

Under the Big Sky

e-Letter

May 2021

National Weather Service

Glasgow, MT

Photo Credit: Greg Forrester, Lead
Forecaster, taken on 5/14/2021



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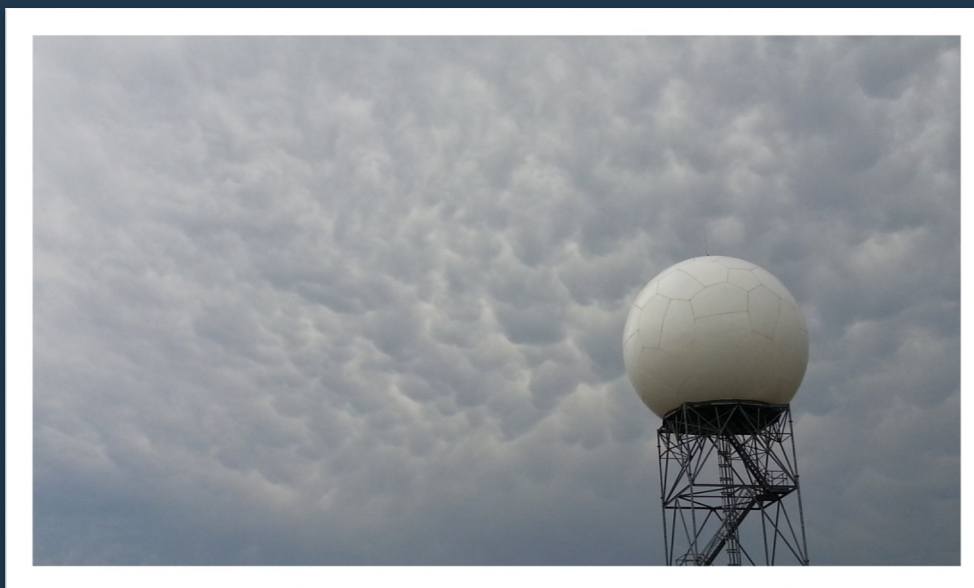


Figure 1: Mammatus cloud at NWS Glasgow.

Severe Weather Readiness:

...Beeeeeeppppp, Beeeeeeppppp, Beeeeeeppppp...The National Weather Service in Glasgow has issued a Severe Thunderstorm Watch for Northeast Montana...

Cooler temperatures have kept severe weather at bay so far this season, but it's knocking on our door. There's a few resources to help get you back into thinking about thunderstorm safety:

- Quick read/graphics: [NWS Weather Ready Nation Thunderstorm Safety](#)
- Short [NWS Glasgow 2021 Thunderstorm Safety Videos](#) on You Tube
- NWS Online Skywarn Training Course (You'll need to create an account, but you won't get spammed with tons of emails from doing so!)
- [Role of the Skywarn Spotter](#)
- [Skywarn Spotter Convective Basics](#)

We wish you a safe summer, but we know some of you will have to deal with severe weather. Here's a reminder of the reports we are looking for:

- Hail (any size)
- Wind gusts over 58 mph or causing damage (any speed)
- Rotation in the base of the clouds
- Funnel Clouds or Tornadoes
- Large Dust Devils
- Flooding/Flash Flooding

And, here's how best to report to us:

- Spotter Reporting Line: 800-775-5771
- Email: ggw.wxreport@noaa.gov (if sending from you phone, please include your name/location and time of event)
- Facebook: <https://www.facebook.com/NWSGlasgow>
- Twitter: [@NWSGlasgow](#)



Figure 2: Thunderstorm and lightning safety infographic.

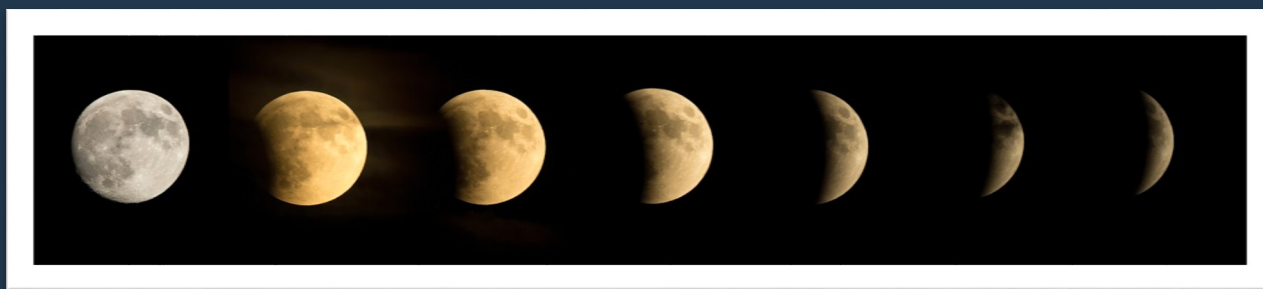


Photo Credit: NASA.

Northeast Montana is one of the few places in the entire country that has very low light pollution and it makes this place a unique and excellent location to watch the night sky! We hope that you will join us in Looking Up at the Big Sky! The space weather program at the National Weather Service in Glasgow, MT is partnering with the US Army Corps of Engineers at the Fort Peck Interpretive Center and Charles M. Russell National Wildlife Refuge to put together a virtual summer astronomy series. An introduction to the program and the first edition has already premiered on Facebook. Our first topic was about the supermoon and lunar eclipse on May 26th, 2021. We will talk about relevant night sky events, provide an educational background, and share with you the viewing forecast and recommended locations for the best view! Check facebook (National Weather Service Glasgow and US Army Corps of Engineers, Omaha District - Fort Peck Dam & Lake) for our June program and future events throughout this summer!



Photo Credit: NWS SWPC.

Join CoCoRaHS Today!

CoCoRaHS is a grassroots organization with a network of dedicated 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)

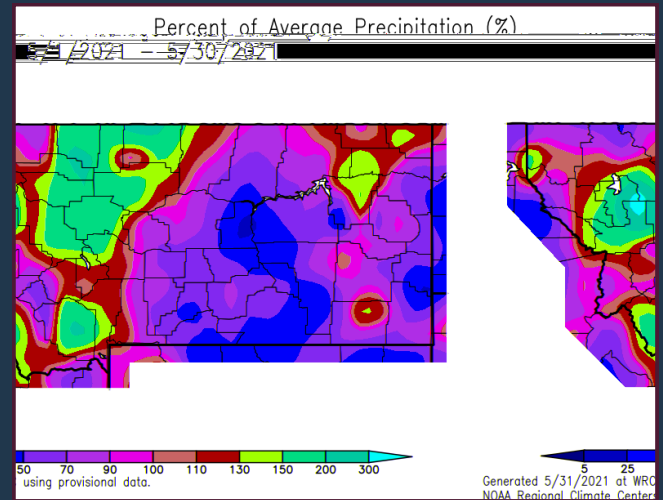


Figure 3: 30-day percent of normal precipitation across Montana.

Avg. Temp Departure from Normal (Montana)

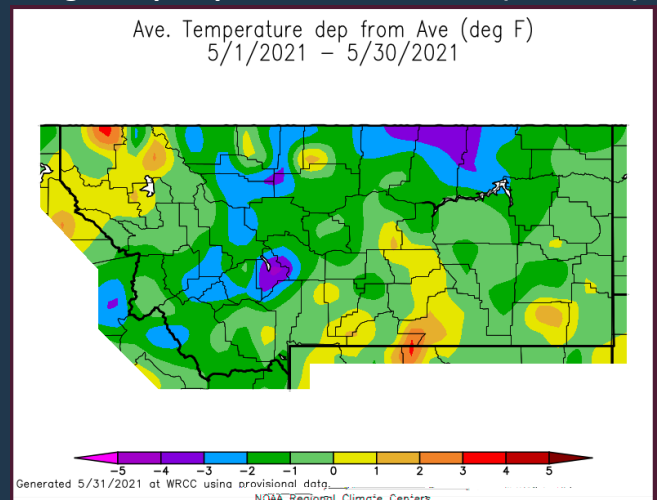


Figure 4: 30-day temperature anomalies across Montana.

Summary: Over the last 30 days precipitation has trended above normal for portions of North Central Montana. However, much of eastern and southeastern parts of the state had near or below normal precipitation over the same period. Meanwhile, temperatures were within a couple of degrees of average across much of Montana.

Hydrologic Summary for March 2021 by Greg Forester, Lead Forecaster at NWS Glasgow:

It was a drier and warmer than normal month for temperatures over Northeast Montana. A few areas mainly in the southwest had near to above normal precipitation. The wet spots were Zortman with 1.56 inches, Glasgow 46SW with 0.95 inch, and Flatwillow and Carlyle with 0.83 inch. The dry spots were Opheim 12SE with 0.07 inch, Hoyt with 0.08 inch, and Scobey with 0.10 inch. Glasgow received 0.43 inch which was 53 percent of normal. Temperatures averaged between 3 degrees below and 2 degrees above normal across the region. Glasgow averaged 44.4 degrees which was 0.5 degrees below normal.

The dry weather has allowed extreme drought to develop over the northeast half of the region which includes areas east of Malta, Fort Peck, and Terry. The remainder of the region is in severe drought according to the Drought Monitor.

Stream flow on the Milk, Yellowstone, and Poplar Rivers was below normal for the entire month. The Missouri River had near normal stream flow for the entire month.

The Fort Peck Reservoir elevation fell slightly to 2233.0 feet during the month. The reservoir was at 78 percent of capacity and 99 percent of the mean pool.

CPC Three Month Outlook:

The Climate Prediction Center released an update of its three month outlook for temperature and precipitation for June through August back on May 20, 2021. The outlook calls for increased odds of above normal temperatures across the state. Unfortunately, the outlook is also suggesting a dry summer ahead which is not good news for those with growing drought concerns. This does not mean there will not be periods that may run cooler or wetter, but, on the whole a warm and dry summer is expected to result.

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.

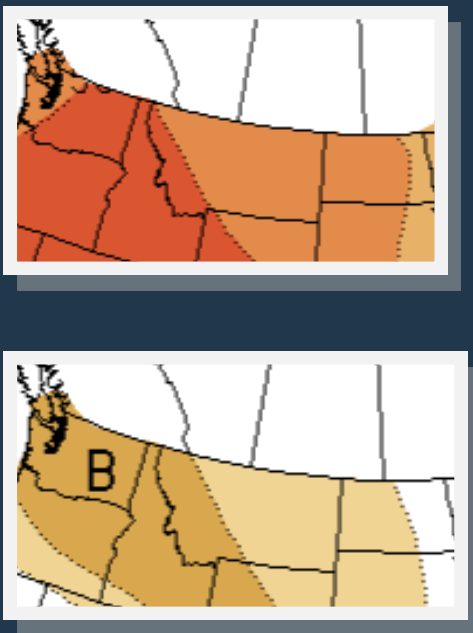


Figure 5: Climate Prediction Center three month temperature (top) and precipitation (bottom) outlook for June 2021 through August 2021.

U.S. Drought Monitor:

The latest U.S. Drought Monitor was released on Thursday June 3, 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](#).

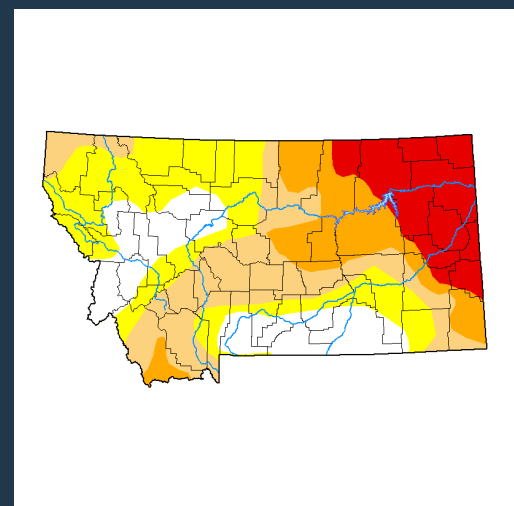
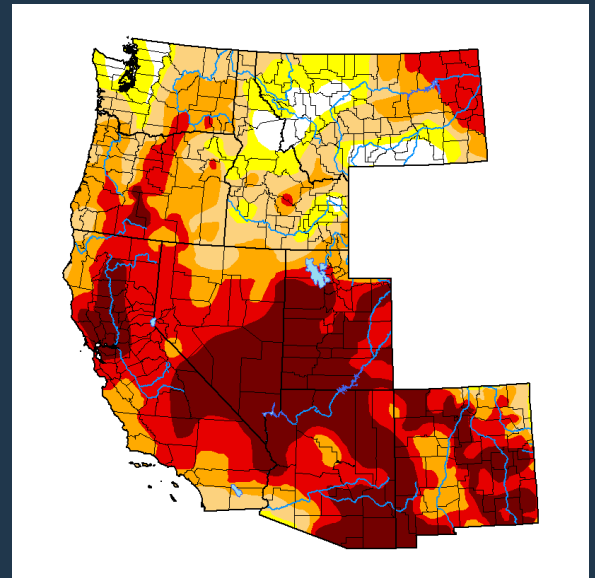


Figure 6: U.S. Drought Monitor updated June 3, 2021

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

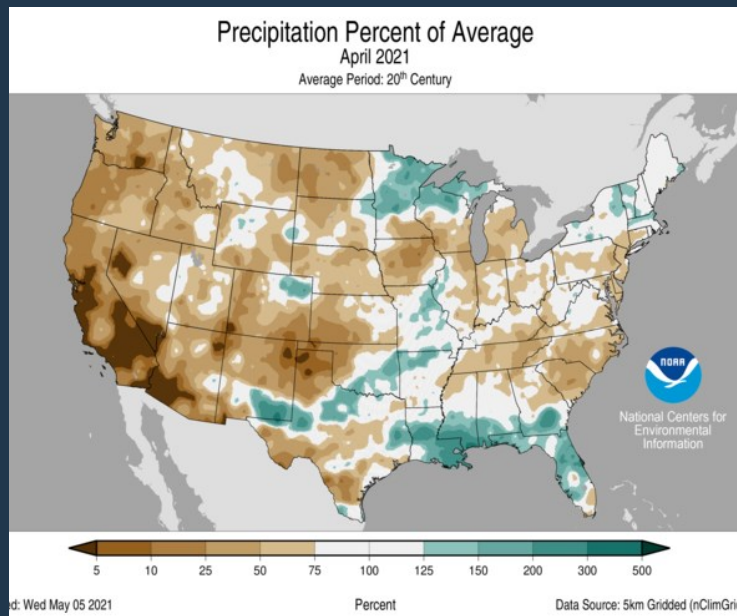


Figure 7: April 2021 Percent of Average Precipitation (U.S.).

U.S. Highlights for April 2021

- 1) The contiguous U.S. average temperature for April 2021 was 51.9 °F, ranking within the middle warmest third of the climate record.
- 2) The average April precipitation total for the contiguous U.S. came in at 2.03 inches. This ranks as the 14th driest April on record, and driest since 1989.

Global Highlights for April 2021

- 1) The 2021 global land and ocean surface temperature was the 9th warmest on record.
- 2) The ocean surface temperature departure for April was the smallest since 2014 but the 8th highest on record.
- 3) La Niña began to weaken in April, with things progressing toward ENSO-neutral conditions. However, it is still strong enough to have an effect.

Heat Safety Reminders

Summer is on the way, and that means the risk of hot temperatures and heat-related stress. Here are some important reminders for you to stay safe this season.



Figure 8: Heat Safety graphic shared on 5/16 on NWS Glasgow social media accounts.

Links You May Like:

[May ENSO Update](#)

[Atlantic Hurricane Season—A New Normal](#)

[Fires of the Future](#)

[CO2 & Methane Rise in 2020](#)

COOP Precipitation Data (*Preliminary* April 2021)

Station	Precipitation	Location
BAYM8	0.15	Baylor
BRDM8	0.26	Bredette
BTNM8	M	Brockton 17 N
BKNM8	M	Brockton 20 S
BKYM8	0.24	Brockway 3 WSW
BRSM8	0.33	Brusette
CLLM8	0.83	Carlyle 13 NW
CIRM8	0.17	Circle
CHNM8	0.42	Cohagen
COM8	0.30	Cohagen 22 SE
CNTM8	0.32	Content 3 SSE
CULM8	0.33	Culbertson
DSNM8	0.36	Dodson 11 N
FLTM8	0.83	Flatwillow 4 ENE
FPKM8	0.29	Fort Peck PP
GLAM8	0.35	Glasgow 14 NW
GGWM8	0.43	Glasgow WFO
GGSM8	0.95	Glasgow 46 SW
GNDM8	0.18	Glendive WTP
HRBM8	M	Harb
HINM8	0.76	Hinsdale 4 SW
HNSM8	0.60	Hinsdale 21 SW
HOMM8	0.18	Homestead 5 SE
HOYM8	0.08	Hoyt
JORM8	M	Jordan
LNDM8	0.43	Lindsay
MLAM8	0.41	Malta
MLTM8	0.49	Malta 7 E
MTAM8	0.42	Malta 35 S

Station	Precipitation	Location
MDCM8	0.42	Medicine Lake 3 SE
MLDM8	0.24	Mildred 5 N
MSBM8	0.32	Mosby 4 ENE
OPNM8	0.17	Opheim 10 N
OPMM8	0.07	Opheim 12 SSE
PTYM8	0.53	Plentywood
PTWM8	0.13	Plentywood 1 NE
POGM8	0.16	Port of Morgan
RAYM8	M	Raymond Border Station
SAOM8	0.45	Saco 1 NNW
SMIM8	0.22	St. Marie
SAVM8	M	Savage
SCOM8	0.10	Scobey 4 NW
SDYM8	0.38	Sidney
SIDM8	0.23	Sidney 2S
TERM8	0.39	Terry
TYNM8	0.85	Terry 21 NNW
VIDM8	M	Vida 6 NE
WSBM8	M	Westby
WTRM8	0.22	Whitewater
WHIM8	M	Whitewater 18 NE
WBXM8	0.63	Wibaux 2 E
WTTM8	0.34	Winnett
WNEM8	0.26	Winnett 6 NNE
WNTM8	0.50	Winnett 8 ESE
WITM8	M	Winnett 12 SW
WLFM8	0.17	Wolf Point
ZRTM8	1.56	Zortman

Monthly Trivia:

Last time we asked...

Convective thunderstorm season is upon us! This month we ask: What's the difference between a watch and a warning? We'll share the answer to this as well as some additional important safety information in the next newsletter edition!



Answer: The differences between a watch and a warning, as well as safety actions you should take, are summarized nicely in the table below.

Watch	Warning
Conditions are favorable for the development of severe thunderstorms in and near the watch area. This generally is for the next 0-6 hours.	The severe thunderstorm (1" or larger hail and/or wind gusts to 58 mph or higher) or a tornado is either occurring or will be soon. This generally has a lead time of 0 to 60 minutes.
Watch Actions: <ul style="list-style-type: none">⇒ Know where your safest place to shelter will be (not a mobile or modular home)⇒ Monitor radar, be prepared to go to a safe place before storms or warnings get to you⇒ Have at least two ways to receive future warnings (local radio, TV, text messages, NOAA Weather Radio, etc.)⇒ Put away outdoor items that could blow away⇒ Put away vehicles in sheltered locations⇒ As storms get closer, even before warnings may be issued, go to your "safe" location, bring family, friends, pets	Warning Actions: <ul style="list-style-type: none">⇒ Seek immediate shelter in your safe location⇒ Lowest level of safe structure, away from windows and chimneys⇒ Have as many walls between you and the outside as possible⇒ Have a radio, smart phone, tablet/laptop with you to monitor situation⇒ In a car, wear seatbelt, and try to go south then west of the storm. If you cannot avoid it, pull over, lay down and protect head with a blanket

Figure 9: Graphical depiction of a severe weather watch vs. warning and actions you can take.



New Question: 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?

Hint: The answer is somewhere in this newsletter!

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[Twitter.com/NWSGlasgow](https://twitter.com/NWSGlasgow)

[YouTube.com/NWSGlasgow](https://www.youtube.com/NWSGlasgow)