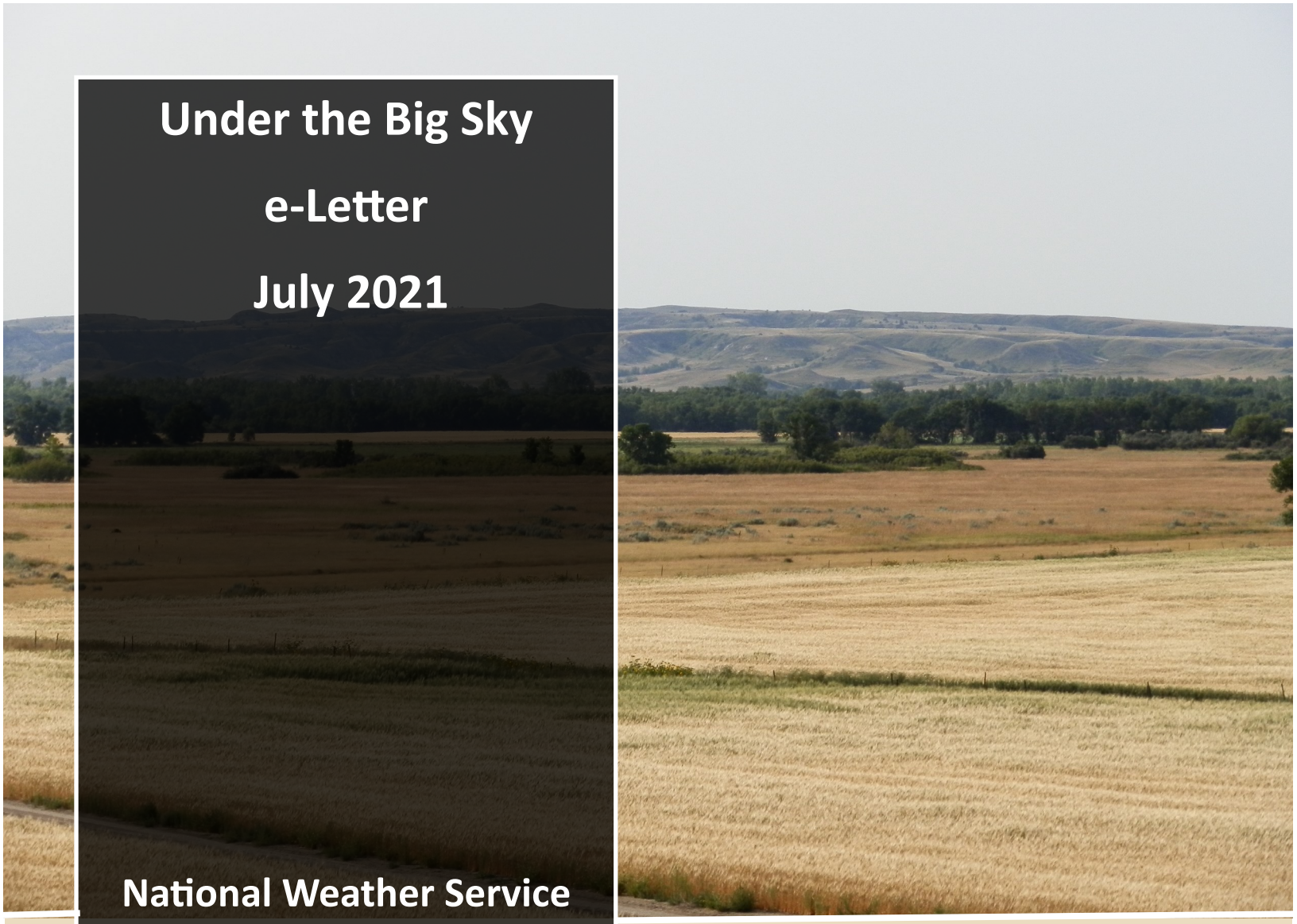
Under the Big Sky

e-Letter

July 2021



National Weather Service

Glasgow, MT

A Peak Inside:

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!

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)

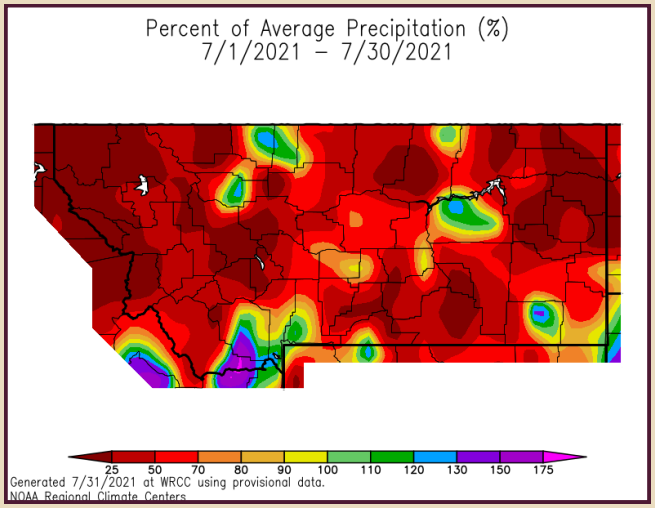


Figure 1: 30-day percent of normal precipitation across Montana.

Avg. Temp Departure from Normal (Montana)

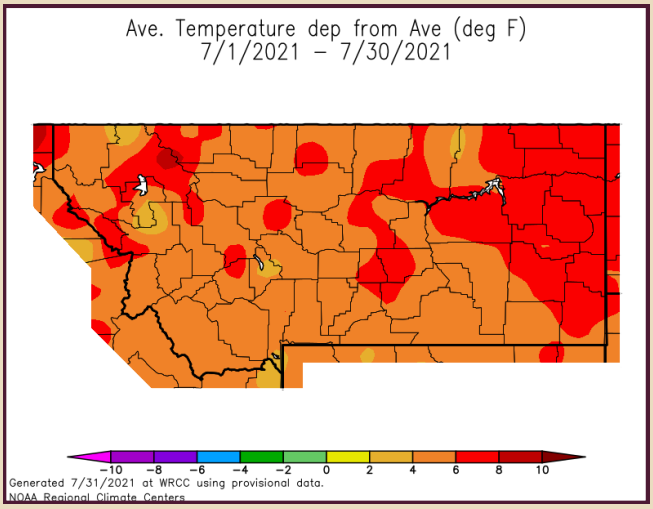


Figure 2: 30-day temperature anomalies across Montana.

Summary: The prior 30 days has trended both drier and hotter than average overall. This has been a predominant trend in recent months, leading to exacerbated drought concerns. Of note, Glasgow had a high temperature of 110°F on July 19, tying the 3rd highest temperature on record (ever) and is the hottest since the observation for Glasgow moved to the airport in 1948.

Updated Hydrologic Summary for June 2021, By Greg Forrester, Lead Forecaster at NWS Glasgow:

It was a hot and dry month over most of Northeast Montana. Glasgow had its second warmest June with an average temperature of 72.4 degrees which was 7.9 degrees above normal. The warmest June for Glasgow was 1988 which averaged 76.8 degrees. Temperatures were 2 to 8 degrees above normal across the region. A few areas had near normal precipitation. The wet spots were Sidney 2S with 2.87 inches, Medicine Lake with 2.80 inches, and Sidney with 2.38 inches. Most of the region had either below normal or well below normal precipitation. The dry spots were Glasgow 46SW with 0.11 inch, Content with 0.20 inch, and Terry & St. Marie with 0.27 inch. Glasgow received 0.45 inch which was 16 percent of normal.

Heavy rain fell from thunderstorms on June 8 did produce some flash flooding along US2 around 6 miles west of Wolf Point.

The dry weather has allowed extreme drought to expand over the region.

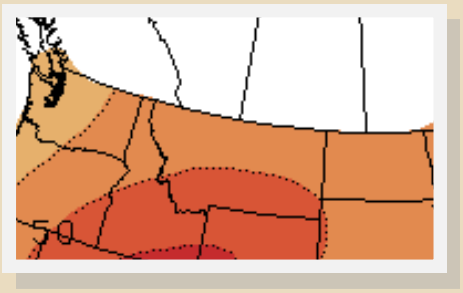
Stream flow on the Milk River was below normal for the entire month. The Yellowstone Rivers had near normal stream flow for the first week of the month and then, the stream flow fell to below normal for the remainder of the month. The Poplar River had near normal stream flow until June 13th when run off from locally heavy rain produced above normal stream flow until it fell back to near normal on June 20th for the remainder of the month. The Missouri River had near normal stream flow for the entire month.

The Fort Peck Reservoir elevation fell to 2232.5 feet during the month. The reservoir was at 77 percent of capacity and 98 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 August through October back on July 15, 2021. The outlook shows favored warmer and drier than normal conditions overall during the next three months, largely a continuation over recent trends. This will need to be monitored as drought conditions worsen and we enter the heart of 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.



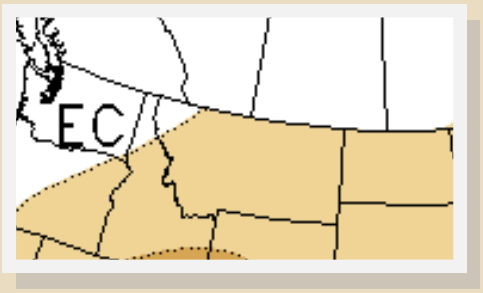
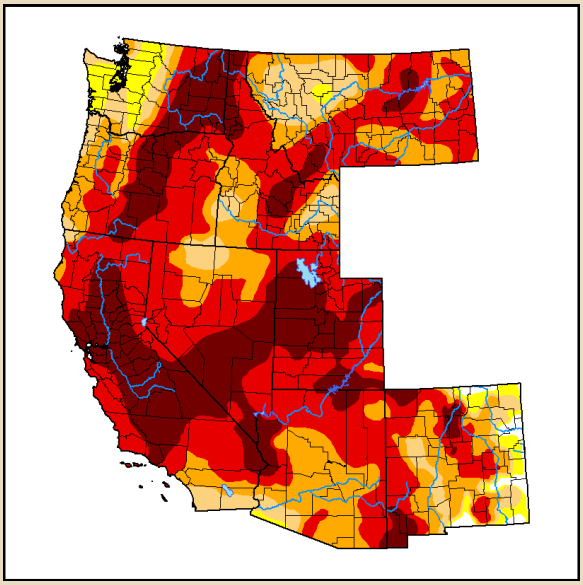
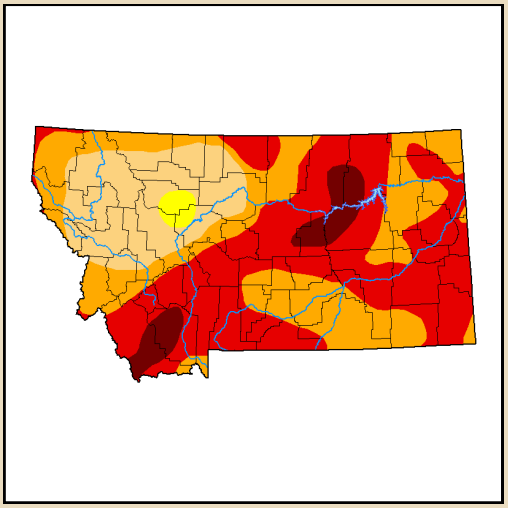


Figure 3: Climate Prediction Center three month temperature (top) and precipitation (bottom) outlook for August 2021 through October 2021.

U.S. Drought Monitor:

The latest U.S. Drought Monitor was released on Thursday July 29, 2021. Most of NE Montana is under the grip of an extreme to exceptional drought, with dry conditions unrelenting month after month. This outlook is updated weekly. Please feel free to check out the latest here.





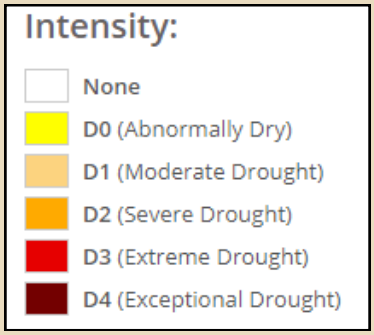


Figure 4: U.S. Drought Monitor updated July 29, 2021

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

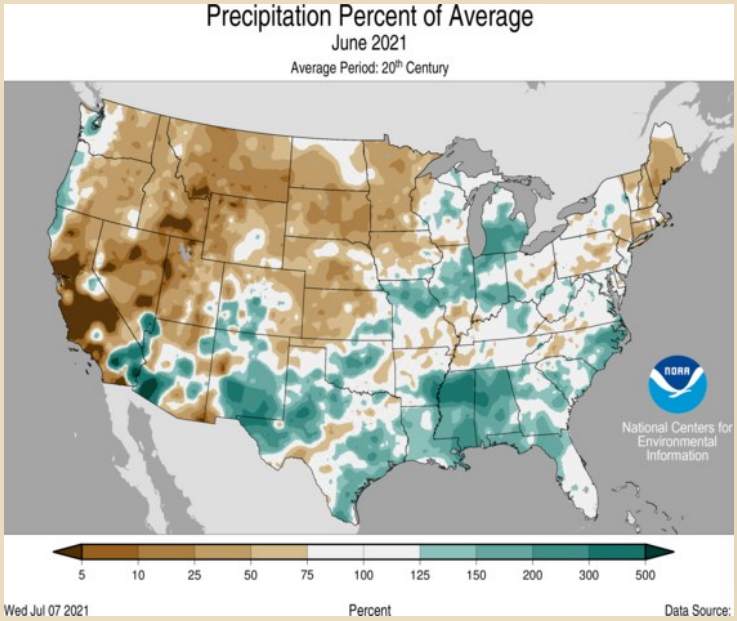


Figure 5: June 2021 Percent of Average Precipitation (U.S.).

U.S. Highlights for June 2021

1) The contiguous U.S. average temperature for June 2021 was 72.6 °F, ranking as the warmest in the 127 year period of record.
2) The average June precipitation total for the contiguous U.S. came in at 2.93 inches. This ranks is exactly average.

Global Highlights for June 2021

1) The 2021 global land and ocean surface temperature was the 5th warmest on record.
2) The land surface temperature for June 2021 was the warmest ever recorded. All of the ten warmest June global land surface temperatures took place since 2010.
3) June featured ENSO neutral conditions.

Fire Weather Season

As we enter the month of August, we go deeper into fire weather season. Hot and dry conditions, exacerbated by the ongoing drought situation means we all have to remind ourselves about activities that could potentially cause a spark. Remember: One less spark, one less wildfire!

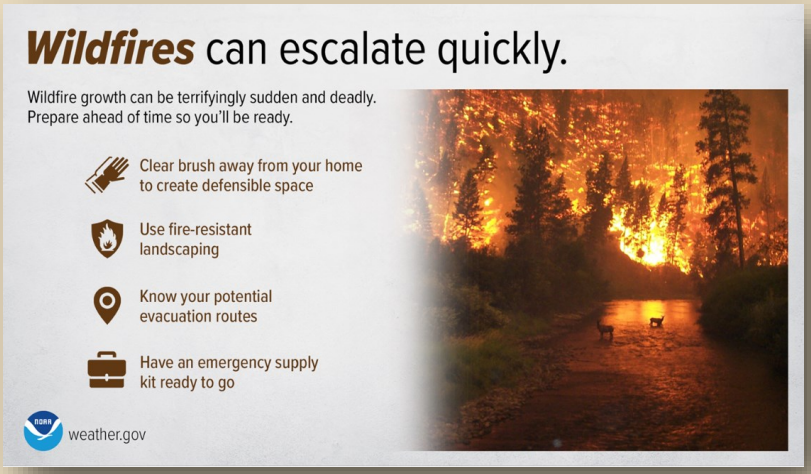


Figure 6: Wildfire safety graphic.

Links You May Like:

June 2021 5th Warmest Ever

1,000-year Heat Wave

ENSO Update

ENSO and Crop Yields

ENSO and Tornados

COOP Precipitation Data (*Preliminary* June 2021 –Updated)

Station	Precipitation	Location
BAYM8	M	Baylor
BRDM8	1.86	Bredette
BTNM8	M	Brockton 17 N
BKNM8	1.86	Brockton 20 S
BKYM8	1.43	Brockway 3 WSW
BRSM8	0.51	Brusette
CLLM8	0.53	Carlyle 13 NW
CIRM8	1.38	Circle
CHNM8	0.64	Cohagen
COM8	M	Cohagen 22 SE
CNTM8	0.20	Content 3 SSE
CULM8	2.00	Culbertson
DSNM8	0.91	Dodson 11 N
FLTM8	1.67	Flatwillow 4 ENE
FPKM8	0.43	Fort Peck PP
GLAM8	0.33	Glasgow 14 NW
GGWM8	0.45	Glasgow WFO
GGSM8	0.11	Glasgow 46 SW
GNDM8	0.86	Glendive WTP
HRBM8	M	Harb
HINM8	0.65	Hinsdale 4 SW
HNSM8	M	Hinsdale 21 SW
HOMM8	2.25	Homestead 5 SE
HOYM8	0.31	Hoyt
JORM8	M	Jordan
LNDM8	1.36	Lindsay
MLAM8	2.33	Malta
MLTM8	1.15	Malta 7 E
MTAM8	M	Malta 35 S

Station	Precipitation	Location
MDCM8	2.80	Medicine Lake 3 SE
MLDM8	0.53	Mildred 5 N
MSBM8	0.75	Mosby 4 ENE
OPNM8	0.41	Opheim 10 N
OPMM8	0.44	Opheim 12 SSE
PTYM8	1.79	Plentywood
PTWM8	2.32	Plentywood 1 NE
POGM8	1.24	Port of Morgan
RAYM8	1.59	Raymond Border Station
SAOM8	1.24	Saco 1 NNW
SMIM8	0.27	St. Marie
SAVM8	M	Savage
SCOM8	2.13	Scobey 4 NW
SDYM8	2.38	Sidney
SIDM8	2.87	Sidney 2S
TERM8	0.27	Terry
TYNM8	M	Terry 21 NNW
VIDM8	M	Vida 6 NE
WSBM8	M	Westby
WTRM8	1.25	Whitewater
WHIM8	M	Whitewater 18 NE
WBXM8	0.97	Wibaux 2 E
WTTM8	0.83	Winnett
WNEM8	0.42	Winnett 6 NNE
WNTM8	0.51	Winnett 8 ESE
WITM8	0.35	Winnett 12 SW
WLFM8	2.06	Wolf Point
ZRTM8	1.86	Zortman

Monthly Trivia:

Last time we asked…

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

Answer: The record number of consecutive days Glasgow, MT experienced a high temperature of at least 100 degrees is 6, which occurred in 2003 ending on August 16. With plenty of summer still to go around in 2021, we remind you to stay safe and do what you can to beat the heat. That includes taking precautions such as staying in the air conditioning, staying hydrated, avoiding strenuous activities, wearing light clothing, and checking on others—including pets & livestock. Remember, heat can escalate quickly! Never leave any person or animal unattended in a vehicle. LOOK before you LOCK!

Figure 7: Heat safety infographic.

New Question (Suggested by Brad Mickelson, Meteorologist at NWS Glasgow): This time around we do a knowledge check and ask, what is density altitude and what is its importance to our partners in aviation? We'll take the deep dive into this explanation in the next newsletter!

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