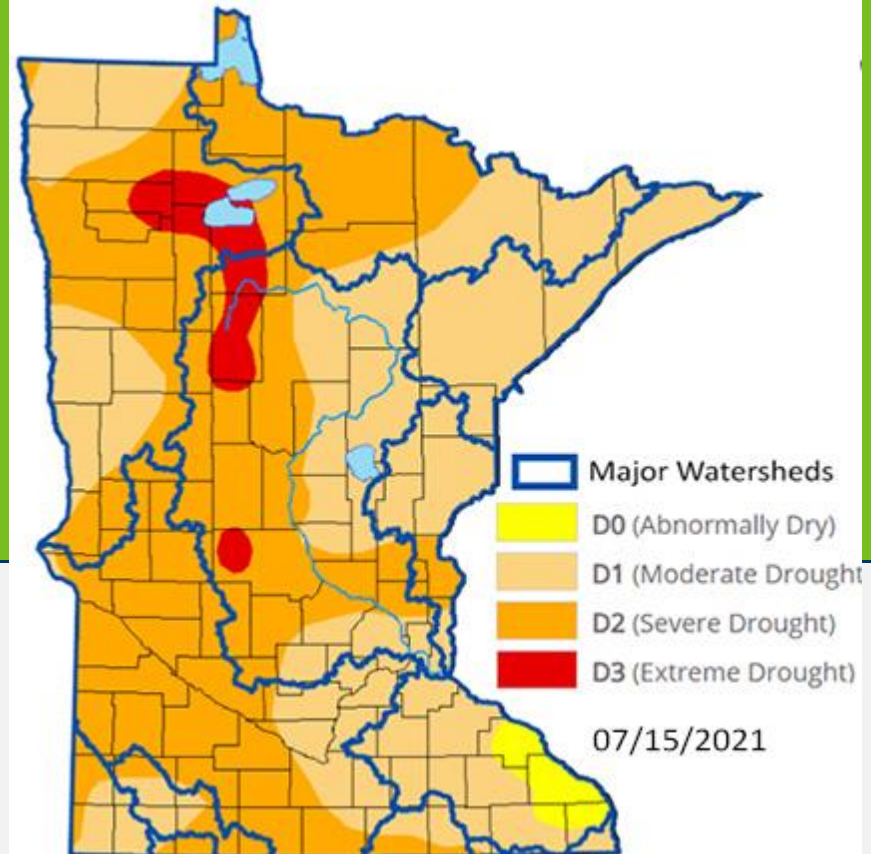




DEPARTMENT OF
NATURAL RESOURCES

STAND BY...

The State Drought
Task Force meeting
will start soon



July 21, 2021



Randall Doneen

Section Manager – Conservation Assistance and Regulation
Ecological and Water Resources Division

July 21, 2021

Agenda

- Welcome Randall Doneen
- Purpose of meeting Katie Smith
- Drought situation review and update Luigi Romolo
- Agency actions / introductions Task Force
- Drought issues discussion All
- Next steps / adjourn Randall Doneen



Katie Smith

Director

Ecological and Water Resources Division

July 21, 2021



Drought Status Update
Drought Task Force, July 21, 2021

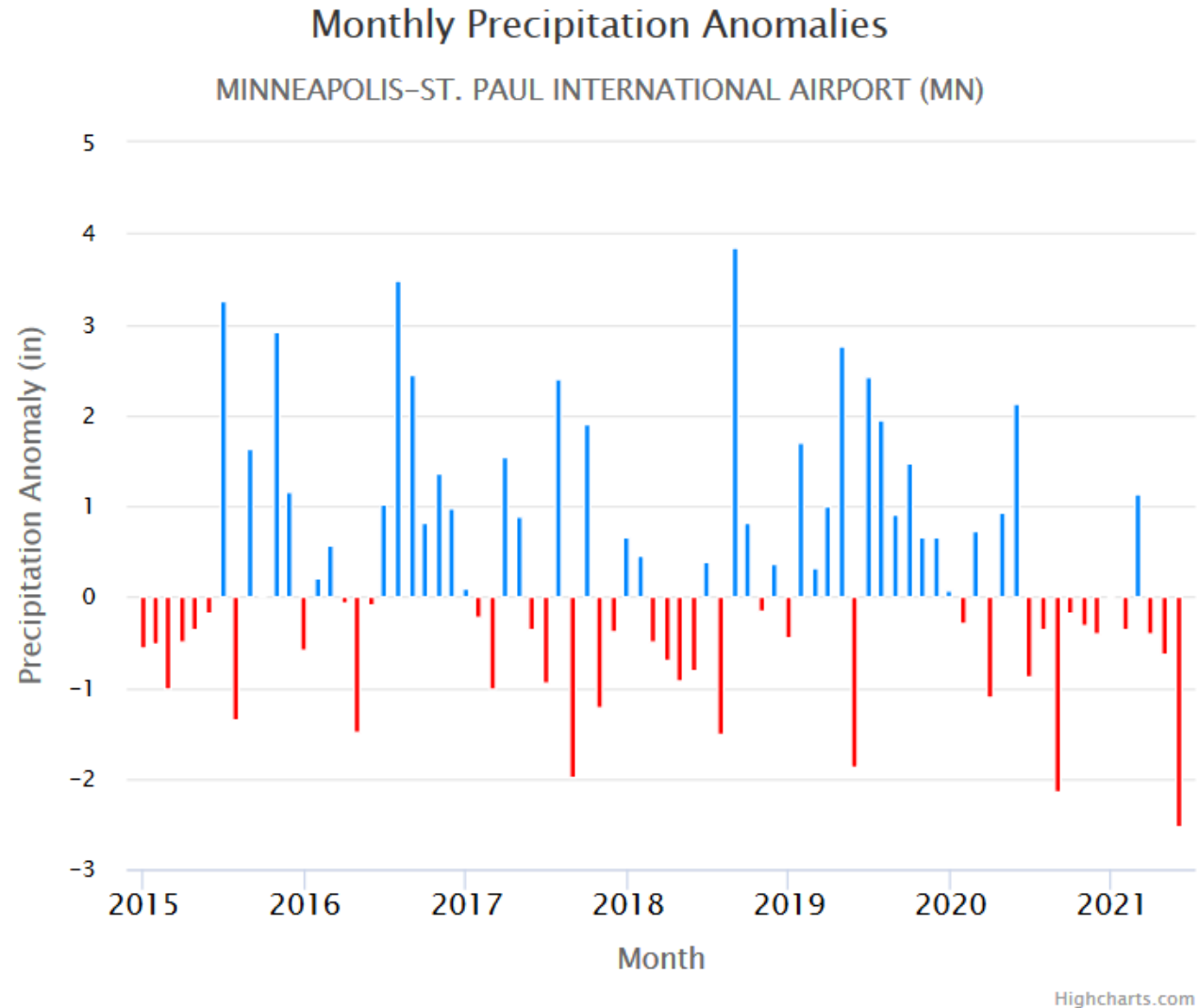
Luigi Romolo PhD

Minnesota State Climatologist

Presentation Overview

- Quick Review of how the drought has evolved
- Current Drought Indicators
- Current Drought Status
- Drought Impacts
- Looking forward
- Questions

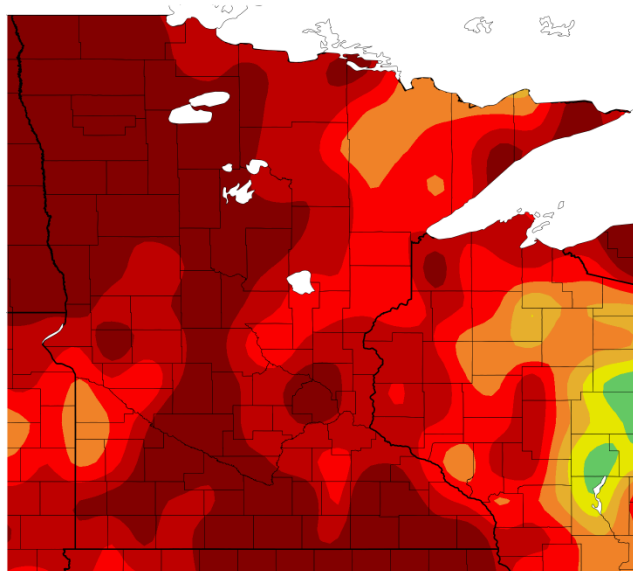
...it's been dry since last summer



Precipitation Anomalies

Water Year - To - Date

Departure from Normal Precipitation (in)
10/1/2020 – 7/19/2021

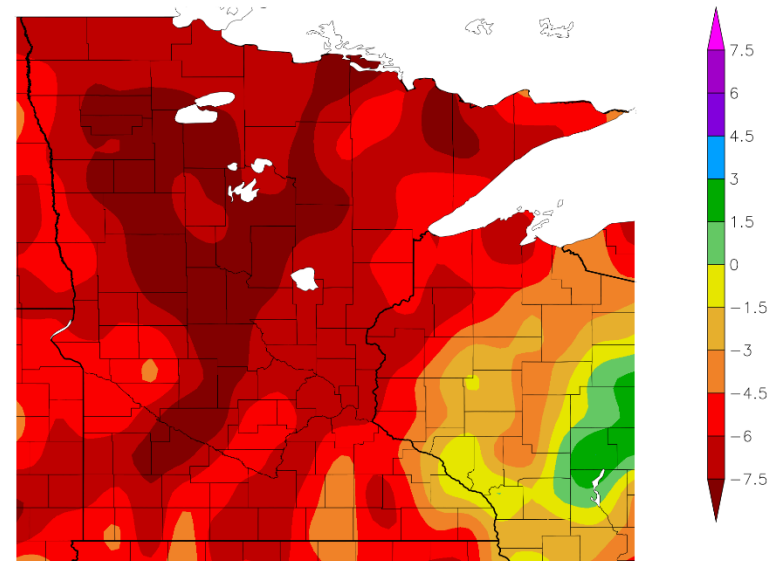


Generated 7/20/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

Past 90 Days

Departure from Normal Precipitation (in)
4/21/2021 – 7/19/2021

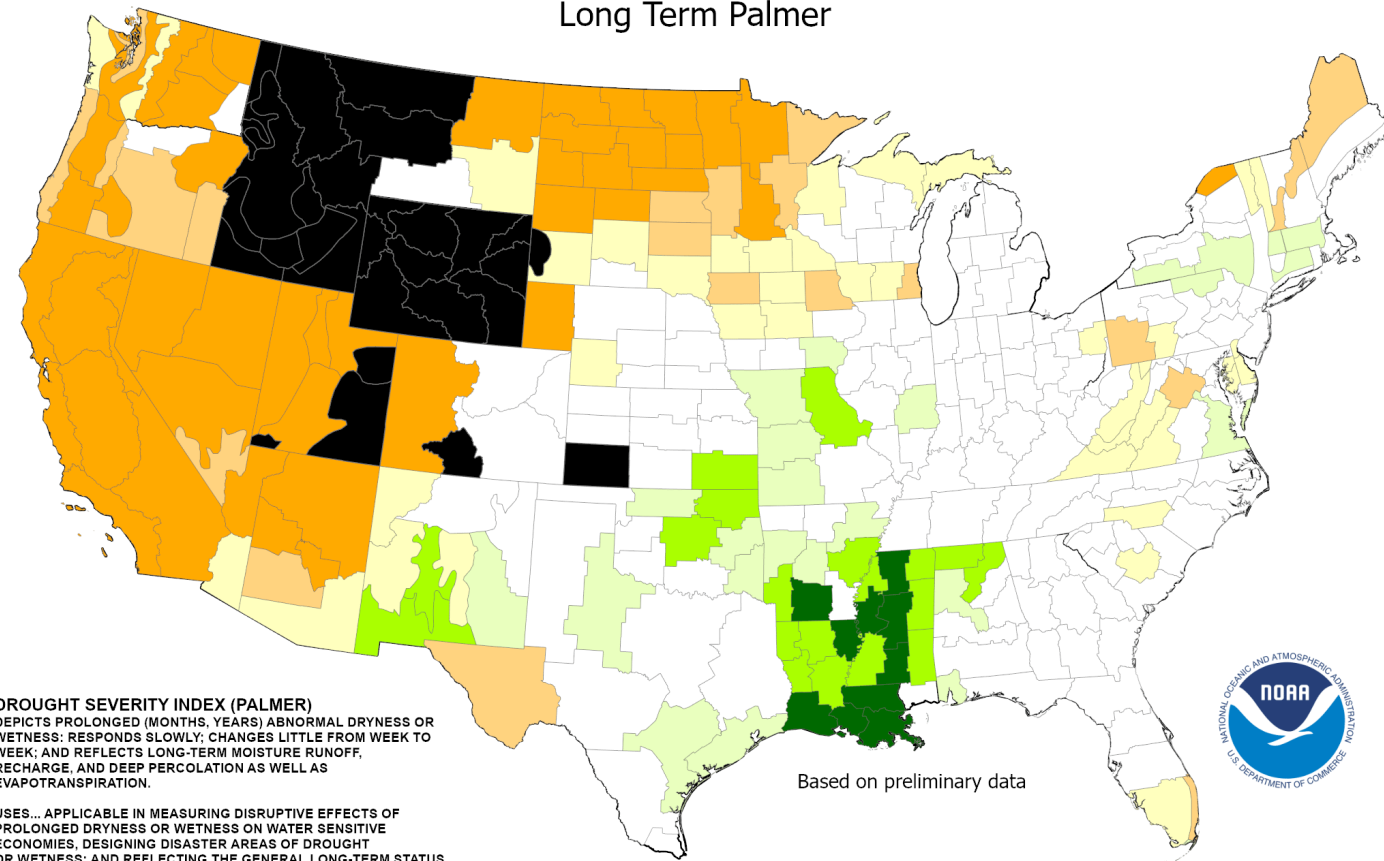


Generated 7/20/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

Palmer Drought Index

Drought Severity Index by Division
Weekly Value for Period Ending Jul 17, 2021
Long Term Palmer



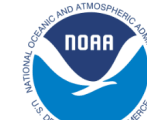
DROUGHT SEVERITY INDEX (PALMER)
DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.

USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.

LIMITATIONS... IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

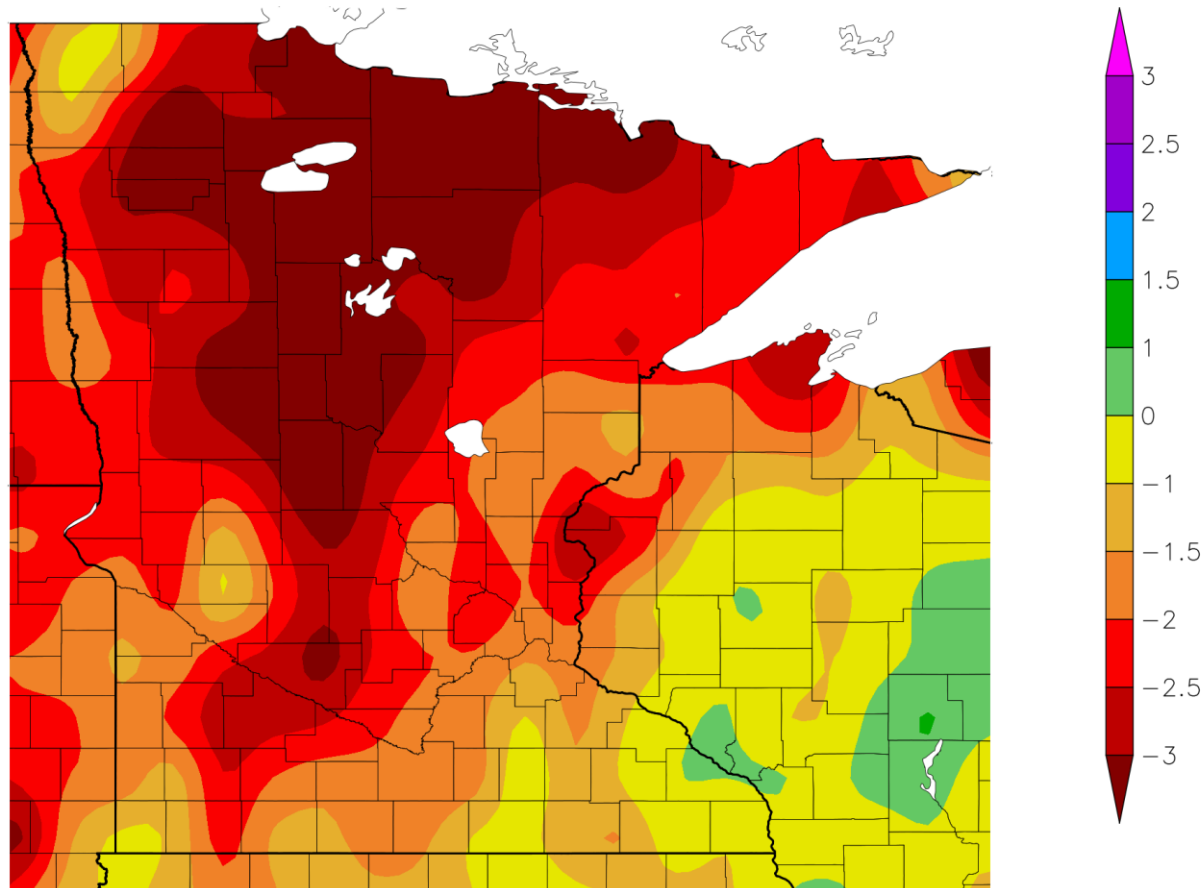
Based on preliminary data

- | | |
|-----------------------------------|--------------------------------------|
| ■ -4.0 or less (Extreme Drought) | ■ +2.0 to +2.9 (Unusual Moist Spell) |
| ■ -3.0 to -3.9 (Severe Drought) | ■ +3.0 to +3.9 (Very Moist Spell) |
| ■ -2.0 to -2.9 (Moderate Drought) | ■ +4.0 and above (Extremely Moist) |
| ■ -1.9 to +1.9 (Near Normal) | ■ Missing/Incomplete |



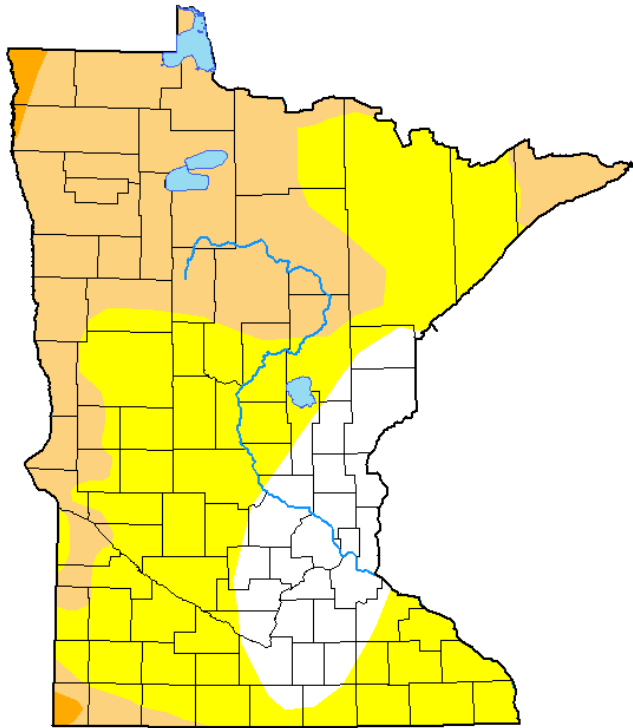
Drought Indicator: Standardized Precipitation Index (SPI)

90 Day SPI
4/20/2021 - 7/18/2021



Drought Map: March 30 & June 1

U.S. Drought Monitor Minnesota



March 30, 2021
(Released Thursday, Apr. 1, 2021)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	14.87	85.13	38.80	0.89	0.00	0.00
Last Week 03-23-2021	0.00	100.00	41.21	0.89	0.00	0.00
3 Months Ago 12-29-2020	1.60	98.40	23.40	0.28	0.00	0.00
Start of Calendar Year 12-29-2020	1.60	98.40	23.40	0.28	0.00	0.00
Start of Water Year 09-29-2020	54.95	45.05	8.39	0.00	0.00	0.00
One Year Ago 03-31-2020	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:



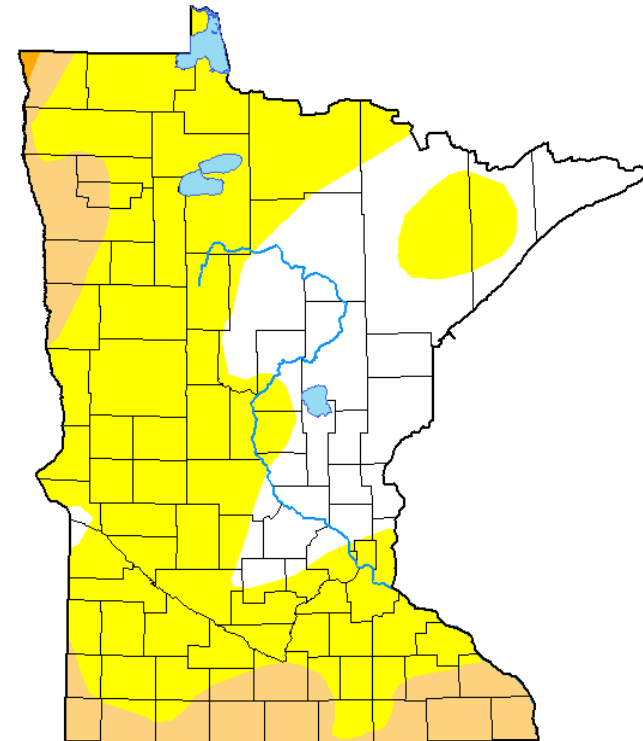
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:
Brad Pugh
CPC/NOAA



droughtmonitor.unl.edu

U.S. Drought Monitor Minnesota

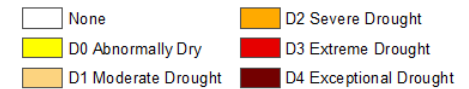


June 1, 2021
(Released Thursday, Jun. 3, 2021)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	26.79	73.21	13.45	0.18	0.00	0.00
Last Week 05-25-2021	26.79	73.21	13.42	0.18	0.00	0.00
3 Months Ago 03-02-2021	0.00	100.00	39.53	0.61	0.00	0.00
Start of Calendar Year 12-29-2020	1.60	98.40	23.40	0.28	0.00	0.00
Start of Water Year 09-29-2020	54.95	45.05	8.39	0.00	0.00	0.00
One Year Ago 06-02-2020	44.33	55.67	17.69	0.00	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>

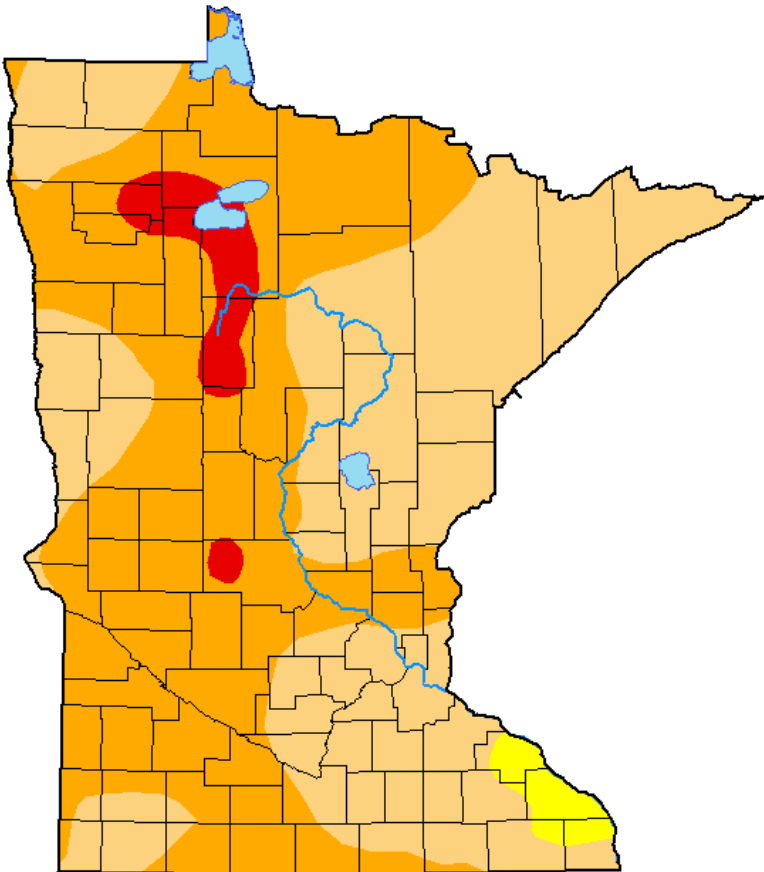
Author:
Brian Fuchs
National Drought Mitigation Center



droughtmonitor.unl.edu

Current Drought Map

U.S. Drought Monitor Minnesota



July 13, 2021
(Released Thursday, Jul. 15, 2021)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	98.21	52.42	3.95	0.00
Last Week <i>07-06-2021</i>	0.00	100.00	92.96	39.70	0.00	0.00
3 Months Ago <i>04-13-2021</i>	56.33	43.67	11.34	0.80	0.00	0.00
Start of Calendar Year <i>12-29-2020</i>	1.60	98.40	23.40	0.28	0.00	0.00
Start of Water Year <i>09-29-2020</i>	54.95	45.05	8.39	0.00	0.00	0.00
One Year Ago <i>07-14-2020</i>	61.84	38.16	20.08	4.44	0.00	0.00

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:

Adam Hartman
NOAA/NWS/NCEP/CPC



droughtmonitor.unl.edu

Source: National Drought Mitigation Center

Agriculture

- Corn: 42% good to excellent (76% on June 1; Last Year: 83%)
- Soybeans 43% good to excellent (76% on June 1; Last Year: 80%)

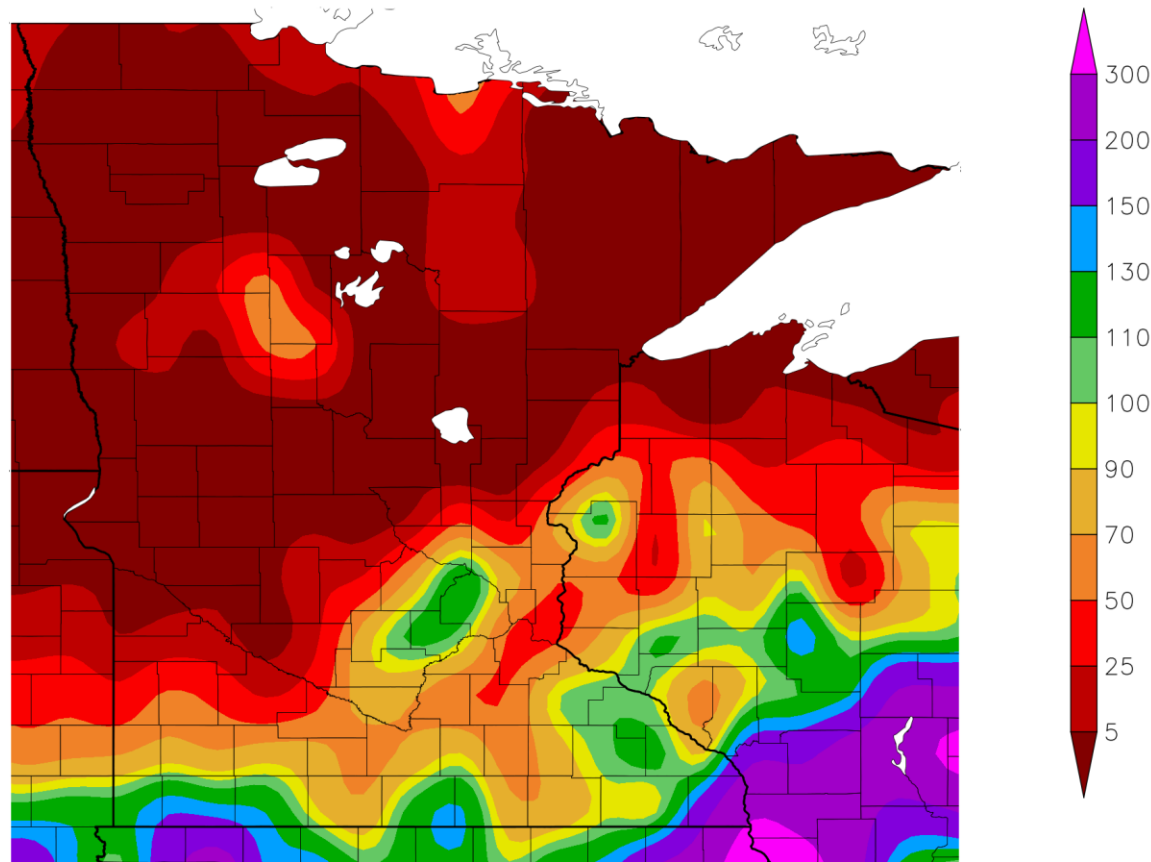
Water Resources

- Reduced Streamflow
- Reduced Lake Levels

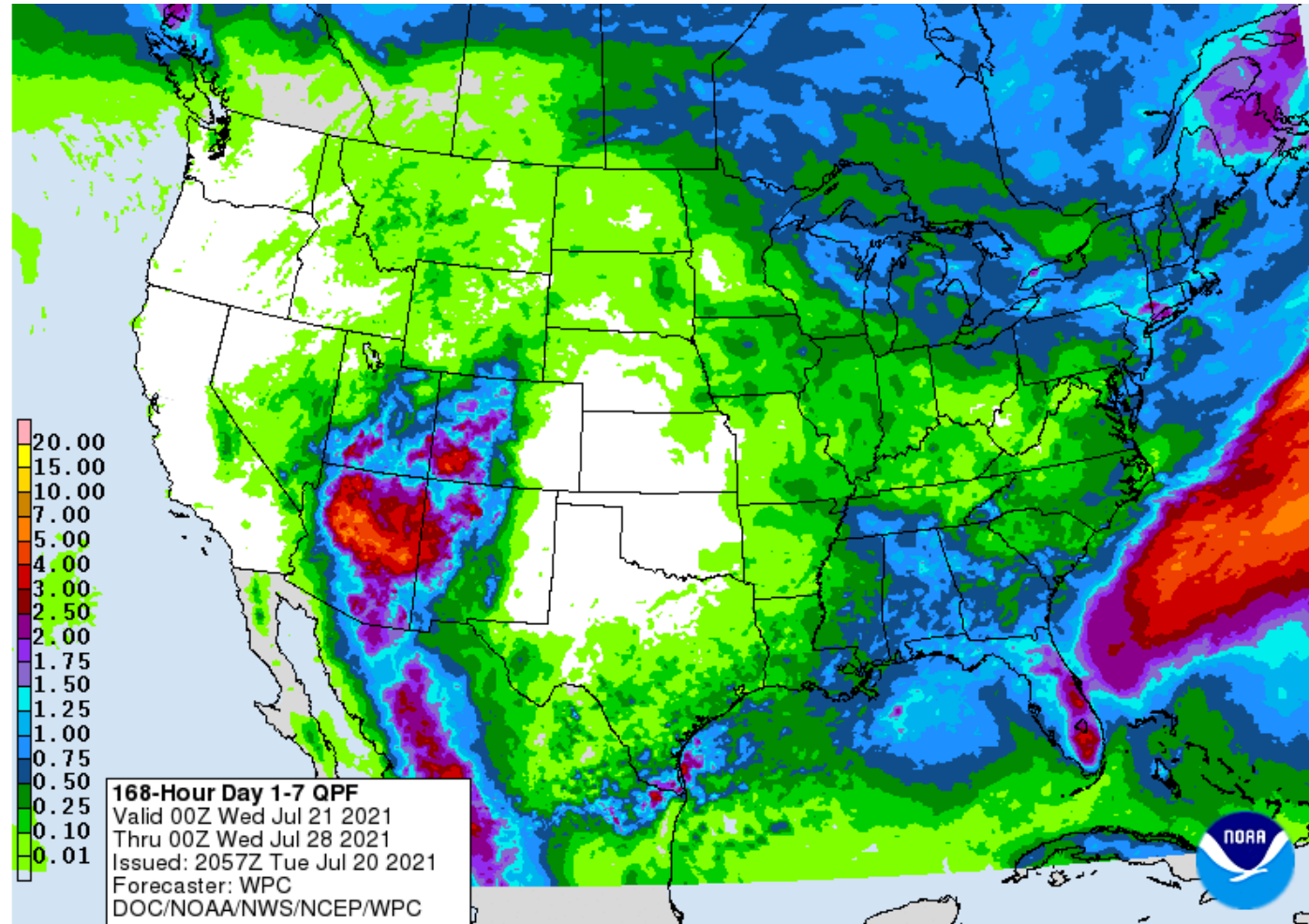
Tourism

Precipitation for the last 7 days

Percent of Normal Precipitation (%)
7/13/2021 – 7/19/2021



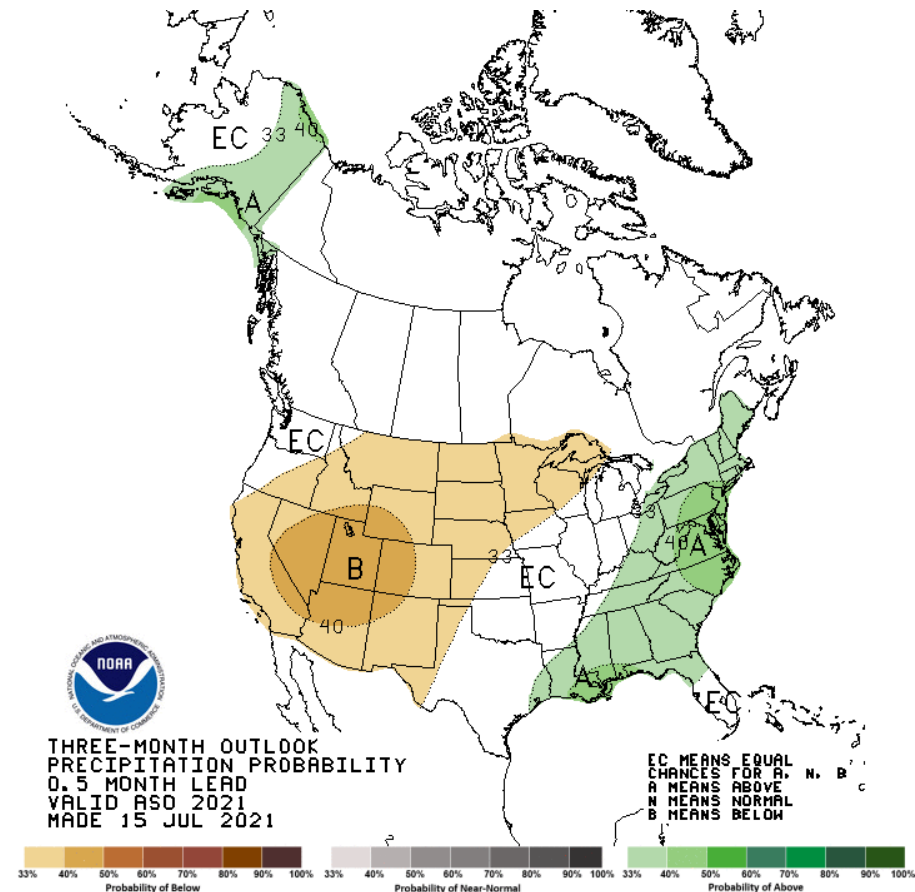
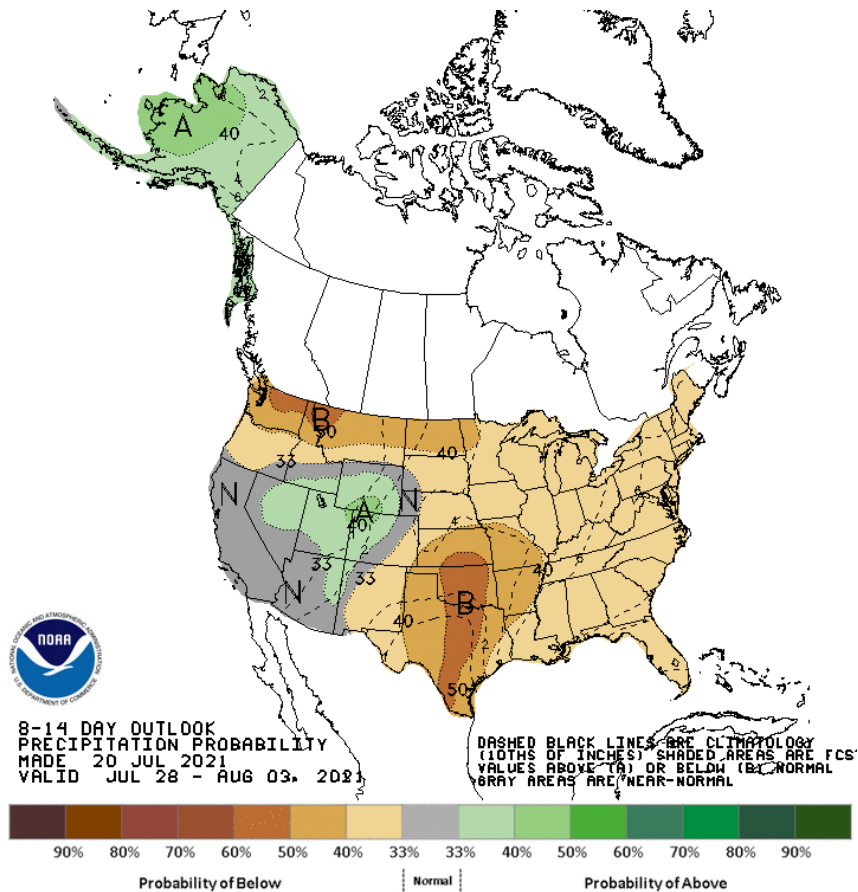
Precipitation for the next 7 days



Climate Prediction Center Precipitation Outlooks

8-14 Days – Aug 3, 2021

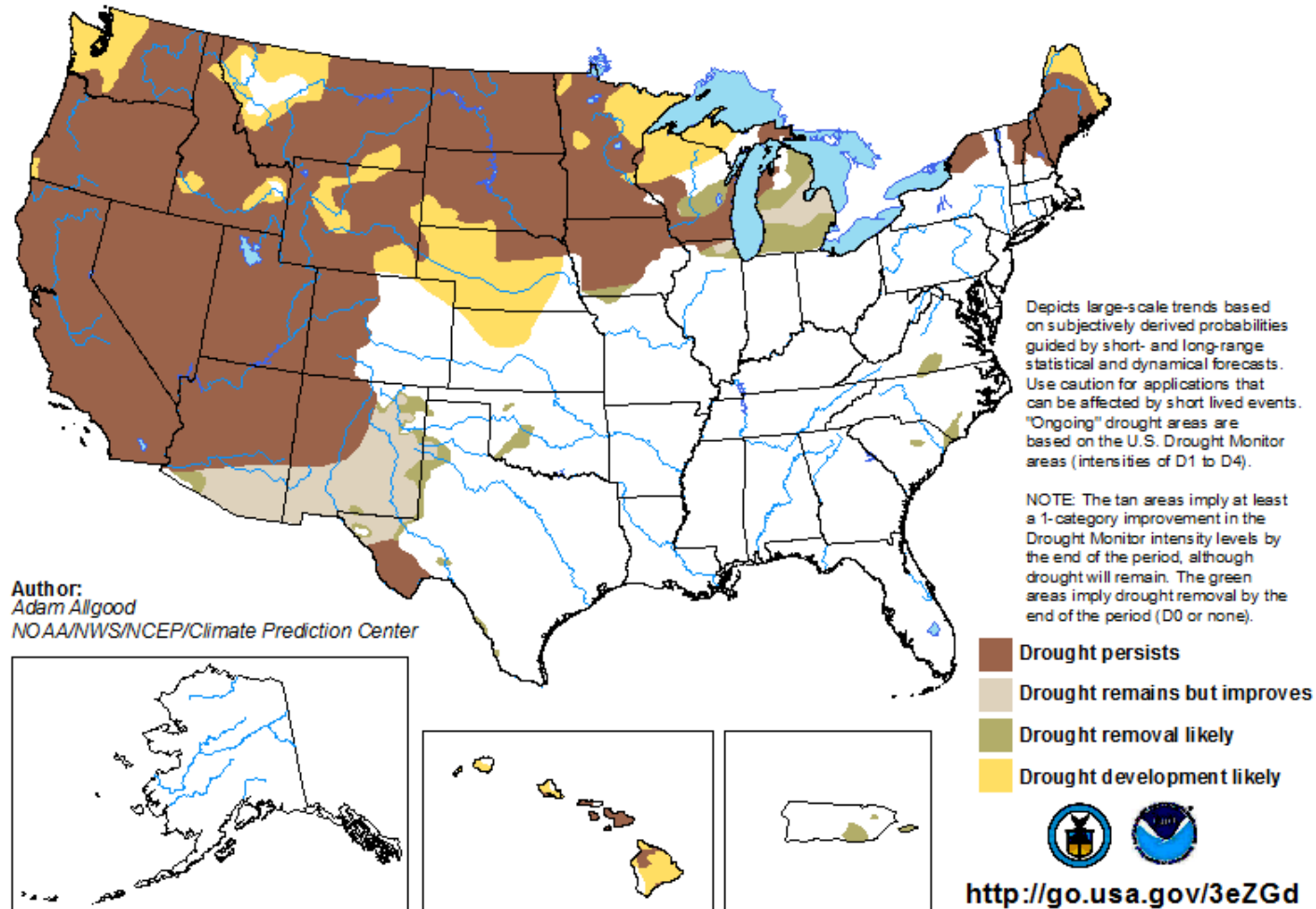
Aug – Sep - Oct



Drought Outlook

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

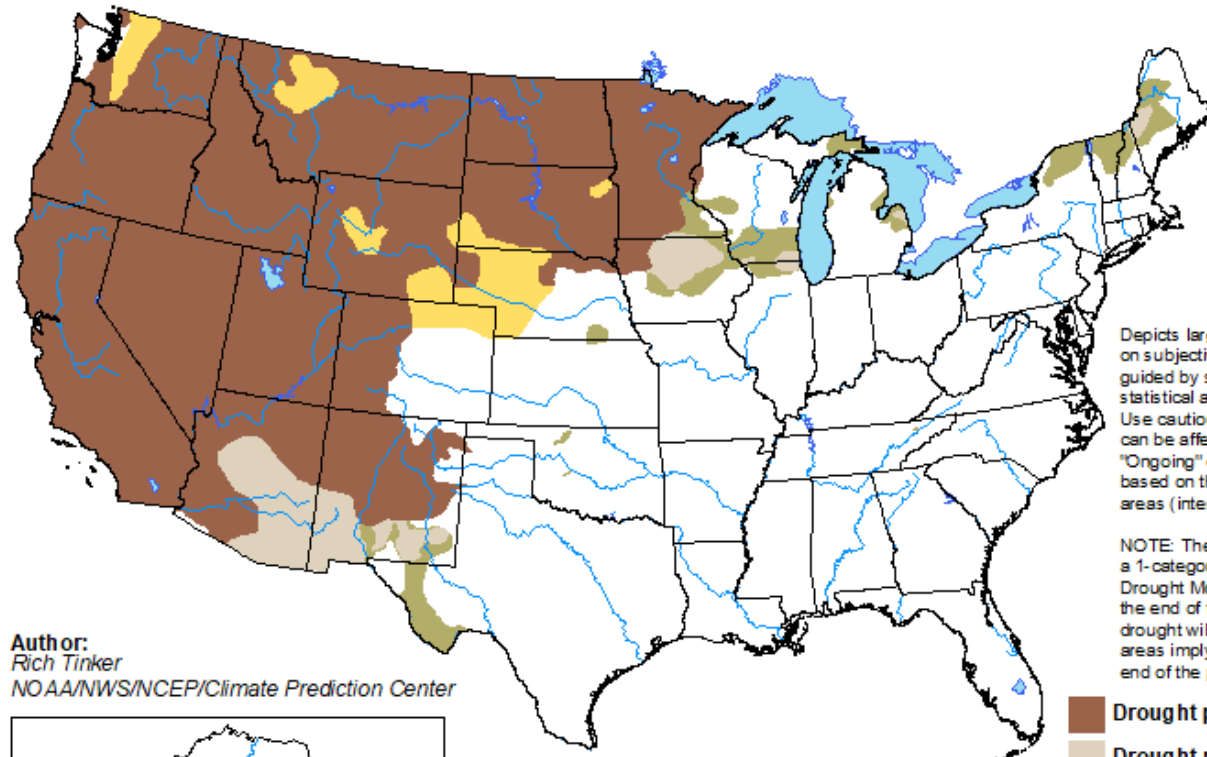
Valid for July 2021
Released June 30, 2021



Drought Outlook

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

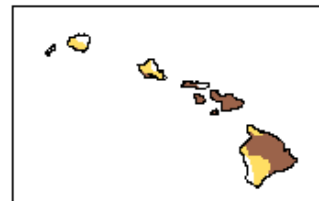
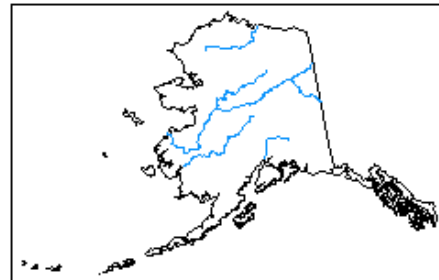
Valid for July 15 - October 31, 2021
Released July 15







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/3eZ73>

- Drought has taken hold in Minnesota
- Could be the first full growing season drought in a long time
- All current indications are that drought is expected to persist in the foreseeable future
- Though conditions may improve down the road, we must remain diligent in our efforts to mitigate impacts.

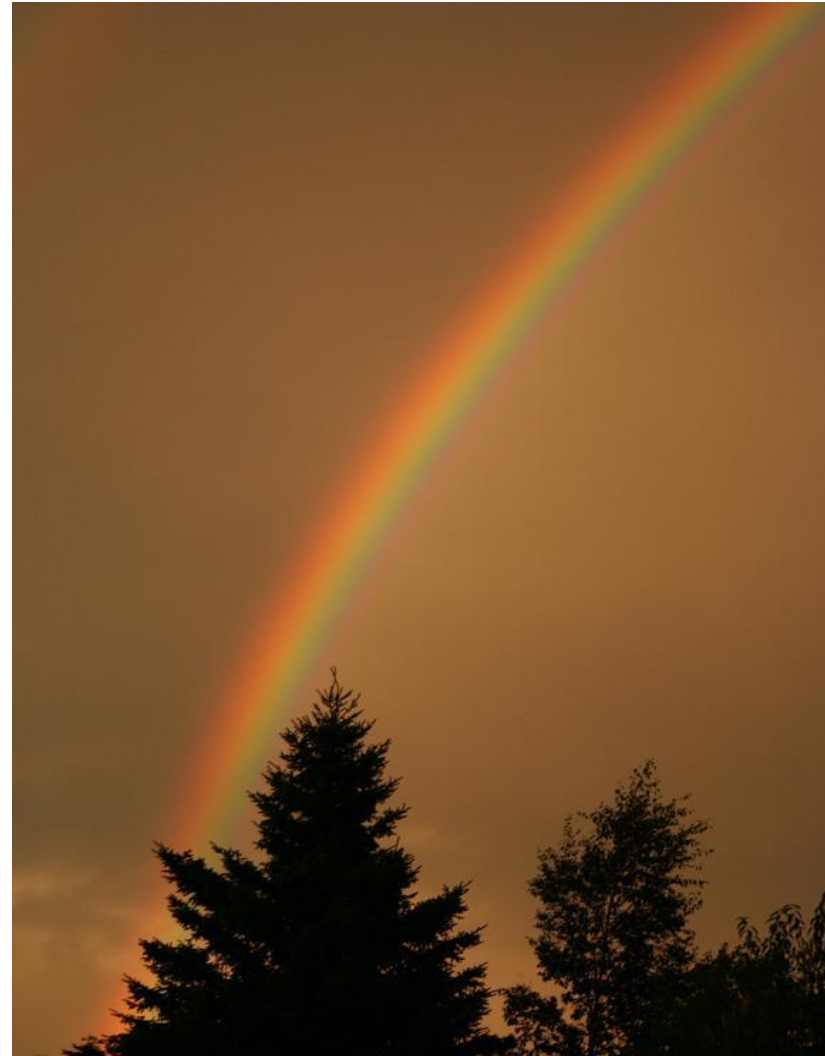


Photo Credit: Pete Boulay

Questions ?

Thank You!

- Introduce yourself (name and position)
- Who do you represent?
- What actions has your agency / organization / government taken to respond to the drought?

Agenda

- Welcome Randall Doneen
- Purpose of meeting Katie Smith
- Drought situation review and update Luigi Romolo
- Agency actions / introductions Task Force
- Drought issues discussion All
- Next steps / adjourn Randall Doneen

- Clarify action items resulting from today's meeting
- How should we manage the meeting notes?
- How do we manage both media and public information?
- How frequently does the Task Force meet?



State Drought Task Force Meeting

July 21, 2021