

Under the Big Sky

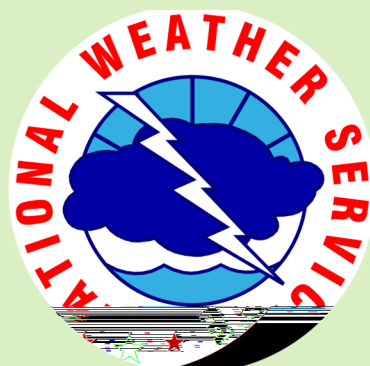
e-Letter

May 2022



Photo Credit: Ryan Bernhart at Porcupine Creek Canyon north of Nashua, MT.

National Weather Service
Glasgow, MT



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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, 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!

Stay alert for updates on our Spring CoCoRaHS Training in the near future! We will be focusing on warm season reporting where you'll learn how to submit rain and hail reports.

Percent of Normal Precipitation (Montana)

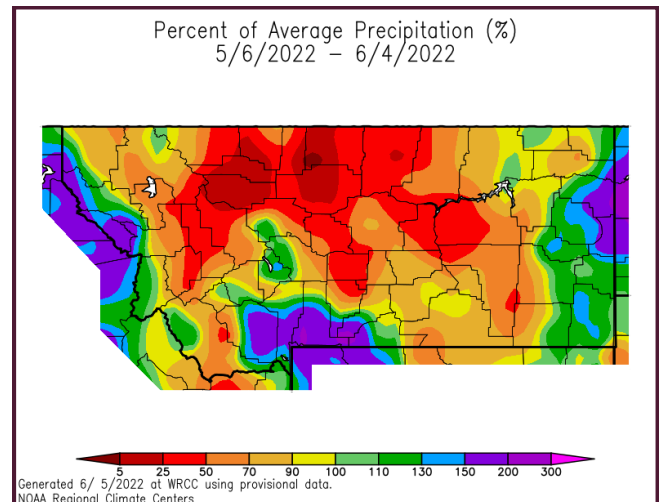


Figure 1: 30-day percent of normal precipitation across Montana.

Avg. Temp Departure from Normal (Montana)

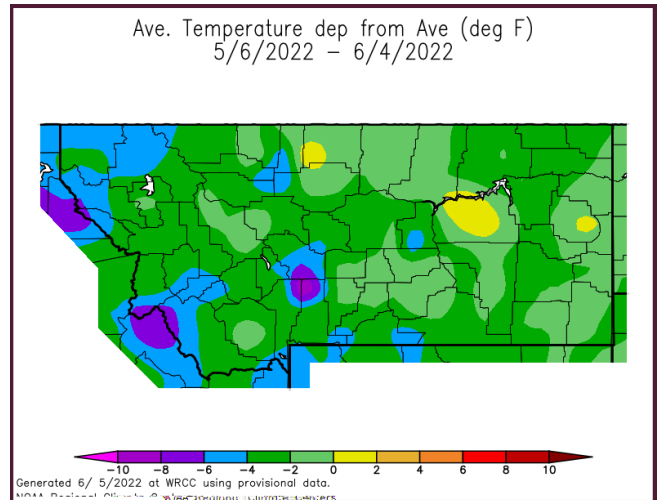


Figure 2: 30-day temperature anomalies across Montana.

Summary: The last 30 days brought below normal temperatures across the state of Montana, in general. Meanwhile, precipitation trended below normal for much of the middle two-thirds of the state with only patchy spots across western, southern, and northeastern Montana seeing near to slightly above normal precipitation.

Hydrologic Summary for April 2022, By Greg Forrester, Lead Forecaster at NWS Glasgow:

It was a wet month for areas near and south of the Missouri River in Northeast Montana. The wet spots for the month were Carlyle 13NW with 3.97 inches, Savage with 3.35 inches, and Glasgow 46SW with 2.85 inches. Some areas north of the Missouri River missed out on the larger rain and snow events that moved across the region in April. The dry spots were Whitewater with 0.16 inch, Wolf Point with 0.26 inch, and Malta 7E with 0.38 inch. Glasgow received 0.94 inch which was 93 percent of normal. Temperatures varied from 3 to 7 degrees below normal across the region. Glasgow averaged 39.8 degrees which was 5.0 degrees below normal.

The wet weather allowed for some improvement in the drought from extreme to severe across the area.

The Milk, Poplar, Yellowstone, and Missouri Rivers had below normal streamflow for the entire month. The Fort Peck Reservoir elevation remained steady at 2222.6 feet during the month. The reservoir was at 68 percent of capacity and 85 percent of the mean pool.

CPC Outlook:

The Climate Prediction Center released its latest one month outlook for temperature and precipitation for June on May 31, 2022. The three month outlook was issued on May 19, 2022 for the months of June through August 2022. The outlook shows June as being favored for cooler than normal across Montana and wetter than normal across central and Western Montana. Equal chances exist for below normal, normal, or above normal precipitation in June. The three month outlook shows that above normal temperatures are expected June through August over much of Montana, though equal chances for below normal, normal, or above normal exist across portions of North Central and far Northeast portions of the state. Meanwhile, precipitation is largely expected to trend below the average for all of Montana this summer. Although the three months overall may trend drier, as indicated by the June outlook, that does not mean there won't be wetter or more normal periods at times as suggested by the June outlook. 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.

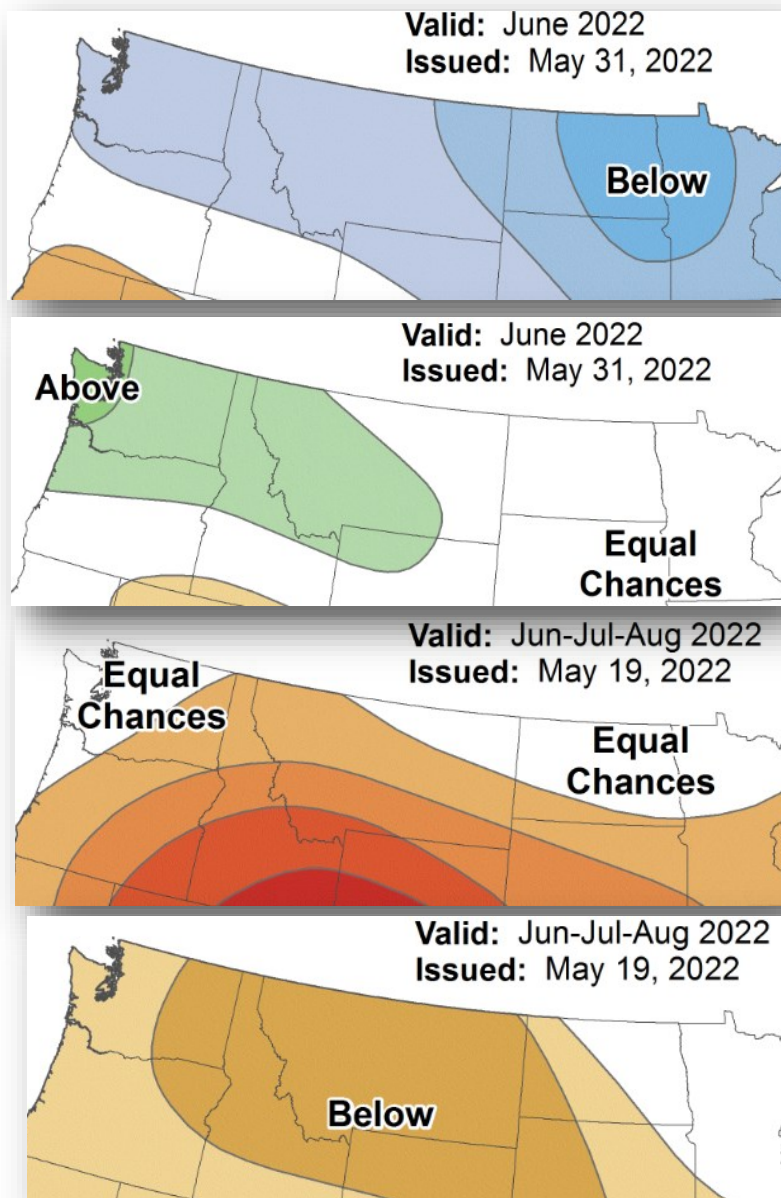


Figure 3: Climate Prediction Center one month temperature and precipitation outlook for June 2022 (top two images) and three month temperature and precipitation outlook for June through August 2022 (bottom two images).

U.S. Drought Monitor:

The latest U.S. Drought Monitor was released on Thursday June 2, 2022. Drought continues to impact large portions of Montana. While recent precipitation has led to short term relief across eastern Montana, they largely remain in moderate to severe drought. Across North Central Montana, extreme drought conditions persist, and this extends across the Little Rockies of NE Montana. This outlook is updated each Thursday. Please feel free to check out the latest [here](#).

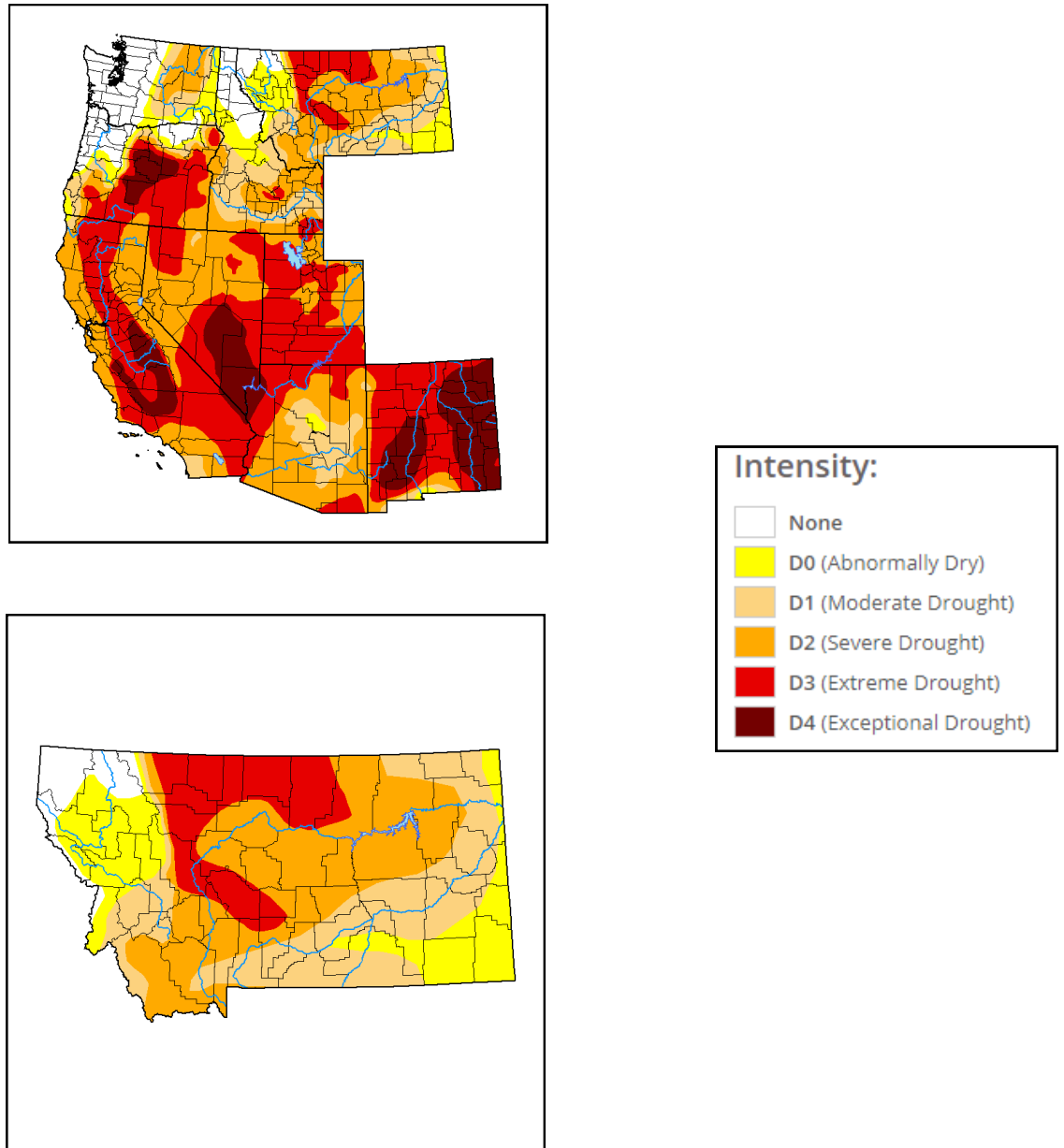


Figure 4: U.S. Drought Monitor updated June 2, 2022.

U.S. & Global Climate Highlights (March): The [U.S.](#) & [Global](#) climate highlights for April 2022 have been released, the latest month for which data was available. A few points for you to take home are provided below.

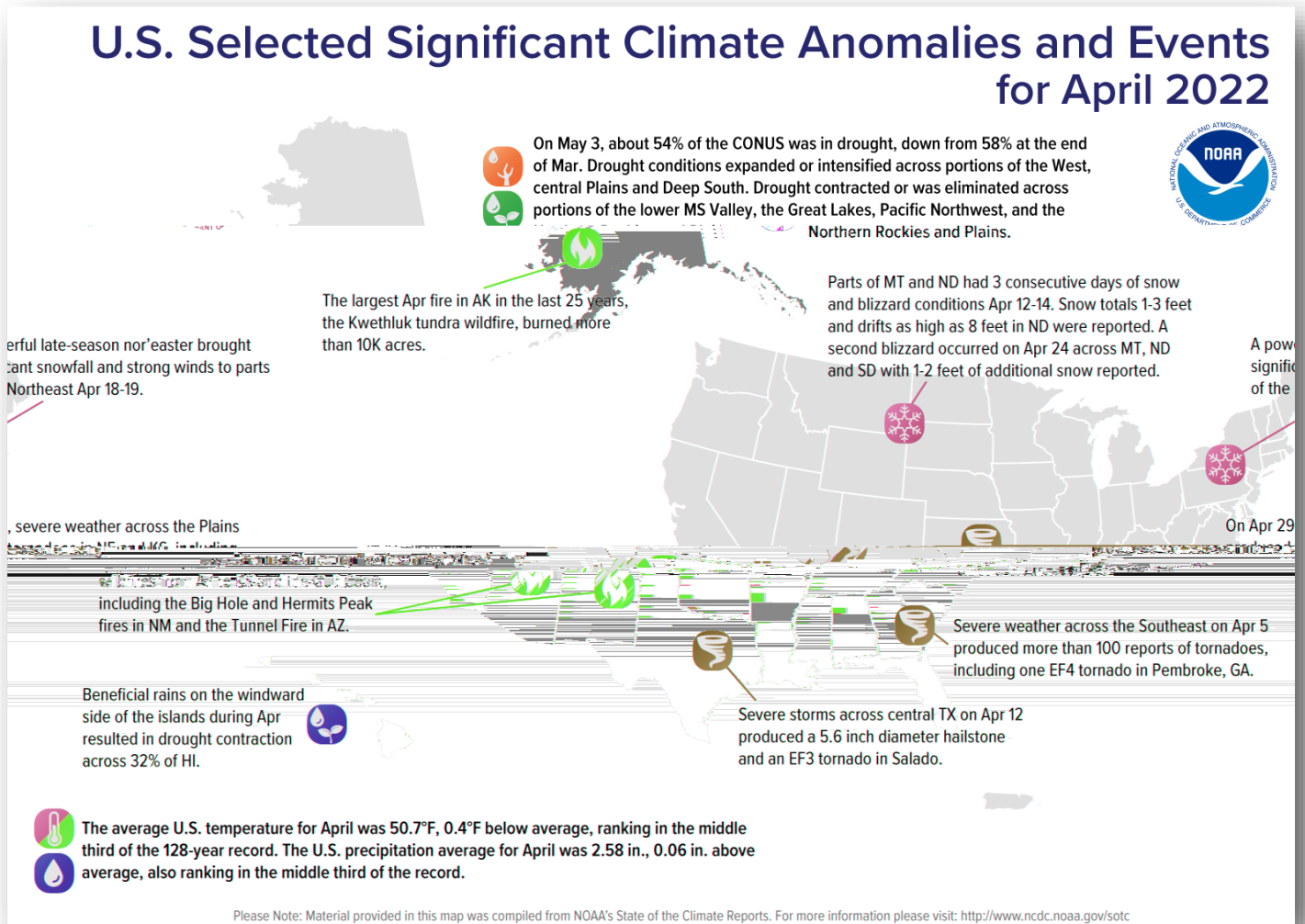


Figure 5: Significant Climate anomalies and events in April 2022

U.S. Highlights for April 2022

- 1) The contiguous U.S. average temperature for April 2022 was 50.7 °F, ranking in the middle third on record.
- 2) The average April precipitation total for the contiguous U.S. came in at 2.58 inches, also within the middle third of the period of record.

Global Highlights for April 2022

- 1) The April 2022 global surface temperature came in tying with the fifth highest for April on record.
- 2) The 10 warmest Aprils ever have all taken place since 2010 and this is the 46th consecutive April and 448th consecutive month with temperatures above the 20th century average.
- 3) Precipitation anomalies varied considerably around the world in April 2022, which is fairly typical.

Warm Season Boating Safety Reminders on Fort Peck Lake

- ◆ Summer is near, and we wanted to continue reminding you to keep [boating safety](#) in mind before you head out on the lake this season. You can always get the latest forecast [here](#).

Weather-Ready for Boating?

Strong Winds
Dangerous wind can arrive well before the rain.
Reduce speed and head to shore if alerted to high wind.
Always wear a life jacket when on a boat.

Lightning
If you hear thunder or see lightning, it's time to
stay in the cabin or head to shore.

Fog
If fog forms, slow down and turn on your lights.
Listen for other boats around you or check radar.

weather.gov NOAA

Figure 6: NOAA Safety graphic for weather-ready boating.

Links You May Like:

[ENSO Update](#)

[Prediction of Western U.S. Wildfires](#)

[NOAA Atlantic Hurricane Season Prediction for 2022](#)

[NOAA Wind Forecasts Save \\$150m/Year](#)

[Decline in Arctic Sea Ice](#)

[Flash Flooding to Increase for most of U.S.](#)

[CO2 50% Above Pre-Industrial Levels](#)

COOP 2021 Precipitation Totals for April 2022 (Preliminary)

Station	Precipitation	Location
BAYM8	1.24	Baylor
BRDM8	1.12	Bredette
BTNM8	M	Brockton 17 N
BKNM8	1.85	Brockton 20 S
BKYM8	1.17	Brockway 3 WSW
BRSM8	0.81	Brusette
CLLM8	3.97	Carlyle 13 NW
CIRM8	1.44	Circle
CHNM8	1.04	Cohagen
COM8	1.53	Cohagen 22 SE
CNTM8	0.77	Content 3 SSE
CULM8	1.72	Culbertson
DSNM8	0.44	Dodson 11 N
FLTM8	2.22	Flatwillow 4 ENE
FPKM8	0.99	Fort Peck PP
GLAM8	0.72	Glasgow 14 NW
GGWM8	0.94	Glasgow WFO
GGSM8	2.85	Glasgow 46 SW
GNDM8	2.68	Glendive WTP
HRBM8	M	Harb
HINM8	0.73	Hinsdale 4 SW
HNSM8	0.86	Hinsdale 21 SW
HOMM8	0.49	Homestead 5 SE
HOYM8	1.39	Hoyt
JORM8	M	Jordan
LNDM8	2.03	Lindsay
MLAM8	0.45	Malta
MLTM8	0.38	Malta 7 E
MTAM8	M	Malta 35 S

Station	Precipitation	Location
MDCM8	1.27	Medicine Lake 3 SE
MLDM8	1.87	Mildred 5 N
MSBM8	2.14	Mosby 4 ENE
OPNM8	M	Opheim 10 N
OPMM8	0.48	Opheim 12 SSE
PTYM8	1.65	Plentywood
PTWM8	0.37	Plentywood 1 NE
POGM8	0.45	Port of Morgan
RAYM8	M	Raymond Border Station
SAOM8	0.66	Saco 1 NNW
SMIM8	0.46	St. Marie
SAVM8	3.55	Savage
SCOM8	0.29	Scobey 4 NW
SDYM8	2.80	Sidney
SIDM8	2.29	Sidney 2S
TERM8	1.81	Terry
TYNM8	M	Terry 21 NNW
VIDM8	M	Vida 6 NE
WSBM8	M	Westby
WTRM8	0.16	Whitewater
WHIM8	M	Whitewater 18 NE
WBXM8	M	Wibaux 2 E
WTTM8	M	Winnett
WNEM8	0.82	Winnett 6 NNE
WNTM8	2.16	Winnett 8 ESE
WITM8	1.80	Winnett 12 SW
WLFM8	0.26	Wolf Point
ZRTM8	2.14	Zortman

COOP 2021 Precipitation Totals for May 2022 (Preliminary)

Station	Precipitation	Location
BAYM8		Baylor
BRDM8		Bredette
BTNM8		Brockton 17 N
BKNM8	3.42	Brockton 20 S
BKYM8	1.88	Brockway 3 WSW
BRSM8		Brusette
CLLM8		Carlyle 13 NW
CIRM8	2.49	Circle
CHNM8		Cohagen
COM8		Cohagen 22 SE
CNTM8		Content 3 SSE
CULM8	2.70	Culbertson
DSNM8		Dodson 11 N
FLTM8	1.92	Flatwillow 4 ENE
FPKM8	2.92	Fort Peck PP
GLAM8	1.48	Glasgow 14 NW
GGWM8	2.11	Glasgow WFO
GGSM8		Glasgow 46 SW
GNDM8	3.28	Glendive WTP
HRBM8		Harb
HINM8		Hinsdale 4 SW
HNSM8		Hinsdale 21 SW
HOMM8	2.12	Homestead 5 SE
HOYM8	3.34	Hoyt
JORM8		Jordan
LNDM8	3.56	Lindsay
MLAM8	1.03	Malta
MLTM8		Malta 7 E
MTAM8		Malta 35 S

Station	Precipitation	Location
MDCM8		Medicine Lake 3 SE
MLDM8	3.08	Mildred 5 N
MSBM8		Mosby 4 ENE
OPNM8		Opheim 10 N
OPMM8		Opheim 12 SSE
PTYM8		Plentywood
PTWM8		Plentywood 1 NE
POGM8	1.12	Port of Morgan
RAYM8		Raymond Border Station
SAOM8	1.48	Saco 1 NNW
SMIM8	2.18	St. Marie
SAVM8		Savage
SCOM8		Scobey 4 NW
SDYM8		Sidney
SIDM8		Sidney 2S
TERM8		Terry
TYNM8	3.65	Terry 21 NNW
VIDM8		Vida 6 NE
WSBM8		Westby
WTRM8		Whitewater
WHIM8		Whitewater 18 NE
WBXM8		Wibaux 2 E
WTTM8		Winnett
WNEM8		Winnett 6 NNE
WNTM8		Winnett 8 ESE
WITM8		Winnett 12 SW
WLFM8	2.05	Wolf Point
ZRTM8	1.99	Zortman

Monthly Trivia:

Last time we asked...

Summer isn't all just about fun in the sun. It's important to remember: when thunder roars, go indoors! Some of those storms turn severe, and NWS Glasgow is ready to help you stay safe from lightning, large hail, damaging winds, and flash flooding with updated forecasts, and information on watches and warnings. Our trivia this month involves a refresher about our last severe weather season: In 2021, what was the largest hail stone diameter reported from a spotter or observer in NE Montana?



Answer: In 2021, a 4.0" diameter hail stone was reported on June 8th located at 9 miles east of Glendive.



New Question: Nowadays, there's a heavier emphasis by the National Weather Service and its products in using ensemble guidance and probabilistic forecasting rather than the legacy deterministic forecasting. This month, we ask: What is the difference between a probabilistic forecast, and a deterministic forecast? We'll have a comprehensive look at this in the next newsletter!

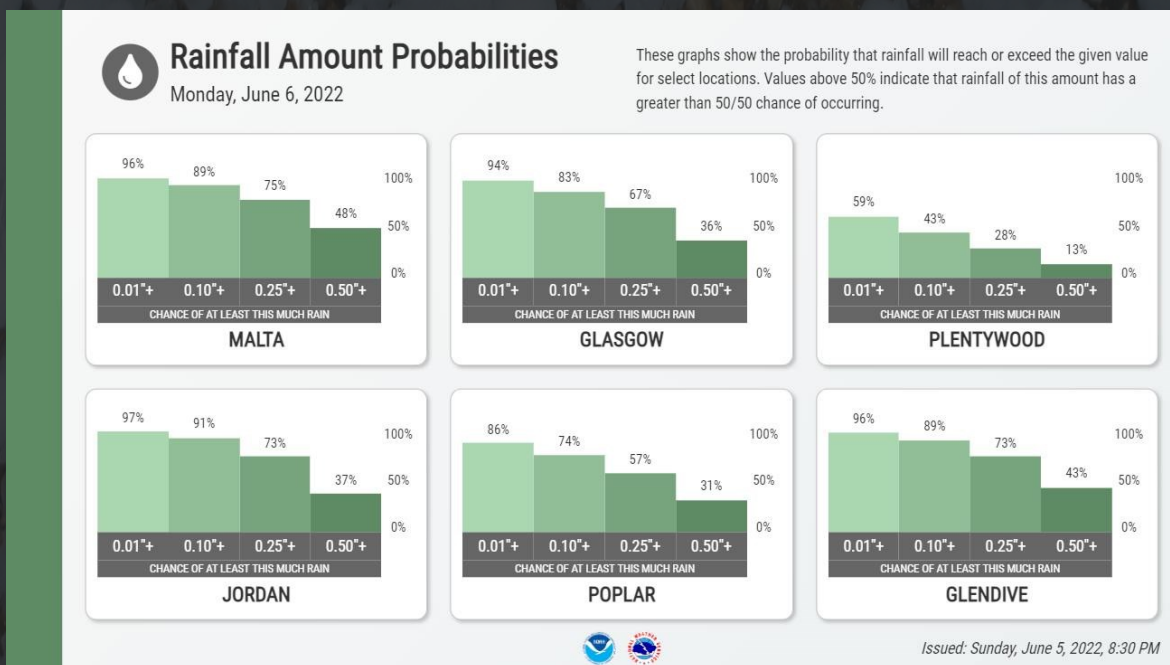


Figure 7: Example of probabilistic forecast graphics shared on social media by NWS Glasgow.

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[Facebook.com/NWSGlasgow](https://www.facebook.com/NWSGlasgow)

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

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