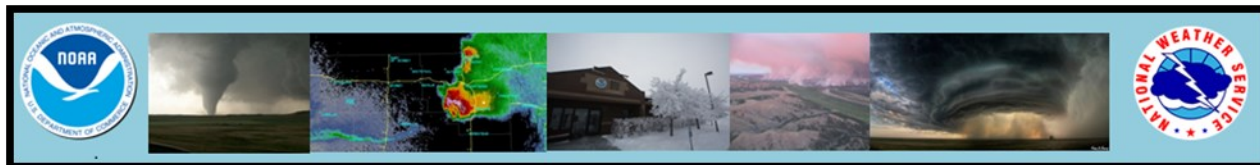


# Under the Big Sky e-Letter

## March 2020



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### Join CoCoRaHS:

NWS Glasgow would like to invite new CoCoRaHS volunteers.



Check out the CoCoRaHS [webpage](#) and tap the join button on the upper right. It is as easy as that!

In the spring and summer convective season, precipitation amounts can be highly variable from community to community (and even from yard to yard!). We want you to help us fill in the gaps and help us to “see” what the radar can’t. Your daily reports help us to see who got heavy rain from that thunderstorm, and who missed out. A number of others use your data as well from those in education, research, and even mosquito control.

This is a great way to make a difference in your community, so if you have an interest in the weather and would like to help, get started today!

### 60 Day Percent of Normal Precipitation (Montana)

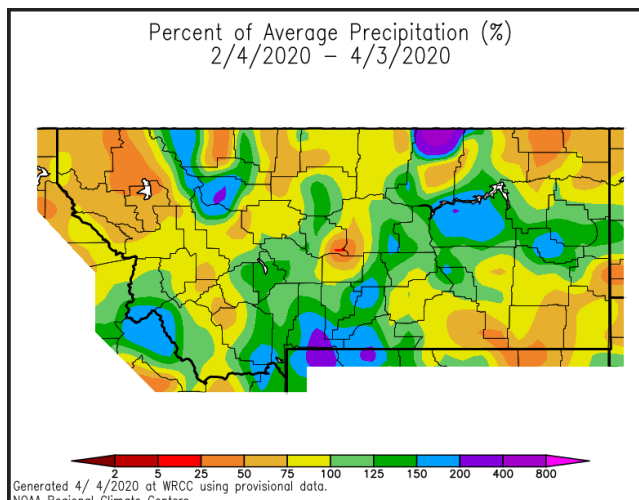


Figure 1: 60-day percent of normal precipitation across Montana.

### 60 Day Temperature Anomalies (Montana)

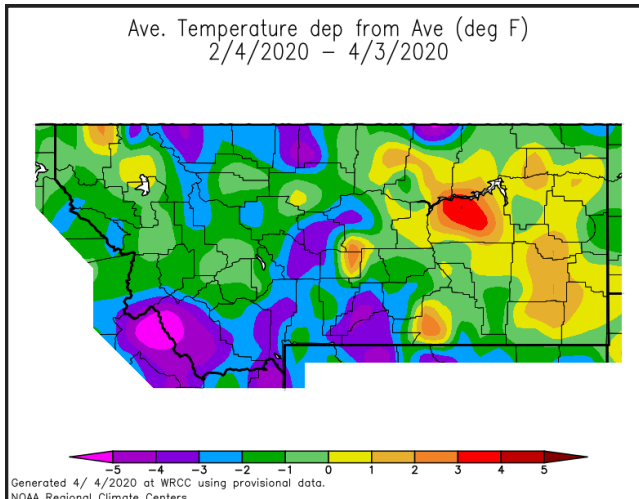


Figure 2: 60-day temperature anomalies across Montana.

**Summary:** Precipitation ranged from near to a little below normal across the state over the last 60 days. A few places such as Northern Phillips and Garfield Counties within NE Montana had above normal precipitation. Temperatures ranged near to above normal across much of eastern Montana. Colder than normal conditions occurred near the Canadian border (notably, N. Phillips County), and southwestern Montana.

## Hydrologic Summary (February 2020) by Greg Forrester, Lead Forecaster at NWS Glasgow:

It was a warmer than normal month over most of Northeast Montana. Temperatures averaged between 1 below and 6 degrees above normal. Glasgow averaged 24.0 degrees which was 4.8 degrees above normal.

Precipitation varied across the region with some locations well below normal and others well above normal for the month. The dry spots were Winnett 6 NNE with 0.06 inch, Medicine Lake with 0.16 inch, and Winnett 12SW and Scobey 4NW with 0.17 inch. The wet spots were Glasgow 46SW with 1.32 inches, Lindsay with 1.22 inches, and Port of Morgan with 1.15 inches.

The Milk, Yellowstone, Missouri, and Poplar Rivers were either frozen or partially frozen during February. Stream flow information was not available for the month.

The Fort Peck Reservoir elevation fell to 2234.9 feet during the month. The reservoir was at 81 percent of capacity and 101 percent of the mean pool.

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## March River Flooding is Ending

Ice break up and snow melt season is ending across NE Montana. The most recent flood warnings for Glasgow and Tampico have been allowed to expire after their recent rises. In fact, while it was close, Glasgow never did quite make it to flood stage officially. Here's a look at the graph.

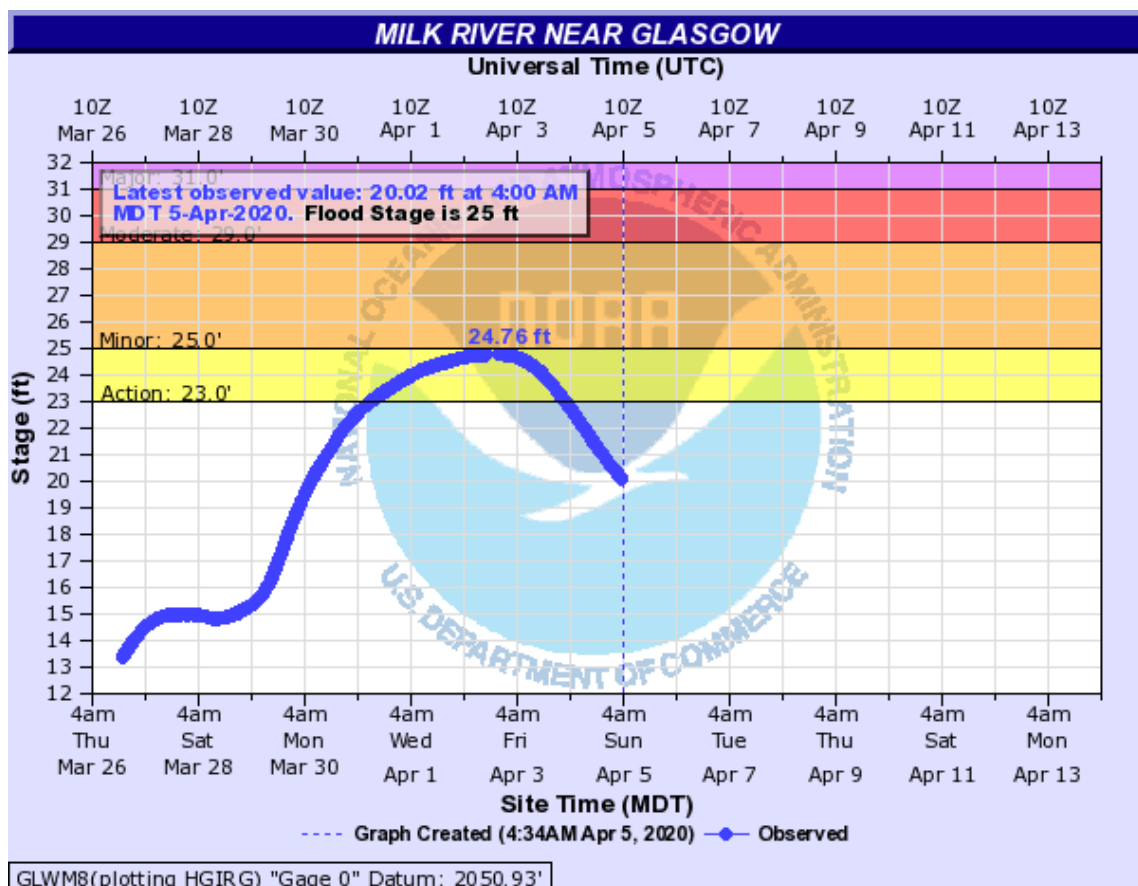


Figure 3: Graphical depiction of the Milk River Near Glasgow. Note that Flood Stage is at 25.0 ft.

**CPC Three Month Outlook:** The Climate Prediction Center released its three month outlook for temperature and precipitation for April 2020 through June 2020 on March 19, 2020. The outlook calls for equal chances for above normal, below normal, or normal temperatures over the three month period for most of central and eastern Montana. Meanwhile, above normal precipitation is favored for the same time frame for all eastern Montana, whereas equal chances for above normal, below normal, or normal precipitation exist for much of the rest of the state. 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.

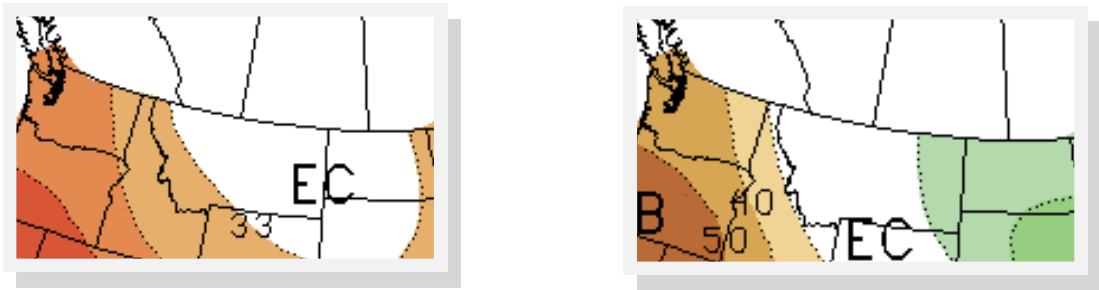


Figure 4: Climate Prediction Center three month temperature (left) and precipitation (right) outlook for April 2020 through June 2020.

**Updated U.S. Drought Monitor:** The [latest U.S. Drought Monitor](#) was released on Thursday April 2, 2020. As of that time, Montana was void of having any drought conditions. That said, spotty abnormally dry conditions were present across portions of the state (see yellow shaded areas on the state graphic below). It is notable that these areas have been expanding in coverage in recent weeks. Moving forward, if the above normal precipitation outlook verifies, Montana should continue

to see a lack of drought conditions over the short and medium term.

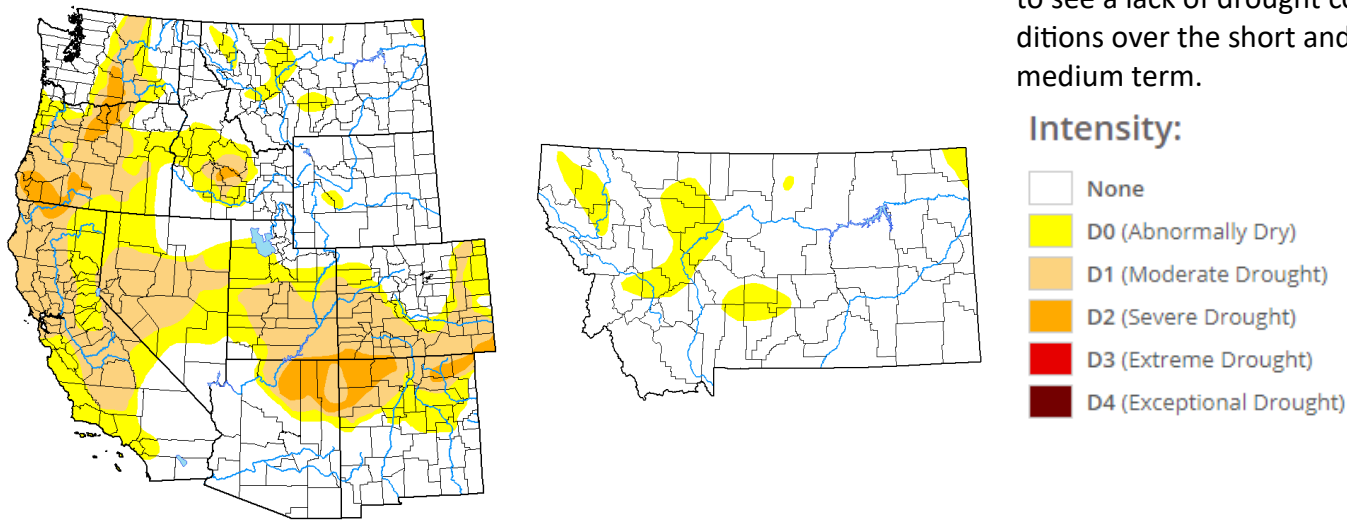


Figure 5: Latest Drought Monitor for the western U.S. (left) and Montana (right) released Thursday April 2, 2020.

**U.S. & Global Climate Highlights (February):** The [U.S.](#) & [Global](#) climate highlights for February 2020 have been released. A few points for you to take home are provided below. March will be available soon!

## U.S. Selected Significant Climate Anomalies and Events for February and Winter 2020

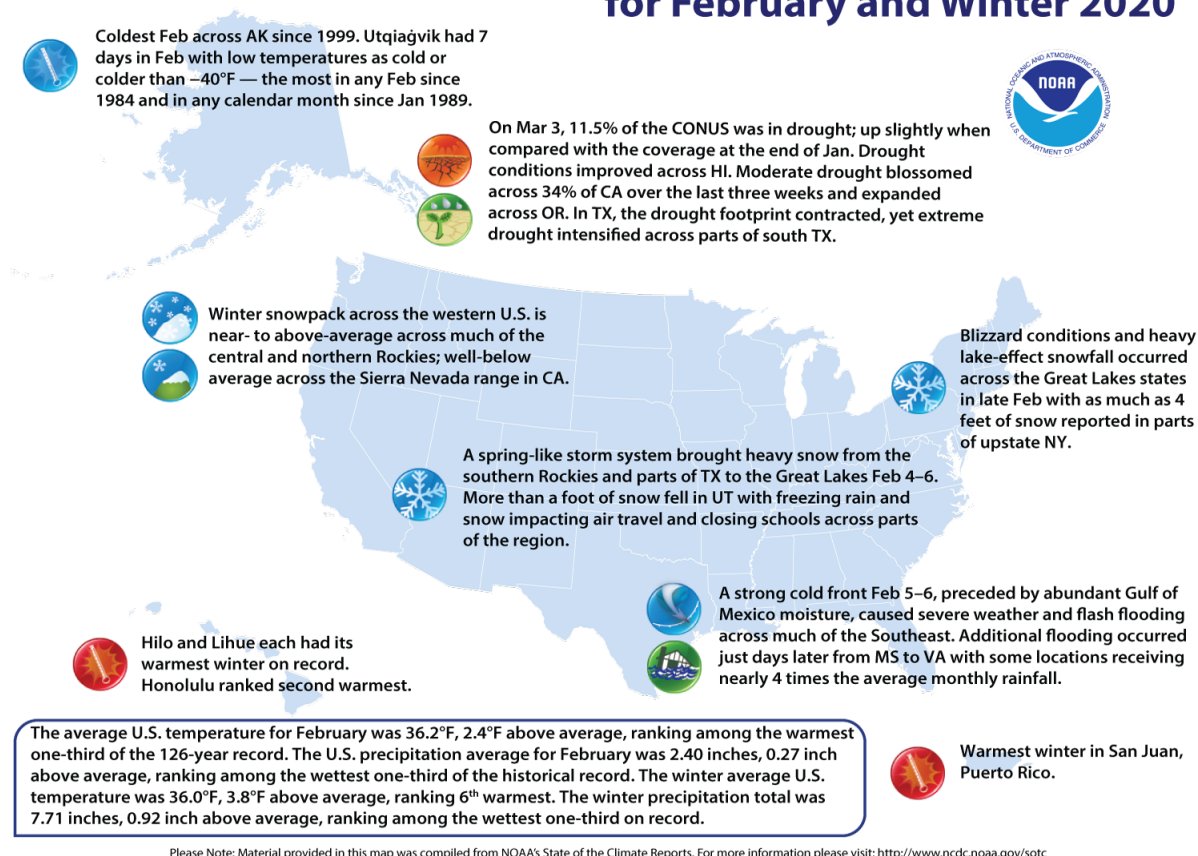


Figure 6: Climate highlights for February and Winter 2020, across the U.S.

### U.S. Highlights for February 2020

- 1) The contiguous U.S. average temperature for February 2020 was  $36.2^{\circ}\text{F}$ , warmest 1/3 on record.
- 2) The average February precipitation total for the contiguous U.S. came in at 2.40 inches. This ranks within the wettest third of the existing period of record (spanning 125 years).
- 3) According to the U.S. Drought Monitor, 12% of the contiguous U.S. was in drought.

### Global Highlights for February 2020

- 1) The February 2020 global land and ocean surface temperature departure from average was the 2nd-warmest on record (topped only by 2016).
- 2) The global land only surface temperature for January 2020 was the highest on record.
- 3) The globally averaged sea surface temperature was the third warmest in the record books.
- 4) This was the 44th consecutive February with temperatures at least marginally higher than the 21st century average. Noteworthy is the fact that the ten warmest Februaries have taken place since 1998.

## Precipitation Data (February 2020):

Station	Precipitation	Location
BAYM8	0.50	Baylor
BRDM8	0.28	Bredette
BTNM8	M	Brockton 17 N
BKNM8	0.51	Brockton 20 S
BKYM8	0.38	Brockway 3 WSW
BRSM8	M	Brusette
CLLM8	0.71	Carlyle 13 NW
CIRM8	0.51	Circle
CHNM8	0.37	Cohagen
COM8	M	Cohagen 22 SE
CNTM8	0.71	Content 3 SSE
CULM8	0.25	Culbertson
DSNM8	0.16	Dodson 11 N
FLTM8	0.21	Flatwillow 4 ENE
FPKM8	0.54	Fort Peck PP
GLAM8	0.55	Glasgow 14 NW
GGWM8	0.52	Glasgow WFO
GGSM8	1.32	Glasgow 46 SW
GNDM8	0.40	Glendive WTP
HRBM8	M	Harb
HINM8	0.97	Hinsdale 4 SW
HNSM8	0.35	Hinsdale 21 SW
HOMM8	0.19	Homestead 5 SE
HOYM8	0.18	Hoyt
JORM8	M	Jordan
LNDM8	1.22	Lindsay
MLAM8	0.35	Malta
MLTM8	0.35	Malta 7 E
MTAM8	0.21	Malta 35 S

Station	Precipitation	Location
MDCM8	0.16	Medicine Lake 3 SE
MLDM8	M	Mildred 5 N
MSBM8	0.37	Mosby 4 ENE
OPNM8	0.36	Opheim 10 N
OPMM8	0.19	Opheim 12 SSE
PTYM8	0.20	Plentywood
PTWM8	0.10	Plentywood 1 NE
POGM8	0.79	Port of Morgan
RAYM8	M	Raymond Border Station
SAOM8	0.45	Saco 1 NNW
SMIM8	0.27	St. Marie
SAVM8	0.50	Savage
SCOM8	0.17	Scobey 4 NW
SDYM8	0.43	Sidney
SIDM8	0.37	Sidney 2S
TERM8	0.80	Terry
TYNM8	M	Terry 21 NNW
VIDM8	0.57	Vida 6 NE
WSBM8	M	Westby
WTRM8	0.60	Whitewater
WHIM8	M	Whitewater 18 NE
WBXM8	0.66	Wibaux 2 E
WTTM8	0.25	Winnett
WNEM8	0.07	Winnett 6 NNE
WNTM8	0.40	Winnett 8 ESE
WITM8	0.17	Winnett 12 SW
WLFM8	0.37	Wolf Point
ZRTM8	1.14	Zortman

## Links You May Like:

[Sea Ice Maximum in 2020 Fails to Impress](#)

[ENSO Update](#)

[Flood & Climate Outlook for the U.S. in 2020](#)

[At Home Science Activities For Families](#)


[Winter & February 2020 2nd Warmest](#)

\*Brad Mickelson, a meteorologist at NWS Glasgow, did a presentation on the NWS Cooperative Observer Program. You can check out the presentation [here](#).

## Monthly Trivia: Last time we asked...

Spring is right around the corner, but before you celebrate, have you reviewed your flood safety plan? Snow-melt, ice jamming, and heavy rainfall in the spring can all cause spring season flooding, which can lead to extreme danger if not prepared. For now, let us just focus on one of these hazards—ice jams. This month we ask: Do you know which state has the highest number of ice jam related deaths in the lower 48 states?

**Answer: Montana.** That's right, Montana is home to the state with the highest number of reported ice jams in the lower 48, as well as the highest number of ice jam related deaths. Additionally, two-thirds of Montana's ice jams occur during the months of February and March. Learn more on ice jams and safety [here](#).

 **New Question:** With winter in the rear-view mirror (hopefully) and summertime thunderstorm season right around the corner, now is a good time to review your [thunderstorm](#) (and [lightning](#)) safety information. As always we'll help you stay ahead of any watches and warnings that come, but now is a good time to be prepared.

That brings us to this month's trivia question. All thunderstorms (severe or not) produce dangerous lightning. It's perhaps not surprising that lightning is also hot—very hot in fact. This month we ask: What's the temperature of lightning? We'll share the answer to this fun trivia question in the next newsletter.

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**New Staff Alert:** A new meteorologist has just arrived to Glasgow, MT by the name of Ryan Bernhart. He is anxiously getting started on training and will get to experience his first severe weather season in Northeast Montana this year. We all welcome him very much as part of the team!

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### March 2020 Climate Graphs for Glasgow, MT

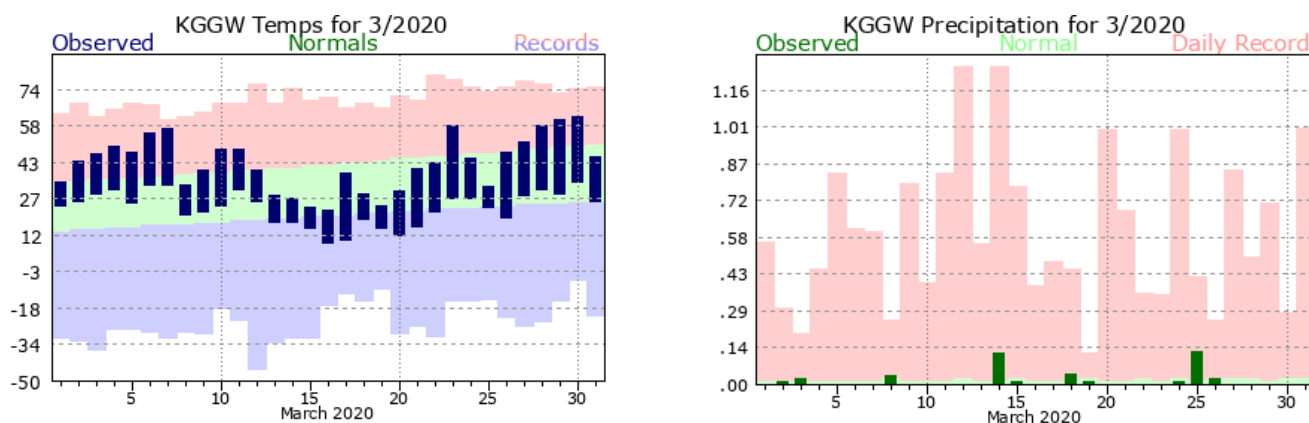


Figure 7: Climate graphs for Glasgow, MT in March 2020: Temperature (left) and precipitation (right).

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