Under the Big Sky e-Letter
May 2019

A Peak Inside:

CoCoRaHS Training: NWS Glasgow will be doing an online CoCoRaHS training with an emphasis on warm season reporting. If you or someone you know is interested in reporting daily precipitation, please pass this information along, becoming a CoCoRaHS observer is a great way to make a difference in the community! Meanwhile, check out the national CoCoRaHS webpage to learn more.

Training Details

When: Thursday 6/20/2019 at 12PM MDT.

Training Link: https:// global.gotomeeting.com/join/331948645

Dial into the training: 877-929-2703

Passcode: 8072342#

30 Day Percent of Normal Precipitation (Montana)

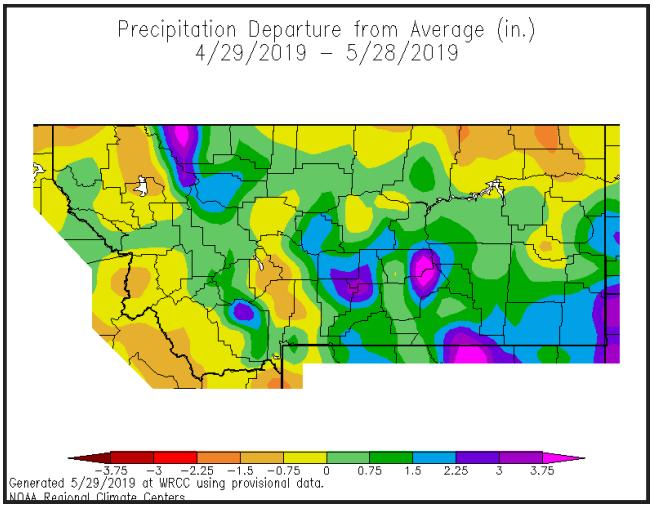

Figure 1: 30-day percent of normal precipitation across Montana.

30 Day Temperature Anomalies (Montana)

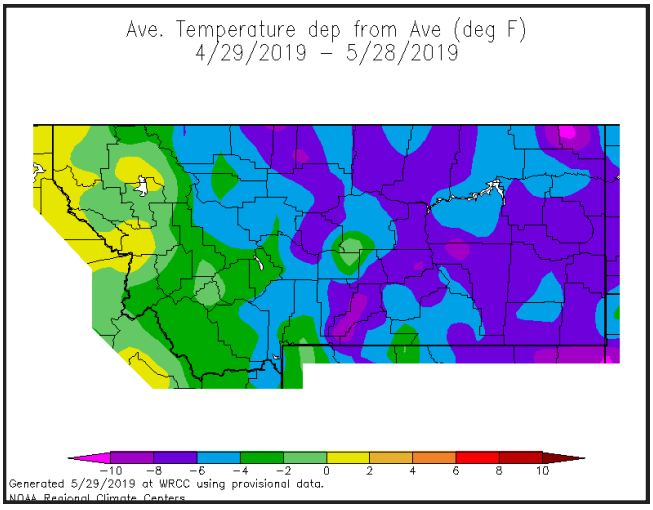

Figure 2: 30-day temperature anomalies across Montana.

Summary: A series of low pressure systems delivered heavy precipitation to southeast Montana, including locations along and south of Highway 2 late April into May. However, due to the storm track, locations further north, especially across Daniels & Sheridan Counties were largely left out. Meanwhile, temperatures have been below normal for central & E. Montana.

Hydrologic Summary (April) by Greg Forrester, Lead Forecaster at NWS Glasgow:

It was a wet month across most of Northeast Montana. However, some areas were drier than normal. The wet spots were Cohagen with 2.38 inches, Zortman with 2.21 inches, and Winnett 12SW with 2.19 inches. The dry spots were Opheim 10N with 0.06 inch, Raymond with 0.10 inch, and Homestead with 0.28 inch. Glasgow had 0.87 inch which was 102 percent of normal.

Temperatures averaged from 2 degrees below to 3 degrees above normal in most areas. Glasgow averaged 46.8 degrees which was 1.9 degrees above normal.

Snow melt flooding that began in March lingered into early April on the Milk River before the water receded.

Stream flow on the Milk, Missouri, Poplar, and Yellowstone Rivers was above normal for the month.

The Fort Peck Reservoir elevation rose to 2240.6 feet during the month. The reservoir was at 87 percent of capacity and 107 percent of the mean pool.

National Safe Boating Week:

May 18-24, 2019 was National Safe Boating Week. The National Weather Service partnered with the National Safe Boating Council to help promote best practices for boating safety. Here at NWS Glasgow, we're here to help you stay safe all summer long should you decide to head on out to Fort Peck Lake for some boating and related recreational activities. We routinely issue Lake Wind Advisories when breezy conditions (generally sustained 20 mph, gusts to 30 mph) are expected to impact activities on the lake, as an example. Check out this resource for more information and important safety reminders before you head out on the water this year.

Figure 3: NWS Glasgow on "Wear Your Lifejacket to Work Day" on 5/17/2019 to help raise awareness on safe boating this year.

Get the latest forecast for the Fort Peck Lake area here.

CPC Three Month Outlook: The Climate Prediction Center released its three month outlook for temperature and precipitation for June 2019 through August 2019 on May 16, 2019. In general, expect central and eastern Montana to see equal chances for below normal, normal, or above normal temperatures. Western Montana is more likely to experience above normal temperatures this summer. Meanwhile, eastward into the Dakotas may see below normal temperatures favored in the next three months. For precipitation, the outlook suggests increased odds of above normal totals through the summer months. 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.

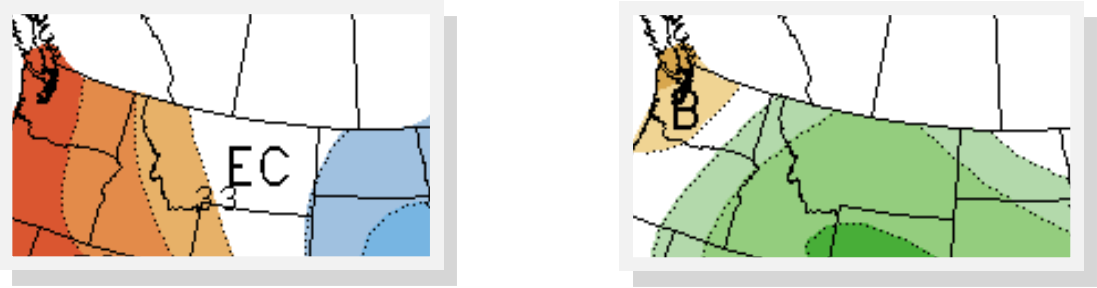

Figure 4: Climate Prediction Center three month temperature (left) and precipitation (right) outlook for June through August 2019.

Updated U.S. Drought Monitor: The latest U.S. Drought Monitor was released on Thursday May 30, 2019. Most of Montana remains absent of any drought conditions, however, portions of far northwest montana have been included in moderate drought. Additionally, portions of northeast Montana, mainly Daniels and Sheridan Counties, have been abnormally dry. This is in part thanks to the trend for the last few precipitation events to shift south, leaving those locations on the drier side.

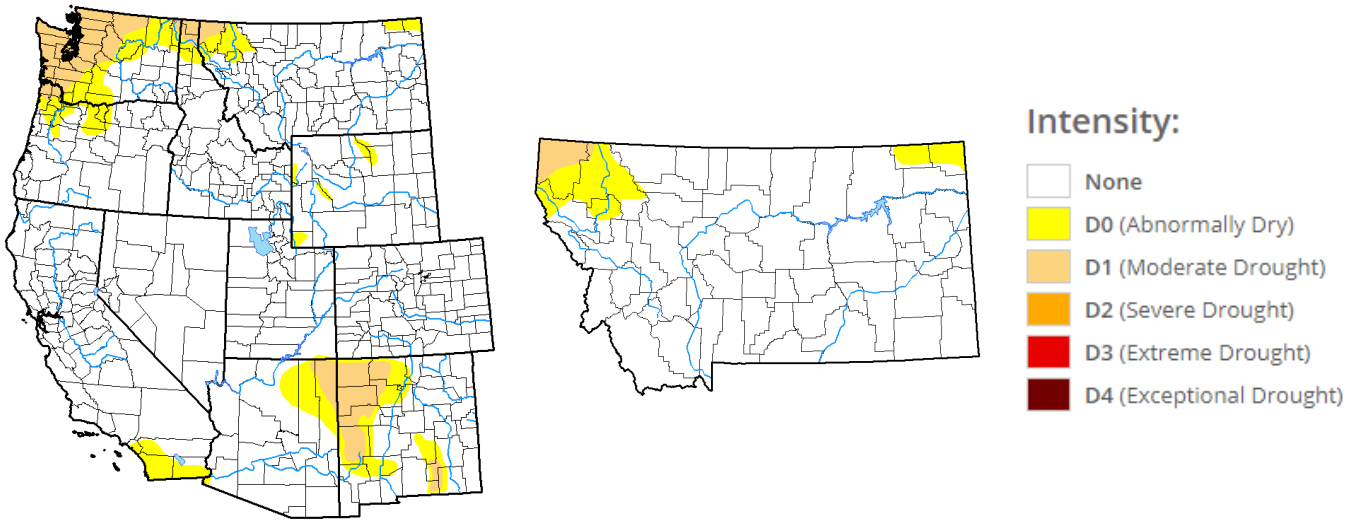

Figure 5: Latest Drought Monitor for the western U.S. (left) and Montana (right) released Thursday May 30, 2019.

U.S. Climate Highlights (April): The latest U.S. & Global climate highlights for April 2019 are now available. A few points for you to take home are provided below.

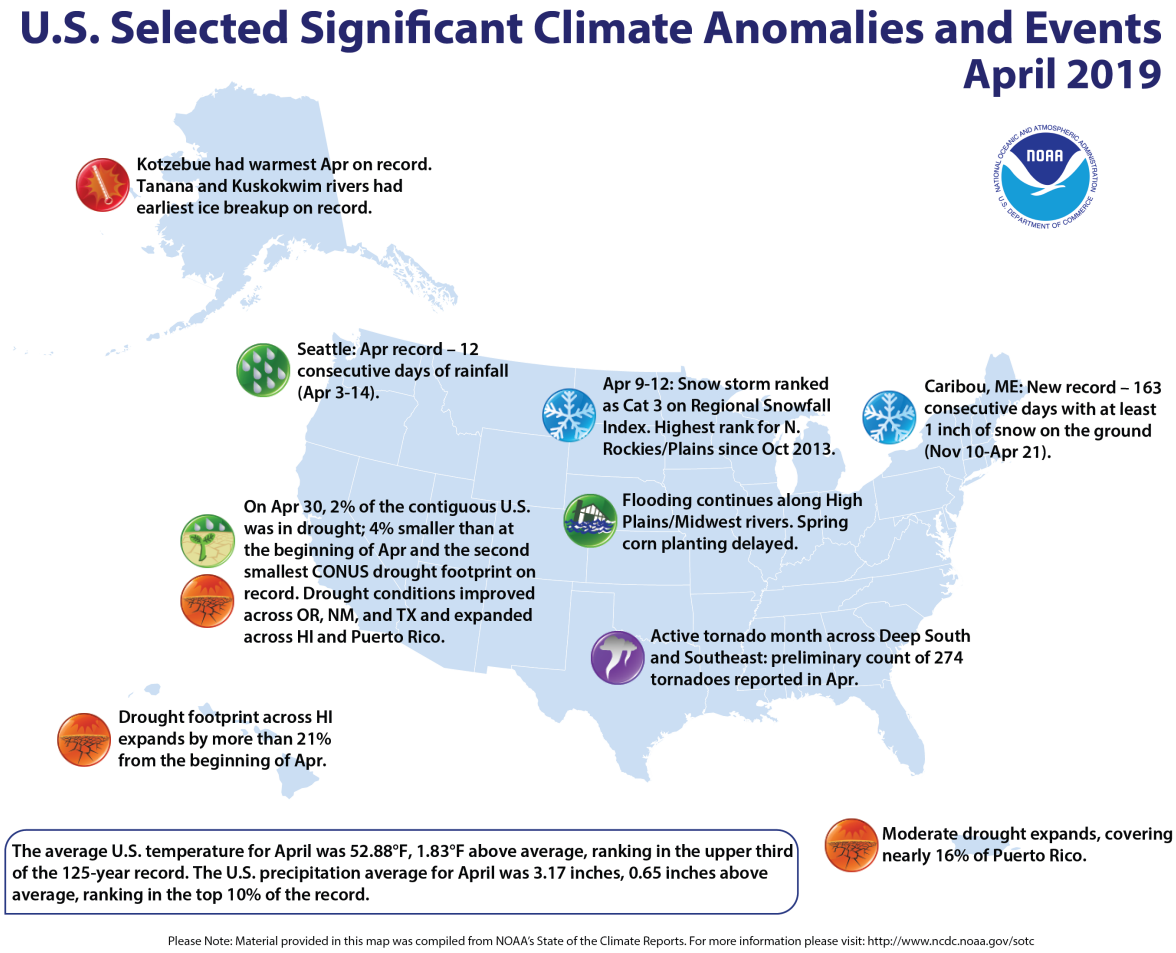

Figure 6: Climate Highlights for April of 2019.

U.S. Highlights for April 2019

1) The contiguous U.S. average temperature for March 2019 was 52.9 °F.
2) The average April precipitation total for the contiguous U.S. came in at 3.17 inches. This ranks within the top ten percent on record.
3) According to the U.S. Drought Monitor, just 2% of the contiguous U.S. was in drought.

Global Highlights for April 2019

1) The April 2019 global land and ocean surface temperature was the second highest for April on record.
2) The global ocean surface temperature specifically for April tied with 2017 as the second warmest on record, coming in at 1.30 °F above average
3) El Niño conditions were present in April 2019 and this is likely to continue through the Northern Hemisphere summer.

Precipitation Data (April 2019):

Station	Precipitation	Location
BAYM8	1.36	Baylor
BRDM8	1.63	Bredette
BTNM8	M	Brockton 17 N
BKNM8	1.83	Brockton 20 S
BKYM8	1.52	Brockway 3 WSW
BRSM8	1.57	Brusette
CLLM8	1.77	Carlyle 13 NW
CIRM8	1.39	Circle
CHNM8	1.71	Cohagen
COM8	2.38	Cohagen 22 SE
CNTM8	0.49	Content 3 SSE
CULM8	1.10	Culbertson
DSNM8	0.90	Dodson 11 N
FLTM8	2.07	Flatwillow 4 ENE
FPKM8	0.54	Fort Peck PP
GLAM8	M	Glasgow 14 NW
GGWM8	0.87	Glasgow WFO
GGSM8	0.64	Glasgow 46 SW
GNDM8	1.69	Glendive WTP
HRBM8	M	Harb
HINM8	0.66	Hinsdale 4 SW
HNSM8	M	Hinsdale 21 SW
HOMM8	0.28	Homestead 5 SE
HOYM8	1.14	Hoyt
JORM8	M	Jordan
LNDM8	1.69	Lindsay
MLAM8	0.70	Malta
MLTM8	M	Malta 7 E
MTAM8	0.43	Malta 35 S

Station	Precipitation	Location
MDCM8	0.77	Medicine Lake 3 SE
MLDM8	1.61	Mildred 5 N
MSBM8	M	Mosby 4 ENE
OPNM8	M	Opheim 10 N
OPMM8	1.15	Opheim 12 SSE
PTYM8	1.52	Plentywood
PTWM8	0.86	Plentywood 1 NE
POGM8	0.85	Port of Morgan
RAYM8	0.10	Raymond Border Station
SAOM8	0.57	Saco 1 NNW
SMIM8	1.12	St. Marie
SAVM8	1.37	Savage
SCOM8	1.45	Scobey 4 NW
SDYM8	1.30	Sidney
SIDM8	1.29	Sidney 2S
TERM8	1.92	Terry
TYNM8	M	Terry 21 NNW
VIDM8	1.23	Vida 6 NE
WSBM8	0.65	Westby
WTRM8	1.07	Whitewater
WHIM8	M	Whitewater 18 NE
WBXM8	1.16	Wibaux 2 E
WTTM8	1.61	Winnett
WNEM8	M	Winnett 6 NNE
WNTM8	2.08	Winnett 8 ESE
WITM8	2.19	Winnett 12 SW
WLFM8	1.64	Wolf Point
ZRTM8	2.21	Zortman

Links You May Like:

NOAA 2019 Atlantic Hurricane Season Forecast

Emissions of Ozone-Destroying Chemical Rising Again

April 2019 2nd Hottest On Record

Rising Greenhouse Gas Emissions

Latest ENSO Update

Monthly Trivia: Last month we asked…

Now that we are approaching severe weather convective season, this is a good time to remind you that we have a number of ways to help keep you safe! This is a good point to offer up some trivia for a refresher. Do you remember the difference between a watch and a warning?

Answer: The main differences can be summarized in the chart below. In general, think of a watch as a "heads up" that severe weather is possible within a few hours. On the other hand, a warning means severe weather is imminent or happening now. **For additional severe weather safety information, including lightning safety tips, check out this resource.**

Watch	Warning
Conditions are favorable for the development of severe thunderstorms in and near the watch area. This generally is for the next 0-6 hours.	The severe thunderstorm (1" or larger hail and/or wind gusts to 58 mph or higher) or a tornado is either occurring or will be soon. This generally has a lead time of 0 to 60 minutes.
Watch Actions: ⇒ Know where your safest place to shelter will be **(not a mobile or modular home)** ⇒ Monitor radar, be prepared to go to a safe place before storms or warnings get to you ⇒ Have at least two ways to receive future warnings (local radio, TV, text messages, NOAA Weather Radio, etc.) ⇒ Put away outdoor items that could blow away ⇒ Put away vehicles in sheltered locations ⇒ As storms get closer, even before warnings may be issued, go to your "safe" location, bring family, friends, pets	**Warning Actions**: ⇒ Seek immediate shelter in your safe location ⇒ Lowest level of safe structure, away from windows and chimneys ⇒ Have as many walls between you and the outside as possible ⇒ Have a radio, smart phone, tablet/laptop with you to monitor situation ⇒ In a car, wear seatbelt, and try to go south then west of the storm. If you cannot avoid it, pull over, lay down and protect head with a blanket

New Question: When looking at our forecasts, what is the difference between POP (Probability of Precipitation) vs. CWR (Chance of Wetting Rain)?

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