

Under the Big Sky
e-Letter
September 2020

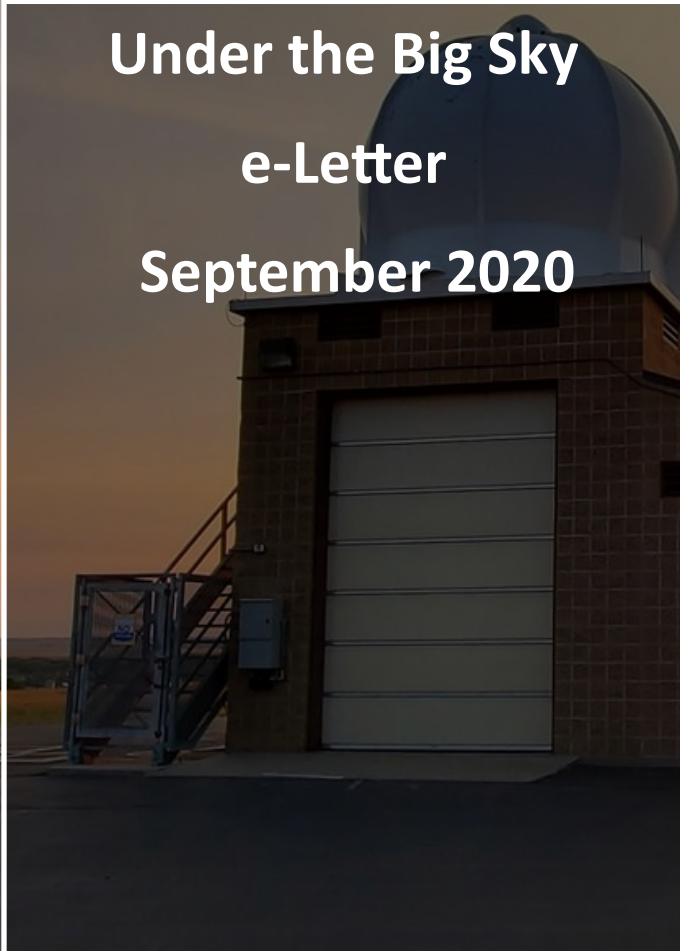


Photo Credit: Tanja Fransen, Meteorologist
in Charge at NWS Glasgow.

National Weather Service
Glasgow, MT



Welcome to the September 2020 Edition of the NWS Glasgow Under the Big Sky E-Letter!

Each month we issue the latest Under the Big Sky newsletter in which we provide you with important weather, climate, and water information. Routinely included are the latest three month outlooks, the latest U.S. Drought Monitor, COOP precipitation reports, summaries of important weather events, trivia, and more. In addition, we also try to shed light on local office NWS Glasgow happenings from time to time , as well as keep you up to date on any staffing changes.

We hope that you find these regularly issued newsletters both fun and informative and we thank you for allowing us the opportunity to serve!

As always, we continue to welcome any feedback that you may have so feel free to share with us what you think!

A Peak Inside:

- **Meet the Staff...Page 1**
- **30-Day Precip & temps/CoCoRaHS...Page 2**
- **Hydrologic Summary...Page 3**
- **CPC Outlook/Drought Monitor...Page 4**
- **Climate Highlights...Page 5**
- **Monthly COOP Precipitation...Page 6**
- **Monthly Trivia...Page 7**



Meet the Staff:

Ryan Bernhart, Meteorologist at NWS Glasgow

1) What do you think of living in northeast Montana so far?

Complete polar (no pun intended) opposite of what I'm used to. I've gone from the hottest part of the country (Phoenix metro area in Arizona), to the coldest part of the country. Also a bit of a culture shock, having previously lived in some of the biggest Metro areas in the whole country to a town with a population of about two of my high schools. However, I think I'm going to like it here! I like the peace and quiet, the lack of traffic, the abundance of wildlife and the chance to live in snow again for the first time in about 20 years!

2) How do you like working for the NWS? When did you first know meteorology as a career move was for you?

Love it! We have a great crew here in Glasgow! I've always loved weather but decided to try a career in construction management first. Turned out it wasn't the best career choice and when we had the Great Recession and work came hard to find in that field I decided it was time for a change and went back to school for meteorology.

3) What's your favorite kind of weather? It's not 30 below, is it?

In the summer my favorite days are the ones that start out as blue skies but then as the day progresses you get the cumulus clouds building into cumulonimbus and by sunset the storm rolls in and gives you a good light show. In the winter, I like heavy snowfalls where you wake up to a foot or more of snow.

4) Do you have any interests and hobbies that you'd like to share (outside of weather)?

Haven't had a garden in awhile so I'm getting back into gardening. I like redesigning my yard and planting trees and plants that encourage and attract wildlife. I also like bicycling, fishing, and boating.

5) If you could describe one thing that truly inspires you, what would that be?

My family, they've believed in me the whole time.



Figure 1: Photo of Ryan Bernhart, Meteorologist at NWS Glasgow.

Become a CoCoRaHS Observer Today:

NWS Glasgow is looking for new CoCoRaHS volunteers to send in precipitation reports. Here is how to join:

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

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. And the best part is that you only need a couple of things to get started such as a 4 inch rain gauge and a ruler or yardstick. Why not give it a try today?



30 Day Percent of Normal Precipitation (Montana)

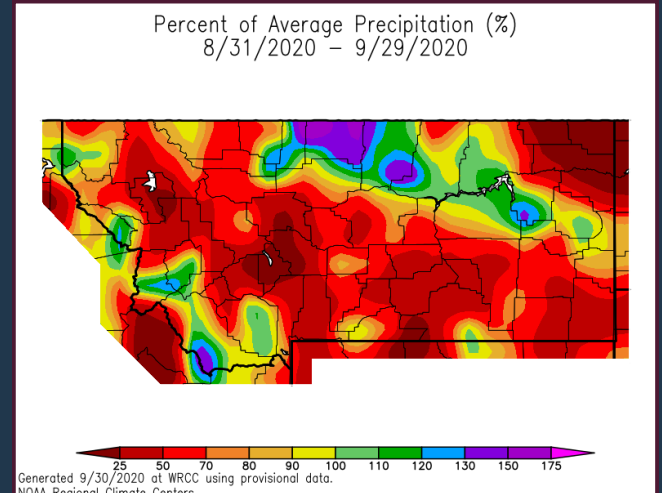


Figure 2: 30-day percent of normal precipitation across Montana.

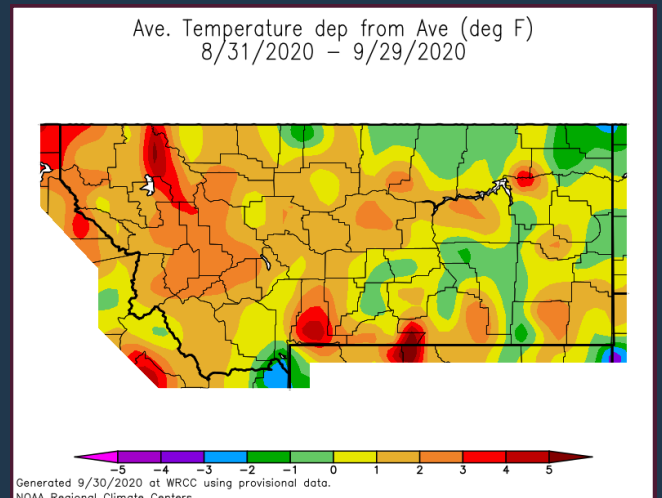


Figure 3: 30-day temperature anomalies across Montana.

Summary: Montana saw drier than average conditions across western, southern, and northeastern portions of the state. Meanwhile, North Central Montana had above normal precipitation over the prior 30 days. Temperatures across the state were generally near average to a couple of degrees above average.

Hydrologic Summary for August 2020 (Updated) by Greg Forester, Lead Forecaster at NWS

Glasgow:

It was an above normal month for temperatures over Northeast Montana. Temperatures averaged between 1 and 4 degrees above normal across the region. Glasgow averaged 60.5 degrees which was 2.2 degrees above normal. Precipitation was variable across the region.

Glasgow had 1.04 inches of precipitation which was 106 percent of normal.

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

The Fort Peck Reservoir elevation fell to 2237.7 feet during the month. The reservoir was at 86 percent of capacity and 106 percent of the mean pool.

The water year has come to an end, with a new one starting on October 1, 2020. During the water year that just ended, 12.14" of precipitation fell vs. 11.66" for the average.

CPC Three Month Outlook:

The Climate Prediction Center released its three month outlook for temperature and precipitation for October 2020 through December 2020 on September 17, 2020. The outlook calls for above normal temperatures to persist over the three month period across the state. Meanwhile, above average precipitation is favored across most of Montana. Equal chances for above normal, normal, and below normal precipitation exist for far eastern parts 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.

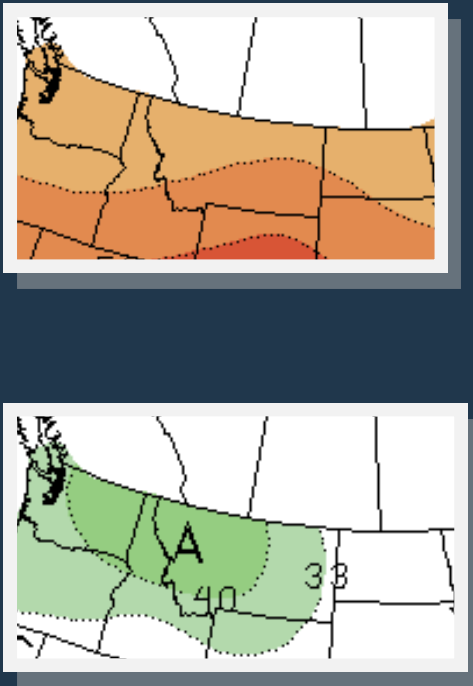
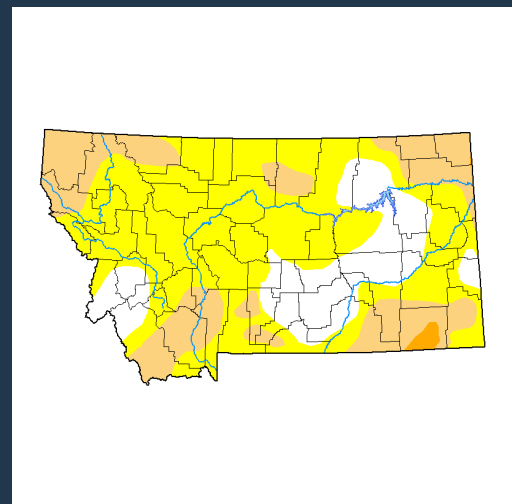
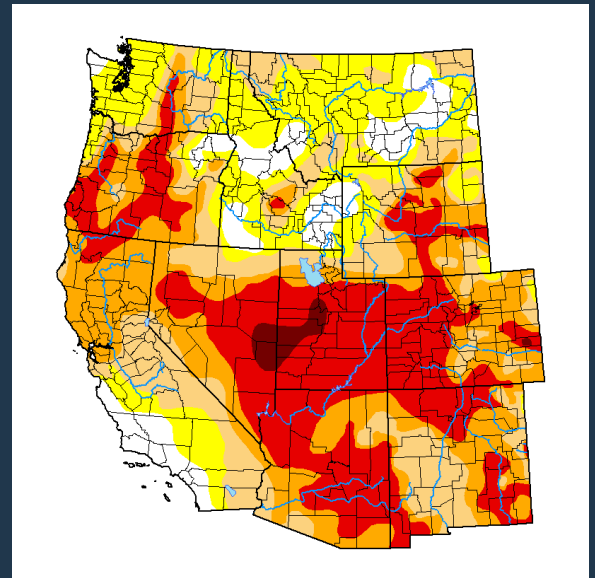


Figure 4: Climate Prediction Center three month temperature (top) and precipitation (bottom) outlook for October 2020 through December 2020.

U.S. Drought Monitor:

The [latest U.S. Drought Monitor](#) was released on Thursday September 24, 2020. Much of the state of Montana is categorized under abnormally dry conditions. There are a few locations such as northwest, southwest, southeast, and far northeast Montana that have moderate drought. Severe drought is also labeled in a small portion of southeast Montana.



Intensity:

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)

Figure 5: U.S. Drought Monitor updated September 24, 2020.

U.S. & Global Climate Highlights (August): The U.S. & Global climate highlights for August 2020 have been released, the latest month for which data was available. A few points for you to take home are provided below.

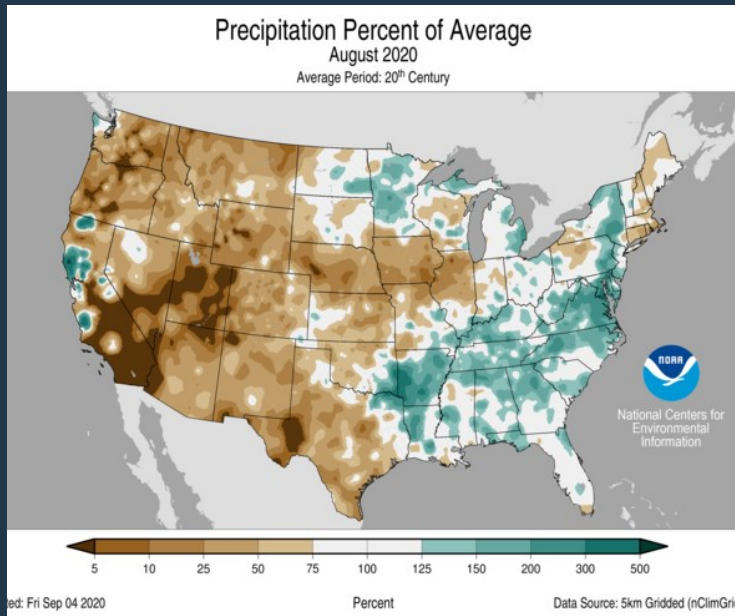


Figure 6: August 2020 Percent of Average Precipitation (U.S.).

U.S. Highlights for August 2020

- 1) The contiguous U.S. average temperature for August 2020 was 74.7 °F, ranking in the warmest third on record.
- 2) The average August precipitation total for the contiguous U.S. came in at 2.35 inches. This ranks within the driest third of the existing period of record.

Global Highlights for August 2020

- 1) The August 2020 global land and ocean surface temperature was the second highest since global records began in 1880. Only August 2016 was warmer.
- 2) The August 2020 global ocean only surface temperature was 1.48°F above average, tying with 2016 as the second highest on record.

Expected Winter 2020 (La Niña) Pattern

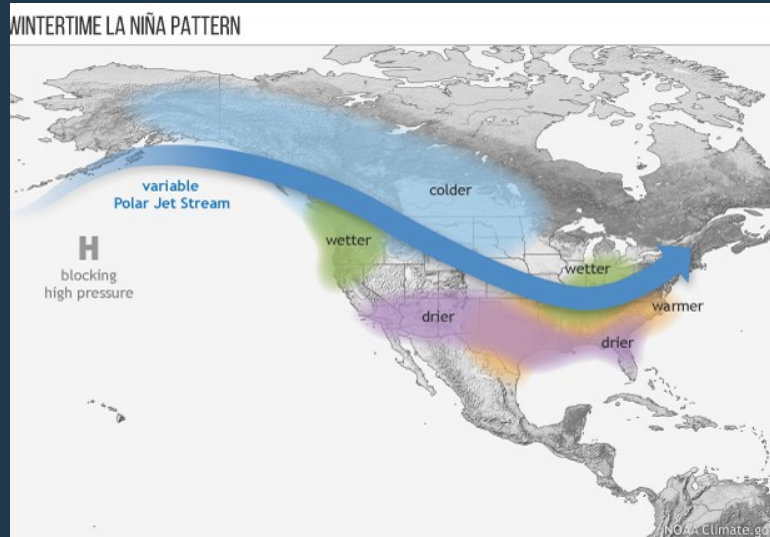


Figure 7: Source: NOAA Climate.gov

Links You May Like:

[ENSO Update](#)

[2020 Arctic Sea Ice](#)

[U.S. Drought Vulnerability Ranking by State](#)

[2020 Atlantic Hurricane Season Update](#)

[Solar Cycle Prediction](#)

[Summer 2020 Among Hottest in U.S.](#)

[Common Ocean Myths](#)

COOP Precipitation Data (*Preliminary* August 2020)

Station	Precipitation	Location
BAYM8	0.27	Baylor
BRDM8	0.03	Bredette
BTNM8	M	Brockton 17 N
BKNM8	0.37	Brockton 20 S
BKYM8	0.16	Brockway 3 WSW
BRSM8	M	Brusette
CLLM8	0.82	Carlyle 13 NW
CIRM8	0.04	Circle
CHNM8	0.51	Cohagen
COM8	0.65	Cohagen 22 SE
CNTM8	0.36	Content 3 SSE
CULM8	0.19	Culbertson
DSNM8	0.65	Dodson 11 N
FLTM8	0.85	Flatwillow 4 ENE
FPKM8	0.68	Fort Peck PP
GLAM8	0.07	Glasgow 14 NW
GGWM8	0.29	Glasgow WFO
GGSM8	0.04	Glasgow 46 SW
GNDM8	0.45	Glendive WTP
HRBM8	M	Harb
HINM8	0.19	Hinsdale 4 SW
HNSM8	0.31	Hinsdale 21 SW
HOMM8	0.47	Homestead 5 SE
HOYM8	0.37	Hoyt
JORM8	M	Jordan
LNDM8	0.35	Lindsay
MLAM8	0.35	Malta
MLTM8	0.47	Malta 7 E
MTAM8	0.28	Malta 35 S


Station	Precipitation	Location
MDCM8	0.37	Medicine Lake 3 SE
MLDM8	M	Mildred 5 N
MSBM8	0.56	Mosby 4 ENE
OPNM8	M	Opheim 10 N
OPMM8	0.10	Opheim 12 SSE
PTYM8	0.72	Plentywood
PTWM8	0.88	Plentywood 1 NE
POGM8	0.25	Port of Morgan
RAYM8	M	Raymond Border Station
SAOM8	0.36	Saco 1 NNW
SMIM8	0.27	St. Marie
SAVM8	M	Savage
SCOM8	0.23	Scobey 4 NW
SDYM8	1.02	Sidney
SIDM8	0.95	Sidney 2S
TERM8	0.52	Terry
TYNM8	M	Terry 21 NNW
VIDM8	0.07	Vida 6 NE
WSBM8	M	Westby
WTRM8	0.23	Whitewater
WHIM8	M	Whitewater 18 NE
WBXM8	0.94	Wibaux 2 E
WTTM8	0.24	Winnett
WNEM8	0.11	Winnett 6 NNE
WNTM8	0.28	Winnett 8 ESE
WITM8	M	Winnett 12 SW
WLFM8	0.34	Wolf Point
ZRTM8	0.88	Zortman

Monthly Trivia:

Last time we asked...

What is an Incident Meteorologist (IMET)?

Answer: An IMET, or Incident Meteorologist, is a National Weather Service Forecaster who has had specialized training and is certified to provide support at a fire location. If a large wildfire has started and help is needed, an IMET is often contacted and provided with orders to travel to the fire location in short order.

 **New Question:** Fall has officially arrived, and that means that leaves are changing colors, the grass is turning brown, and that temperatures will soon be dropping below freezing on a regular basis for NE Montana. That means snow may **SOON** be appearing in the forecast. Our trivia question this time around specifically asks—How does Lake Affect Snow occur out on Fort Peck Lake? We'll share the answer in the next newsletter with the science behind this phenomenon.

Background Photo Credit: Greg Forrester, Lead Forecaster, NWS Glasgow

Find us on Facebook, Twitter and YouTube! No account needed:

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

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

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