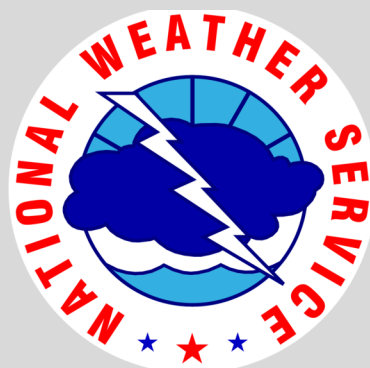


Under the Big Sky
e-Letter
January – March
2024

National Weather Service
Glasgow, MT



Photo Credit: Ben Stoinski Meteorologist at NWS Glasgow.



A Peak Inside:

- **2023 in Review/Skywarn 2024...Page 1**
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- **Hydro Summary...Pages 3**
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National Weather Service

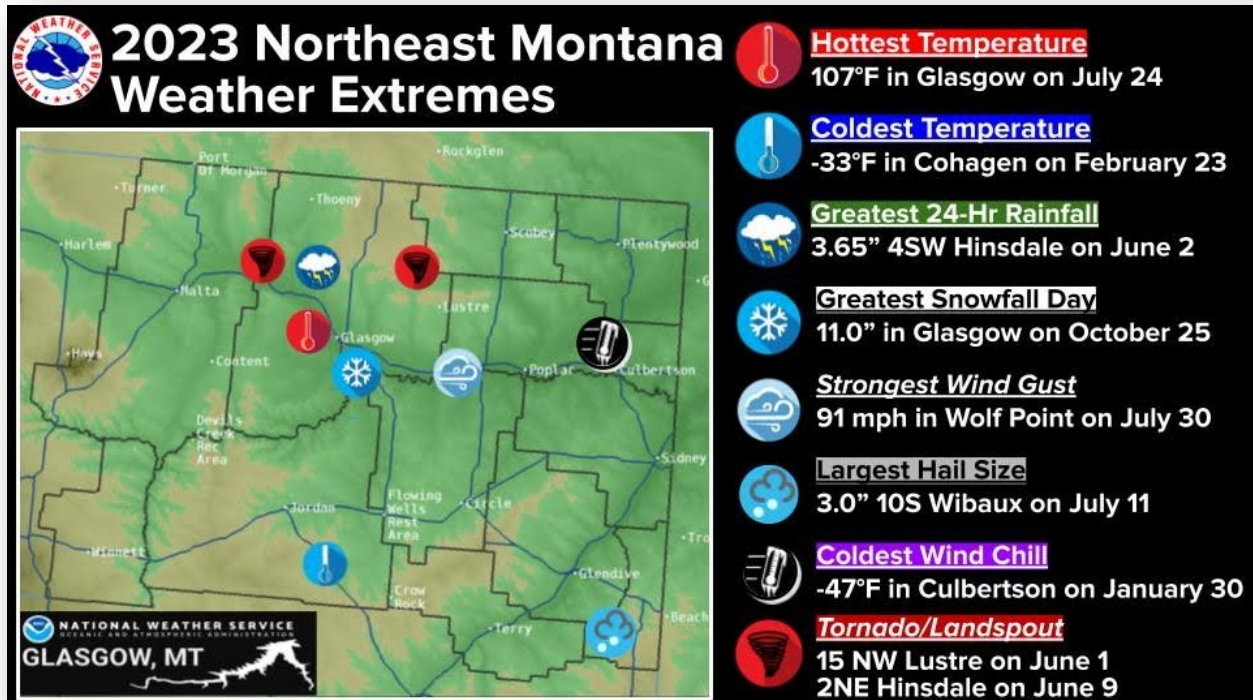
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Glasgow, MT



2023 Northeast Montana Summary

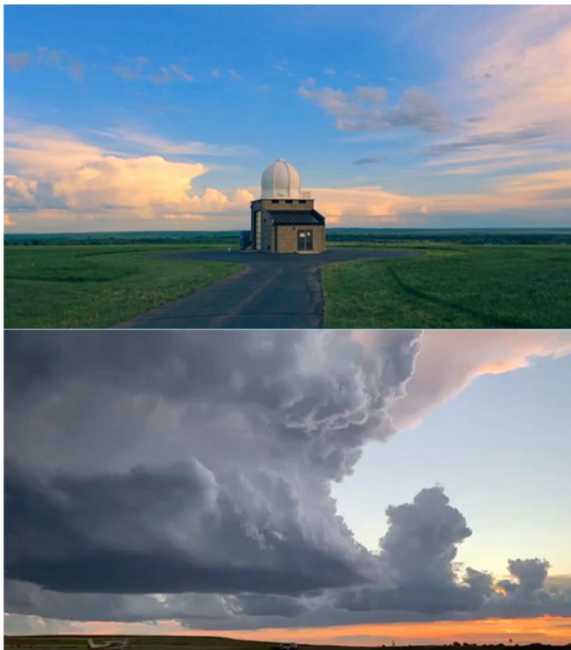
Graphic created by Angel Enriquez, Meteorologist at NWS Glasgow

For this first newsletter of 2024, we wanted to offer a look back at 2023 across NE Montana. Angel Enriquez, a meteorologist at NWS Glasgow, put together the graph below highlighting some of the extreme weather events that took place last year.



2024 SKYWARN Training Schedule

Are you interested in becoming a SKYWARN spotter this year for NWS Glasgow? All are welcome to attend one of the training sessions featured below to learn more about the spotter program. Before you know it, you too can send us your very own severe weather reports!



Coming to a location near you...

National Weather Service Glasgow presents...

SKYWARN Spotter Talks – a night to learn about weather safety, become a SKYWARN spotter, and share your experiences with us!

Spotter Talk Locations/Times

- Sidney – April 1st, 6 PM
 - 1105 3rd ST NW, Sidney, MT - Sidney Fire Station
- Glendive – April 3rd, 6 PM
 - 207 W Bell Dawson County Courthouse - Community Room
- Malta – April 4th, 6 PM
 - 10 ½ S 4th St. E - Library Basement Meeting Room
- Plentywood – April 8th, 6 PM
 - 100 W. Laurel Ave. - Jubilee Room
- Glasgow – May 2nd, 6 PM
 - 501 E Court St. - Valley County Courthouse

Contact Info

Phone: 406-228-4042

Email: scott.rozanski@noaa.gov

National Weather Service
Glasgow, MT



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, those in academia, etc.

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 gauge to get started!

2024 Training: We will be doing a warm season training this spring for anyone interested in joining CoCoRaHS. This will also help serve as refresher training for any current observers interested in taking the training. We'll be reviewing what the CoCoRaHS program is, what you need to get started, as well as how to take rainfall measurements, how to report hail, and much more. Keep watch on the NWS Glasgow social media pages and this newsletter for the exact date and details to come.

Need a refresher

now?: The [CoCoRaHS webpage](#) has a number of available slide presentations that you can check out to learn more about these topics!



Become a CoCoRaHS observer and [join](#) today! Just fill out the electronic form and the CoCoRaHS Coordinator from NWS Glasgow will follow up with you to help you get underway.

Percent of Normal Precipitation (Montana)

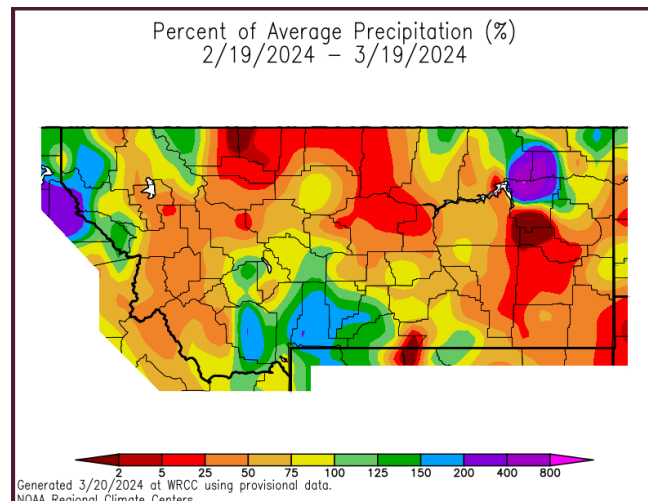


Figure 1: 30-day percent of normal precipitation across Montana.

Avg. Temp Departure from Normal (Montana)

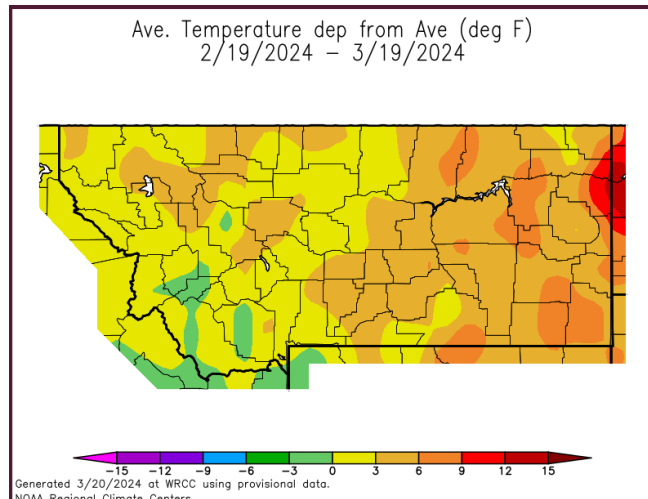


Figure 2: 30-day temperature anomalies across Montana.

Summary: Over the recent 30 day period since the middle of February, much of Montana has trended drier than normal and warmer than normal overall. Undoubtedly, this has been largely influenced by the El Niño pattern this winter season. A transition to ENSO neutral is favored this spring (83% probability) with La Niña expected to develop this summer (62 percent chance).

Hydrologic Summary for February 2024, By Greg Forrester, Lead Forecaster at NWS Glasgow:

February was a warm month with a mix of above and below normal precipitation. Temperatures were 5 degrees to 11 degrees above normal. Glasgow averaged 28.5 degrees which was 9.8 degrees above normal.

Precipitation amounts during February were variable across the region. The wet spots were Carlyle with 1.02 inches, Glasgow 46SW with 1.01 inches, and Mildred 7NNW with 0.99 inch. The dry spots were Winnett 6NNE with 0.10 inch, Terry with 0.15 inch, and Raymond with 0.17 inch. Glasgow received 0.66 inches which was 189 percent of normal.

The dry weather in the northeast corner of the state allowed drought to reappear. Northern Valley, Sheridan, and Daniels Counties are now in moderate drought as of the end of February.

Streamflow on the Missouri, Milk, Yellowstone, and Poplar Rivers was not available due to the rivers being frozen for the entire month.

The Fort Peck Reservoir elevation rose to 2230.4 feet during the month. The reservoir was at 76 percent of capacity and 95 percent of the mean pool.

CPC Outlook:

The Climate Prediction Center released its latest three month outlook for temperature and precipitation for March to May 2024 on February 15, 2024. The outlook provides a look at what this spring is likely to shape up offering as a whole. Currently, Montana is favored to see warmer than average conditions over the three month period. That does not mean, however, that there can't be exceptions at times. Meanwhile, western parts of the state are expected to stay drier than average this spring, but central and eastern Montana have equal chances for normal, below normal, or above normal precipitation.

The latest outlook 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.

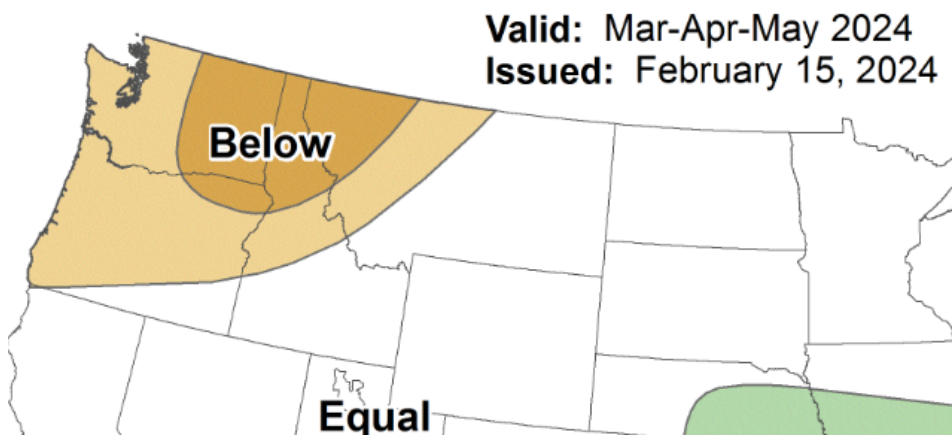
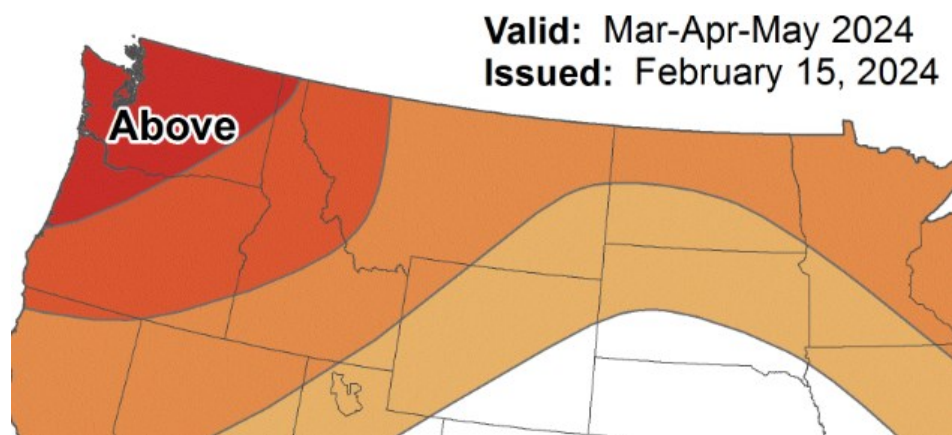


Figure 3: Climate Prediction Center three month outlook for temperature (top) and precipitation (bottom) for March-May 2024, Issued February 15, 2024.

U.S. Drought Monitor:

The latest U.S. Drought Monitor was released on Thursday March 28, 2024. Much of Montana has been on the drier side, leading to increasing drought concerns as of late. Far northeastern parts of the state are in moderate drought. Much of southern and western Montana are in moderate to severe drought. There are isolated areas in western parts of the state that have extreme drought conditions as of the latest drought monitor update.

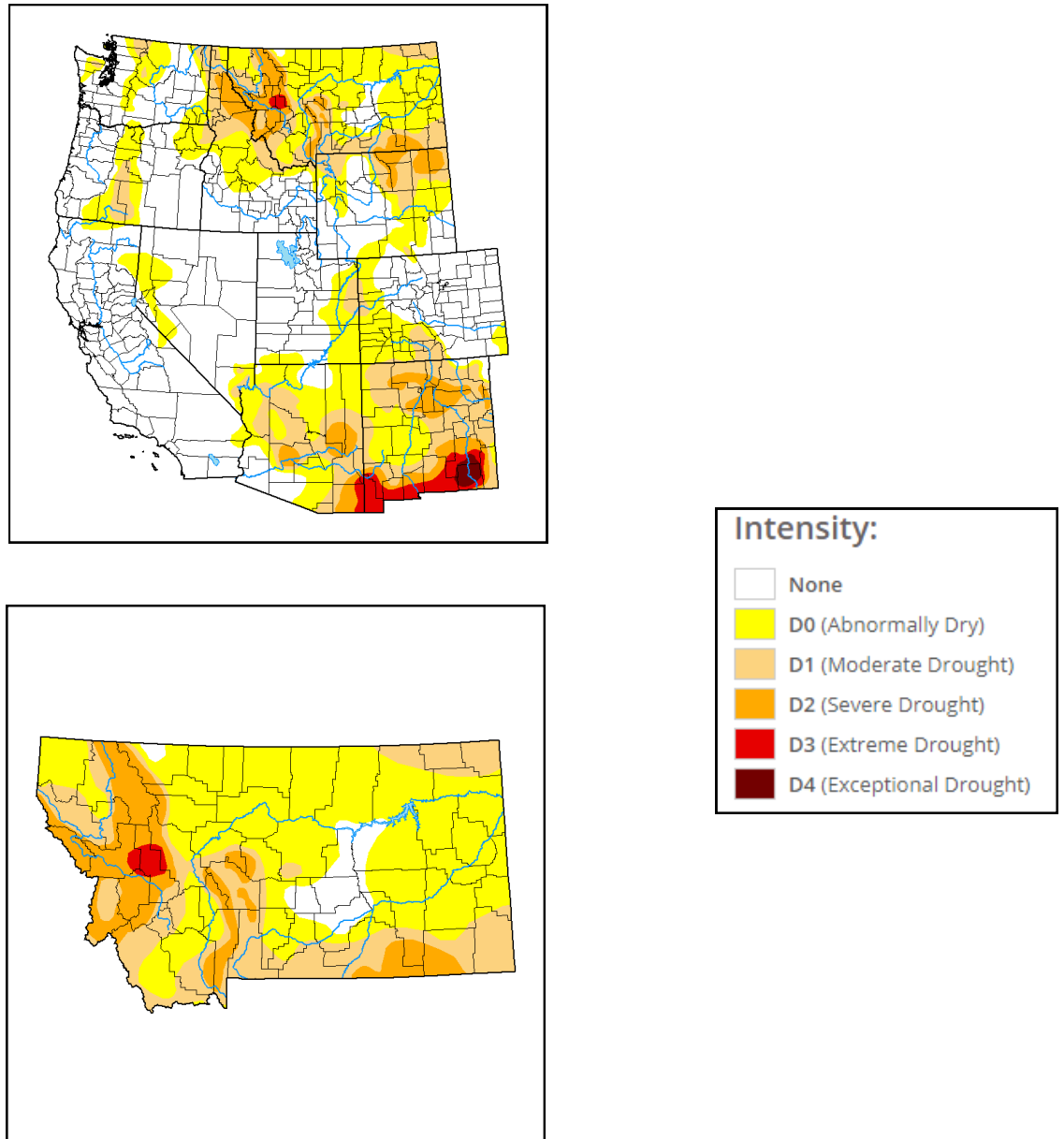


Figure 4: U.S. Drought Monitor updated March 28, 2024.

U.S. & Global Climate Highlights (February): The [U.S.](#) & [Global](#) climate highlights for February 2024 have been released, the latest month for which data was available. A few points for you to take home are provided below.

U.S. Selected Significant Climate Anomalies and Events February and Winter 2024

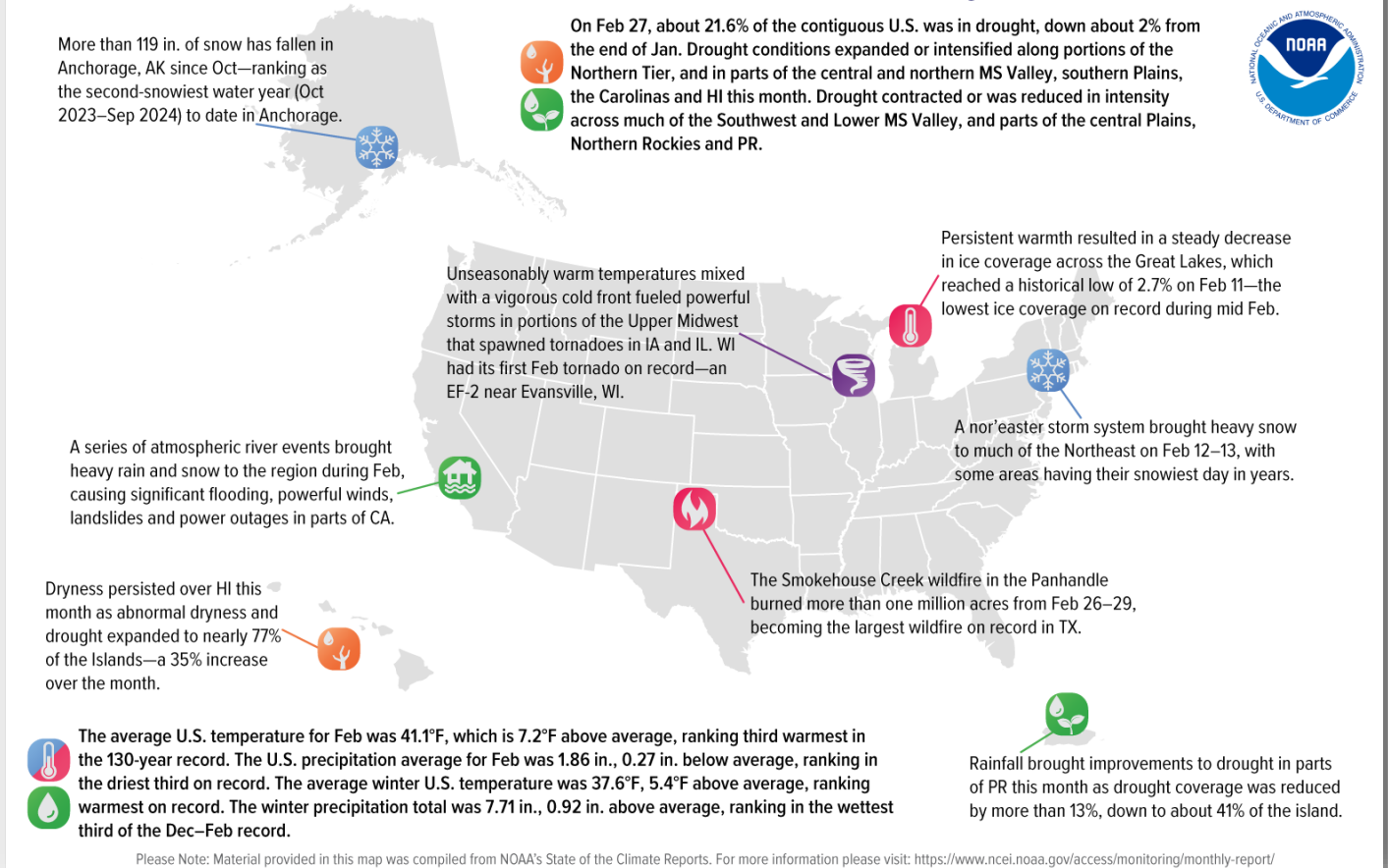


Figure 5: Significant Climate anomalies and events for February and Winter 2024.

U.S. Highlights for February 2024

- 1) The contiguous U.S. average temperature for February 2024 was 41.1 °F, ranking as the 3rd warmest on record.
- 2) The average February precipitation was 1.86 inches, ranking within the driest third on record.

Global Highlights for February 2024

- 1) The February 2024 average global surface temperature was the highest for February since records began in 1850
- 2) El Niño conditions continued during the month of February with an 83 percent probability for ENSO neutral conditions to develop in April-June 2024.

Cold Advisory for Newborn Livestock

- ◆ Late winter and early spring can be a time for weather extremes. Cold, wet, and windy conditions can cause stress on young livestock. The National Weather Service in Glasgow, MT has a Cold Advisory for Newborn Livestock (CANL) that you can use when such impacts might be expected. You can find the latest forecasts and read more about the criteria and the background for how this product was established on our [webpage](#).

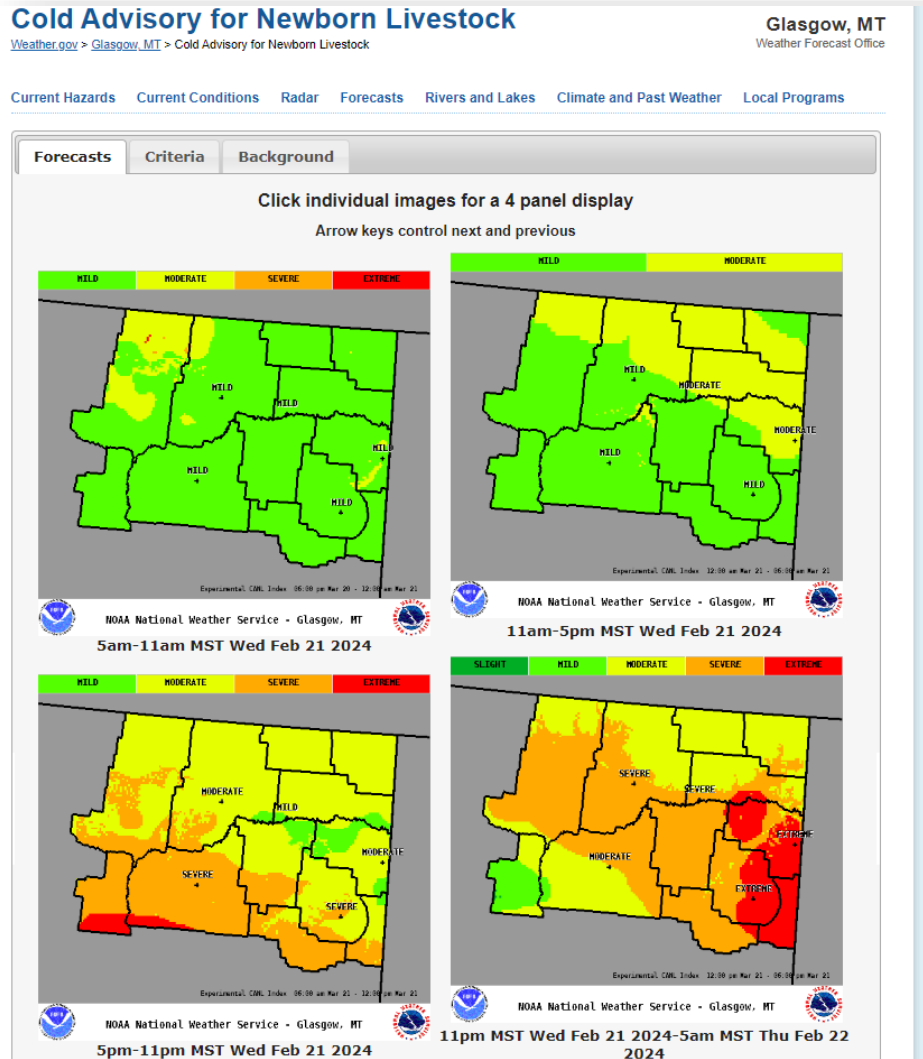


Figure 6: Image is a screenshot of a sample of the Cold Advisory for Newborn Livestock (CANL) product from the National Weather Service Glasgow, MT webpage.

Links You May Like:

[February ENSO Update](#)

[Warmest Since 1850](#)

[Air Pollution and Weather & Climate](#)

[IMETS Ready for Wildfire Season](#)

COOP Precipitation Totals for February 2024 (Preliminary)

Station	Precipitation	Location
BAYM8	0.50	Baylor
BRDM8	0.42	Bredette
BTNM8	M	Brockton 17 N
BKNM8	0.39	Brockton 20 S
BKYM8	0.67	Brockway 3 WSW
BRSM8	M	Brusette
CLLM8	1.02	Carlyle 13 NW
CIRM8	0.63	Circle
CHNM8	0.35	Cohagen
COM8	M	Cohagen 22 SE
CNTM8	0.46	Content 3 SSE
CULM8	0.26	Culbertson
DSNM8	0.75	Dodson 11 N
FLTM8	0.87	Flatwillow 4 ENE
FPKM8	0.50	Fort Peck PP
GLAM8	0.59	Glasgow 14 NW
GGWM8	0.66	Glasgow WFO
GGSM8	1.01	Glasgow 46 SW
GNDM8	0.59	Glendive WTP
HRBM8	M	Harb
HINM8	0.42	Hinsdale 4 SW
HNSM8	0.47	Hinsdale 21 SW
HOMM8	0.38	Homestead 5 SE
HOYM8	0.19	Hoyt
JORM8	M	Jordan
LNDM8	0.36	Lindsay
MLAM8	0.53	Malta
MLTM8	0.57	Malta 7 E
MTAM8	M	Malta 35 S

Station	Precipitation	Location
MDCM8	0.40	Medicine Lake 3 SE
MLDM8	0.99	Mildred 5 N
MSBM8	M	Mosby 4 ENE
OPNM8	M	Opheim 10 N
OPMM8	M	Opheim 12 SSE
PTYM8	M	Plentywood
PTWM8	M	Plentywood 1 NE
POGM8	0.27	Port of Morgan
RAYM8	0.31	Raymond Border Station
SAOM8	0.62	Saco 1 NNW
SMIM8	0.42	St. Marie
SAVM8	M	Savage
SCOM8	0.55	Scobey 4 NW
SDYM8	0.35	Sidney
SIDM8	0.22	Sidney 2S
TERM8	1.01	Terry
TYNM8	M	Terry 21 NNW
VIDM8	M	Vida 6 NE
WSBM8	0.18	Westby
WTRM8	0.64	Whitewater
WHIM8	M	Whitewater 18 NE
WBXM8	M	Wibaux 2 E
WTTM8	0.54	Winnett
WNEM8	0.12	Winnett 6 NNE
WNTM8	0.70	Winnett 8 ESE
WITM8	M	Winnett 12 SW
WLFM8	0.63	Wolf Point
ZRTM8	0.77	Zortman

Monthly Trivia:

Last time we asked...

Why is snow white? We'll have an in-depth look at the science here in the next newsletter!

Answer: The truth is that snow crystals are in fact translucent, not white. The infographic below details the explanation though as to why it appears white to us.



Figure 7: NWS Info graphic explaining why snow “appears” white.

? **New Question:** We are turning the corner by leaving the winter season in the rear view mirror and welcoming the new spring season. However, with it, will come new weather hazards. One of these is the potential for flooding. Flooding can be caused by ice jams, snow melt, or even early season springtime thunderstorms that train over the same area or simply move very slowly. This leads us to our current trivia question. Moving flood waters can knock you off your feet and carry you away. Just how deep does the water have to be to knock you over? We'll explore the answer to this as well as review important flood safety information in our next newsletter!

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

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