

Under the Big Sky

e-Letter

June 2021

National Weather Service

Glasgow, MT



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Figure 1: Mammatus cloud at NWS Glasgow.

From the MIC (Meteorologist in Charge):

These photos were taken by Tanja Fransen on almost exactly the same date, one year apart while attending the Longest Dam Race at Fort Peck. From January 1 through June 30, Glasgow is at its 2nd driest year on record, behind 2017 by just 0.06, or just 38% of normal. Fort Peck is at 44% of normal.

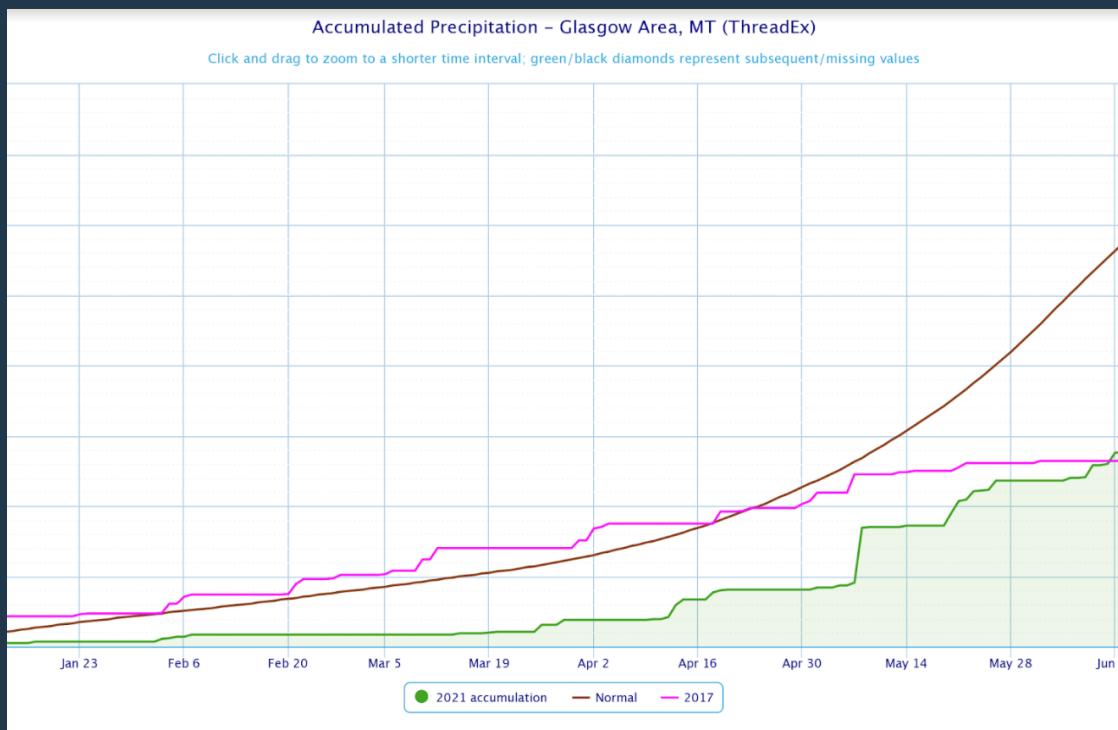


Figure 1: Graphic showing the precipitation differences in Glasgow, MT from Jan 1 to June 30 time period. The brown line is normal (7.32"). The pink line is 2017, with 2.75" of precipitation. The green area is the precipitation so far in 2021 (2.81").

Join CoCoRaHS Today!

CoCoRaHS is a grassroots organization with a network of highly committed observers who report daily precipitation such as rain, hail, or snow from all across the country. The data are used by meteorologists, insurance adjusters, mosquito control, and even by those in academia.



Participating in the CoCoRaHS program is a great way to make a difference in your community. Check out the [CoCoRaHS main page](#) to learn more! We are still accepting new observers so feel free to join through the main CoCoRaHS website today. All you'll need is a ruler and a rain gage to get started!

To access some starter training, check out the recent [warm season CoCoRaHS training](#) that was produced by NWS Glasgow for new and interested observers. If you are a current CoCoRaHS observer, this can be a great refresher session!

30 Day Percent of Normal Precipitation (Montana)

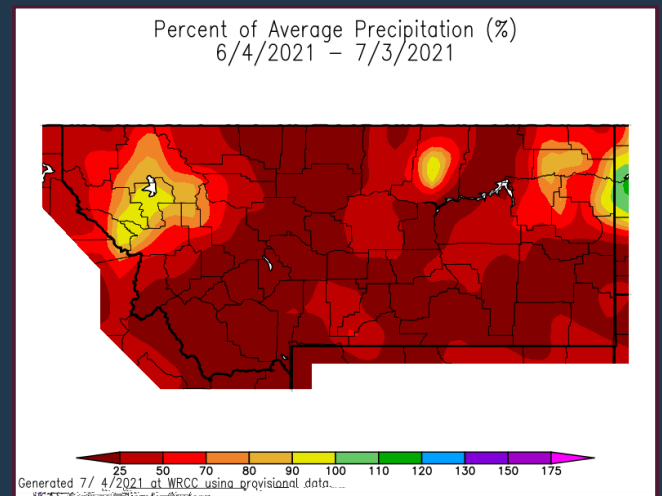


Figure 2: 30-day percent of normal precipitation across Montana.

Avg. Temp Departure from Normal (Montana)

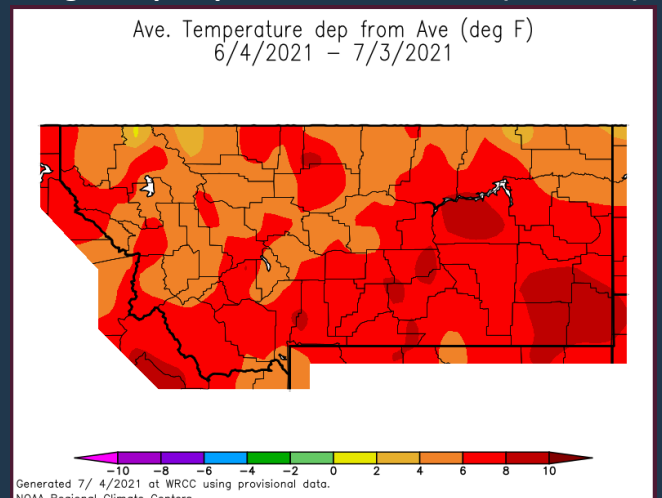


Figure 3: 30-day temperature anomalies across Montana.

Summary: The graphic at the top depicts a serious situation with much of the state having less than 50 percent of normal precipitation over the past 30 days, leading to worsening drought conditions. In addition, temperatures have trended above normal across the state over the same time horizon. That trend was buoyed by the recent excessive heat which broke records across the area. Glasgow had a high of 102 degrees on July 1, breaking the old record of 101 set in 1895. Glasgow hit a high of 101 degrees on July 2nd, tying the old record from 1929. The low that day of 72 was a new record warm low, besting the low of 67 from 1930.

Hydrologic Summary for June 2021:

It was a drier than normal month over most of Northeast Montana. The wet spots were Malta with 2.33 inches, Wolf Point with 2.06 inches, and Culbertson with 2.00 inches. The dry spots were Glasgow 46 SW with 0.11 inch, St. Marie with 0.27 inch, and Hoyt with 0.31 inch. Temperatures averaged between 2 and 8 degrees above normal across most of the region. Glasgow averaged 72.4 degrees which was 7.9 degrees above normal.

The dry weather has allowed severe to extreme drought to persist over Northeast Montana according to the U.S. Drought Monitor.

USGS Data shows Stream Flow generally below normal on the Milk, Poplar, and Missouri Rivers and much below normal on the Yellowstone River.

The Fort Peck Reservoir elevation fell slightly to at 2232.6 feet during the month.

CPC Three Month Outlook:

The Climate Prediction Center released an update of its three month outlook for temperature and precipitation for July through September back on June 17, 2021. The outlook suggests that odds favor warmer and drier than normal conditions overall during the next three months. This will need to be monitored as drought conditions worsen and we get deeper into fire weather season.

The latest outlook in full detail is always available [here](#). In addition, you can check out the Climate Prediction Center [Interactive site](#)! You can zoom in on our area, and navigate to see the climate outlook for your specific location. The pie charts on the left hand side can be particularly useful for assessing the outlook at your specific location.

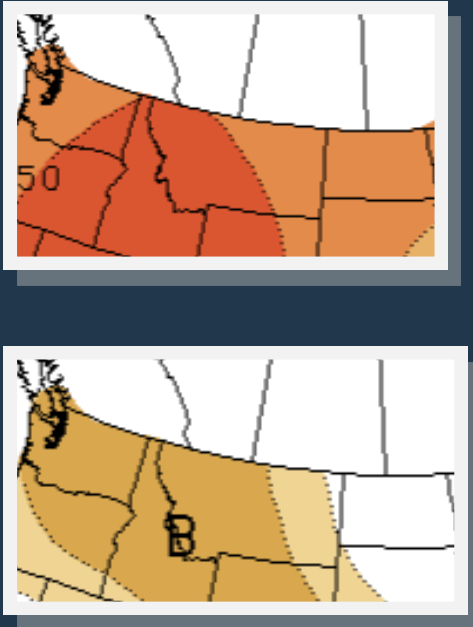
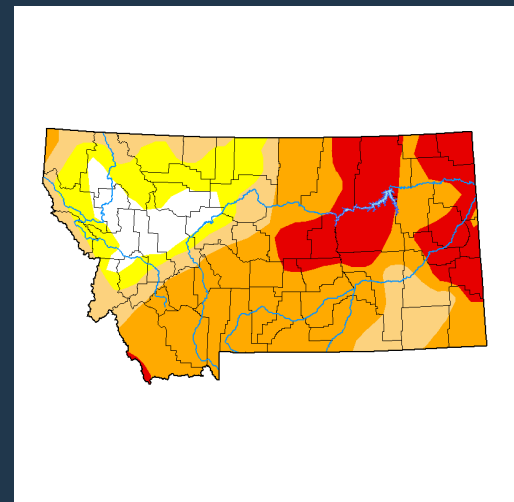
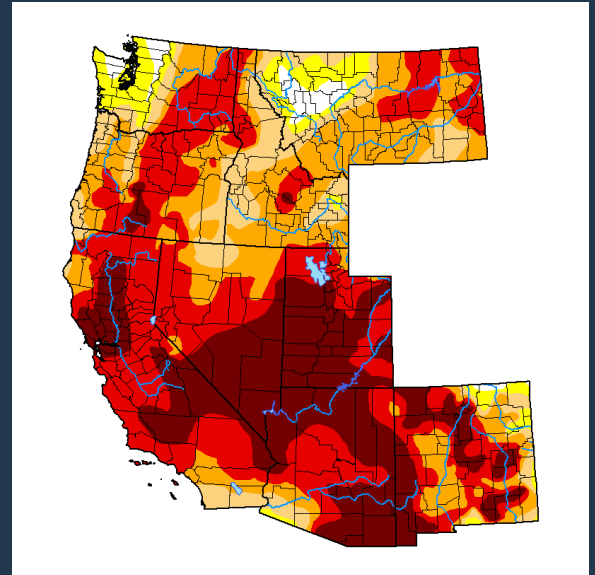


Figure 4: Climate Prediction Center three month temperature (top) and precipitation (bottom) outlook for July 2021 through September 2021.

U.S. Drought Monitor:

The latest U.S. Drought Monitor was released on Thursday July 1, 2021. Much of NE Montana remains under the influence of a severe to extreme drought. This outlook is updated weekly. Please feel free to check out the latest [here](#).



Intensity:

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)

Figure 5: U.S. Drought Monitor updated July 1, 2021

U.S. & Global Climate Highlights (May): The U.S. & Global climate highlights for May 2021 have been released, the latest month for which data was available. A few points for you to take home are provided below.

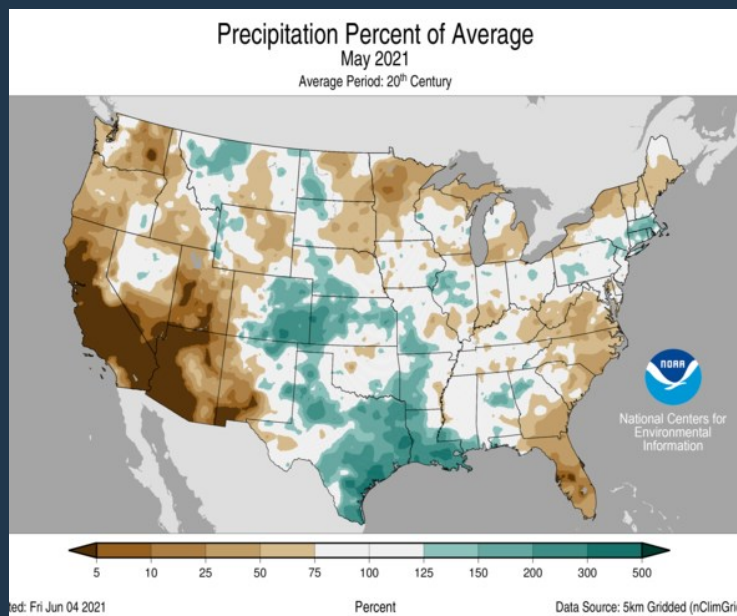


Figure 6: May 2021 Percent of Average Precipitation (U.S.).

U.S. Highlights for May 2021

- 1) The contiguous U.S. average temperature for May 2021 was 60.4 °F, ranking within the middle warmest third of the climate record.
- 2) The average May precipitation total for the contiguous U.S. came in at 2.94 inches. This ranks in the middle third of the climate record.

Global Highlights for May 2021

- 1) The 2021 global land and ocean surface temperature was the 6th warmest on record.
- 2) The ocean surface temperature departure for May was the 8th warmest on record.
- 3) May featured ENSO neutral conditions.

Safety Reminders

Heading to the area lakes to beat the heat this summer?

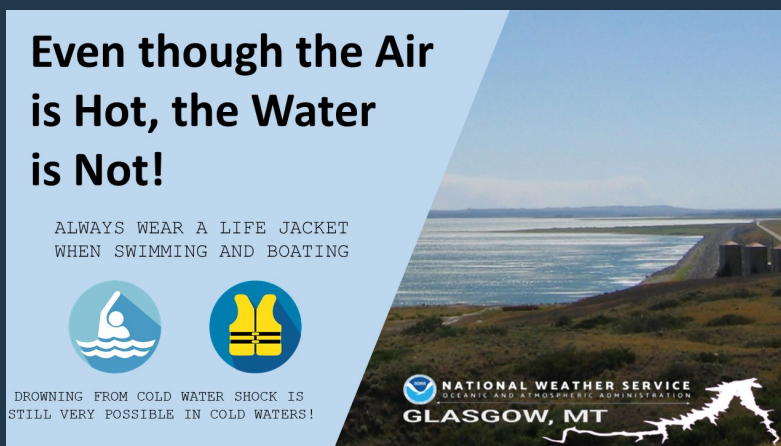


Figure 7: Boating Safety graphic shared on 6/27 on NWS Glasgow social media accounts.

Pay attention to the signs of dehydration when out in the summer heat.



Figure 8: Heat Safety graphic shared as part of a social media graphic on 6/23.

Links You May Like:

[June Enso Update](#)

[Consecutive Winters of La Niña](#)

[Western U.S. Cooks](#)

[Understanding Weather, Climate, & Oceans](#)

COOP Precipitation Data (*Preliminary* May 2021)

Station	Precipitation	Location
BAYM8	M	Baylor
BRDM8	2.69	Bredette
BTNM8	M	Brockton 17 N
BKNM8	2.76	Brockton 20 S
BKYM8	1.48	Brockway 3 WSW
BRSM8	M	Brusette
CLLM8	2.00	Carlyle 13 NW
CIRM8	3.32	Circle
CHNM8	1.64	Cohagen
COM8	M	Cohagen 22 SE
CNTM8	1.49	Content 3 SSE
CULM8	1.85	Culbertson
DSNM8	1.00	Dodson 11 N
FLTM8	1.44	Flatwillow 4 ENE
FPKM8	1.74	Fort Peck PP
GLAM8	2.45	Glasgow 14 NW
GGWM8	1.55	Glasgow WFO
GGSM8	1.71	Glasgow 46 SW
GNDM8	2.29	Glendive WTP
HRBM8	M	Harb
HINM8	1.96	Hinsdale 4 SW
HNSM8	M	Hinsdale 21 SW
HOMM8	2.02	Homestead 5 SE
HOYM8	2.14	Hoyt
JORM8	M	Jordan
LNDM8	2.42	Lindsay
MLAM8	1.09	Malta
MLTM8	2.00	Malta 7 E
MTAM8	M	Malta 35 S

Station	Precipitation	Location
MDCM8	1.64	Medicine Lake 3 SE
MLDM8	2.15	Mildred 5 N
MSBM8	0.17	Mosby 4 ENE
OPNM8	2.25	Opheim 10 N
OPMM8	0.96	Opheim 12 SSE
PTYM8	2.70	Plentywood
PTWM8	2.36	Plentywood 1 NE
POGM8	2.21	Port of Morgan
RAYM8	1.77	Raymond Border Station
SAOM8	1.52	Saco 1 NNW
SMIM8	1.48	St. Marie
SAVM8	M	Savage
SCOM8	2.06	Scobey 4 NW
SDYM8	M	Sidney
SIDM8	2.03	Sidney 2S
TERM8	2.40	Terry
TYNM8	M	Terry 21 NNW
VIDM8	M	Vida 6 NE
WSBM8	M	Westby
WTRM8	M	Whitewater
WHIM8	M	Whitewater 18 NE
WBXM8	2.23	Wibaux 2 E
WTTM8	0.71	Winnett
WNEM8	M	Winnett 6 NNE
WNTM8	1.06	Winnett 8 ESE
WITM8	M	Winnett 12 SW
WLFM8	2.33	Wolf Point
ZRTM8	2.16	Zortman

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BRDM8	M	Bredette
BTNM8	M	Brockton 17 N
BKNM8	M	Brockton 20 S
BKYM8	1.43	Brockway 3 WSW
BRSM8	M	Brusette
CLLM8	M	Carlyle 13 NW
CIRM8	1.38	Circle
CHNM8	M	Cohagen
COM8	M	Cohagen 22 SE
CNTM8	M	Content 3 SSE
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RAYM8	1.59	Raymond Border Station
SAOM8	1.24	Saco 1 NNW
SMIM8	0.27	St. Marie
SAVM8	M	Savage
SCOM8	M	Scobey 4 NW
SDYM8	M	Sidney
SIDM8	M	Sidney 2S
TERM8	M	Terry
TYNM8	M	Terry 21 NNW
VIDM8	M	Vida 6 NE
WSBM8	M	Westby
WTRM8	M	Whitewater
WHIM8	M	Whitewater 18 NE
WBXM8	M	Wibaux 2 E
WTTM8	0.42	Winnett
WNEM8	M	Winnett 6 NNE
WNTM8	M	Winnett 8 ESE
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WLFM8	2.06	Wolf Point
ZRTM8	1.86	Zortman

Monthly Trivia:

Last time we asked...

You've decided to seek shelter due to a Severe Thunderstorm Warning issued for your area. How long after the storm has passed do you have the all clear to resume outdoor activities?



Answer: The recommendation is to wait **30 minutes** after hearing thunder to return outside. At that point, the storm is far enough away that you can resume normal activities and be safe from the dangers of lightning.

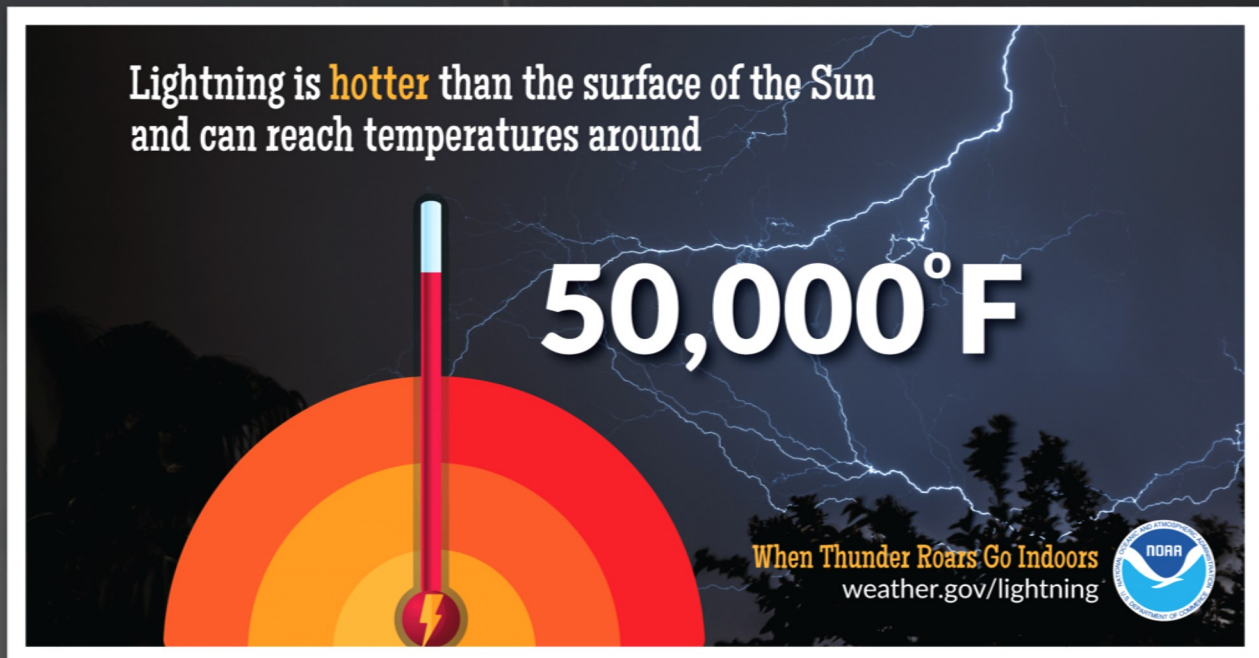



Figure 9: Lightning safety infographic.

 **New Question:** It's been hot this summer so far, but it can always be a lot hotter—right? This month we ask, what's the record number of consecutive days Glasgow, MT received a high temperature of at least 100 degrees?

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