

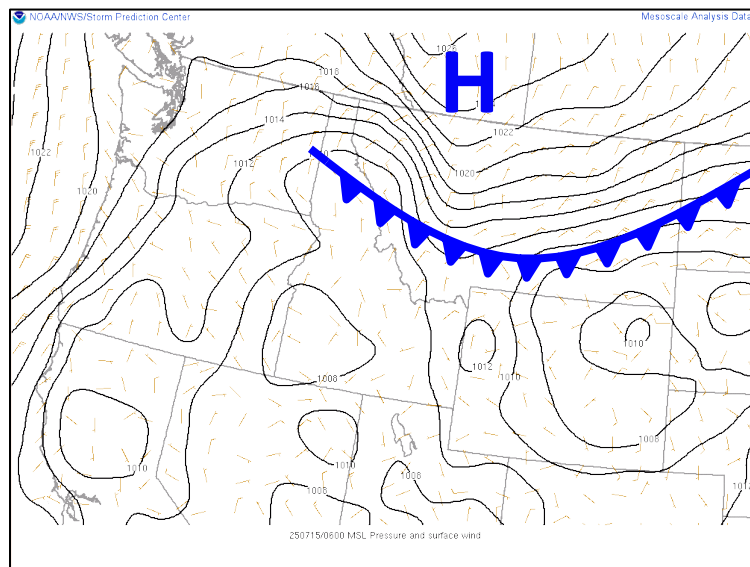
Cool & Wet in Mid-July

July 15-16, 2025

National Weather Service – Billings, MT

OVERVIEW: A weather system that dropped out of Canada brought unseasonably cool temperatures and widespread rain to our region for a 2-day period in mid-July. It was a very spring-like (or fall-like, depending on your point of view) weather system, something very unusual for mid-summer when heat is nearly constant. In fact, it was the coolest stretch of weather we've seen in mid-July in over two decades.

METEOROLOGY: It was quite warm and dry on Monday, July 14th, with some locations reaching 100°, but a cold front that night brought a much cooler Canadian air mass to eastern Montana and northern Wyoming. There were some



thunderstorms along this frontal passage, but it was behind the front that rain developed and continued intermittently for nearly two days, courtesy of a slow-moving upper-level low dropping out of southern British Columbia and through the northern Rockies. The cool air mass with thick low cloud cover remained in place due to persistent easterly/ upslope winds. To the left is a surface analysis at 12am on the 15th, showing a cold front dropping through southeast Montana and cool high pressure over southern Alberta. Remarkably, temperatures during the afternoon of the 15th were around 40° cooler than the previous day.

TEMPERATURES: Daily high temperatures on Tuesday the 15th occurred at midnight, with cooling through the night followed by daytime temps in the 50s and 60s.

Even as precipitation ended on the 16th, cool air remained in place through the day. Daily record cool max temperatures were set at Billings, Miles City, Sheridan, and Baker on the 16th. Due to the moist air mass and cloud cover in place, nighttime temperatures were moderated and there were no daily record lows broken. A switch to drier downslope winds pushed temperatures back to the 80s on Thursday, ending the stretch of unseasonably cool weather.

Below is a summary of coolest high temperatures observed and when comparable temps were last seen in mid-July at each of our main climate stations.

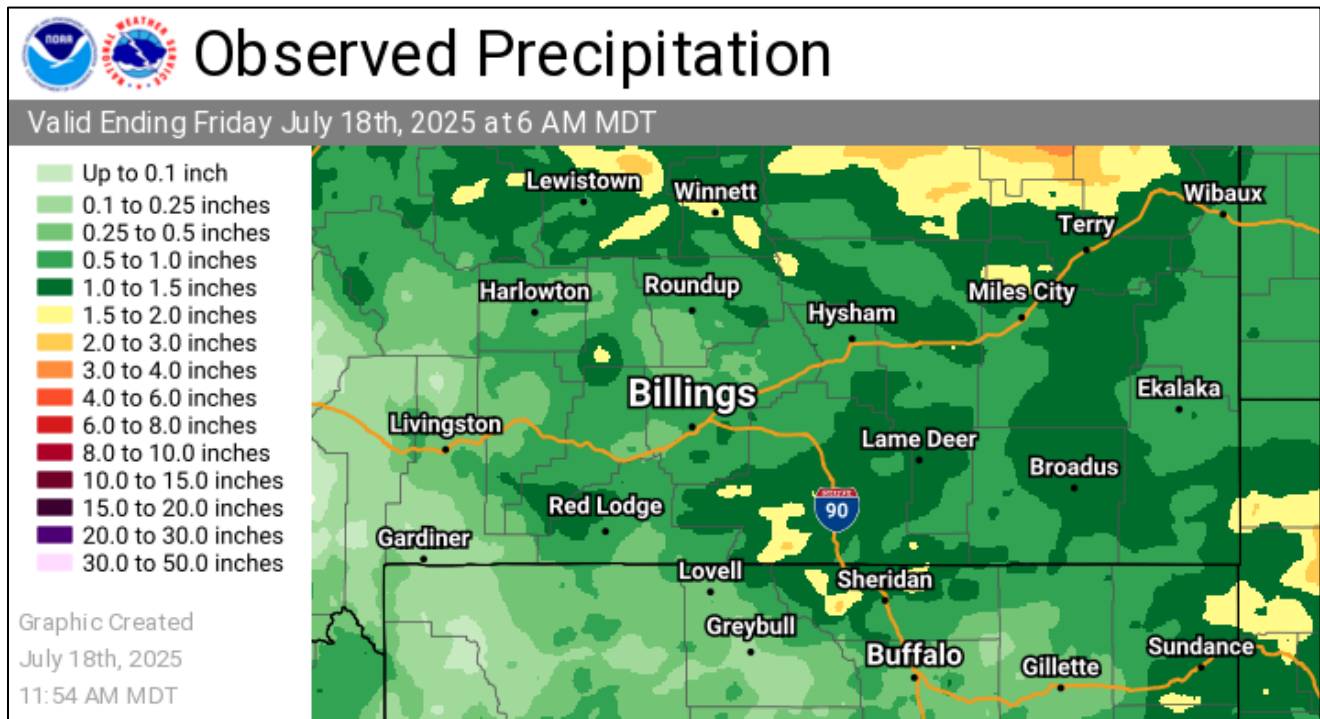
SITE	Coolest high temperature	Previous Record Cool High	Coolest High in July 8-31 Since...
Billings	61° (July 16)	67° (1999)	1997
Livingston	60° (July 15)	(Not a record)	1987
Miles City	64° (July 16)	65° (1993)	1993
Sheridan	63° (July 16)	63° (1922)	1993
Baker	63° (July 16)	70° (1999)	Coolest since records began in 1998

PRECIPITATION: Most rainfall was not heavy, but it fell intermittently throughout the 15th and into the 16th. A few locations received over an inch, including Story 1.88", Delphia 3WNW 1.60", Melville 1.41", Badger Peak Raws in southern Rosebud County 1.30", Brandenburg, Miles City Portable Raws in southern Custer County 1.14", and Crow Agency 1.11". Most of the region saw between a quarter inch and an inch of rain.

Heavy rain along the eastern slopes of the Bighorns during the evening of the 15th caused localized flash flooding and debris flows on the Elk Fire burn scar. A weather station five miles southwest of Dayton reported 0.70" of rain in just 30 minutes. At least four debris flows occurred along US-14, closing the highway for three to four hours. A log jam along the Little Tongue Canyon on Little Tongue Ranch caused localized flooding and damage to a barn. To the right is a photo of a debris flow along the Crystal Spring watershed.



The cool and damp weather improved fire concerns temporarily. Below is a map of estimated precipitation across the region, followed by a list of precipitation reports received by our office.



...PRECIPITATION REPORTS from 7/14/2025 through 7/16/2025 ...

Location	Amount	Time/Date	Lat/Lon/Elev (ft.)
...Montana...			
...Big Horn County...			
Bighorn Mountain	1.23 in	0118 PM 07/16	45.07N/107.89W/8180
Little Bighorn	1.11 in	0159 PM 07/16	45.57N/107.44W/3196
Pryor Mountain	0.98 in	0118 PM 07/16	45.34N/108.49W/6583
Wolf Mountain	0.85 in	0118 PM 07/16	45.30N/107.16W/4886
8 WSW Wyola	0.56 in	0200 PM 07/16	45.07N/107.53W/4159
...Carbon County...			
Wild Horse	0.71 in	0148 PM 07/16	45.13N/108.30W/8149
Quad Creek	0.37 in	0125 PM 07/16	45.03N/109.41W/9773
Timbercrest	0.35 in	0115 PM 07/16	45.16N/109.36W/6399
Hillsboro	0.28 in	0129 PM 07/16	45.10N/108.22W/3985
3 SW East Bridger	0.14 in	0800 AM 07/17	45.25N/108.96W
...Carter County...			
Mosby 16.3nne	0.92 in	0154 PM 07/16	45.81N/104.46W/3996
...Custer County...			
Miles City Portable 2019	1.14 in	0142 PM 07/16	45.92N/105.61W/3227
Knowlton	1.01 in	0140 PM 07/16	46.31N/105.03W/3319
Miles City Airport	0.67 in	0600 PM 07/16	
Miles City	0.47 in	0204 PM 07/16	46.43N/105.88W/2628
...Fallon County...			
Baker Airport	0.86 in	0151 PM 07/16	46.35N/104.25W/2950
Cannonball Creek	0.64 in	0140 PM 07/16	46.48N/104.07W/2958
...Musselshell County...			
3 WNW Delphia	1.60 in	0700 PM 07/16	46.51N/108.27W
Melstone	0.40 in	0145 PM 07/16	46.60N/107.87W/2933
Billings Qd No. 2	0.36 in	0134 PM 07/16	46.46N/108.70W/4365
Horse Thief	0.34 in	0139 PM 07/16	46.43N/108.67W/3414
ROUNDUP	0.31 in	0155 PM 07/16	46.25N/108.50W/4016
Broadview	0.20 in	0200 PM 07/16	46.16N/108.72W/4028
...Park County...			
Mill Creek	1.00 in	0100 PM 07/16	45.26N/110.41W/7510
Soda Butte Raws	0.28 in	0117 PM 07/16	45.01N/110.04W/8160
Livingston	0.27 in	0200 PM 07/16	45.50N/110.57W/4855
Pine Creek	0.25 in	0205 PM 07/16	45.50N/110.58W/4715
Springdale I-90 Mp 352.3	0.09 in	0200 PM 07/16	45.72N/110.25W/4238
1.4 NW Gardiner	0.09 in	0115 PM 07/16	45.05N/110.75W/5175
Gardiner Us-89 Mp 11.0	0.07 in	0200 PM 07/16	45.16N/110.82W/5115
Livingston River Hill	0.04 in	0200 PM 07/16	45.64N/110.55W/4580
Wicked Creek	0.03 in	0107 PM 07/16	45.27N/110.54W/7604
Crazy	0.02 in	0112 PM 07/16	46.16N/110.38W/7320
...Powder River County...			
Bradshaw Creek	0.93 in	0124 PM 07/16	45.05N/105.95W/3930
Fort Howes	0.73 in	0127 PM 07/16	45.30N/106.16W/3443
Coalwood Mt-59 Mp 55.9	0.63 in	0200 PM 07/16	45.73N/105.59W/3350

Home Creek Divide Us-212 Mp 0.56 in 0201 PM 07/16 45.55N/105.89W/3934

...Rosebud County...

Badger Peak 1.30 in 0101 PM 07/16 45.65N/106.50W/4382
Cow Creek 0.72 in 0121 PM 07/16 46.03N/106.19W/3228
1 ENE Forsyth 0.46 in 0755 AM 07/17 46.27N/106.65W/2651

...Stillwater County...

Nye 0.81 in 0159 PM 07/16 45.41N/109.87W/5239
Fishtail 0.78 in 0122 PM 07/16 45.46N/109.57W/4549
Custer No. 1 Portable 0.62 in 0118 PM 07/16 45.49N/109.92W/5819
Park City 6.0 WSW 0.53 in 1030 AM 07/16 45.60N/109.03W/3452
Reed Point 0.41 in 0158 PM 07/16 45.68N/109.40W/4058
3.5 W Fishtail 0.30 in 0122 PM 07/16 45.46N/109.57W/4550
Columbus 0.20 in 1200 PM 07/16 45.62N/109.10W/4149

...Sweet Grass County...

Derby Mountain 0.75 in 0135 PM 07/16 45.58N/109.88W/6600
Big Timber 0.64 in 0155 PM 07/16 45.75N/109.96W/4835
12 W Melville 0.53 in 0200 PM 07/16 46.12N/110.20W/5873
Main Boulder 0.26 in 0139 PM 07/16 45.46N/110.20W/5404

...Wheatland County...

2 ENE Harlowton 0.31 in 0155 PM 07/16 46.45N/109.80W/4363
Judith Gap (MT DOT) 0.23 in 0200 PM 07/16 46.69N/109.75W/4573
2 ENE Harlowton 0.19 in 1255 PM 07/16 46.45N/109.80W/4363

...Yellowstone County...

Steamboat 0.55 in 0141 PM 07/16 46.26N/108.10W/3715
Soda Springs 0.53 in 0121 PM 07/16 45.73N/108.40W/4020
1 ESE Pompeys Pillar 0.50 in 1142 AM 07/16 45.99N/107.93W
Billings Airport 0.38 in 1100 AM 07/16
Billings 0.35 in 0153 PM 07/16 45.80N/108.55W/3329
Ballantine I-94 Mp 15.0 0.33 in 0200 PM 07/16 45.94N/108.15W/3100
6 W Billings 0.23 in 0200 PM 07/16 45.80N/108.67W/3387
BILLINGS 0.23 in 0155 PM 07/16 45.80N/108.67W/3395

...Wyoming...

...Sheridan County...

Story 1.88 in 0145 PM 07/16 44.57N/106.92W/5400
6.3 SW Big Horn 1.00 in 0145 PM 07/16 44.60N/107.04W/4878
2.1 N Sheridan 0.98 in 0130 PM 07/16 44.82N/106.96W/3714
1 NNE Sheridan 0.95 in 1209 PM 07/16 44.80N/106.95W
1 SSW Dayton 0.86 in 0500 PM 07/16 44.86N/107.27W
Sheridan 0.86 in 0148 PM 07/16 44.81N/106.98W/3828
Big Goose 0.80 in 0100 PM 07/16 44.58N/107.20W/7990
Burgess 0.57 in 0104 PM 07/16 44.79N/107.54W/7743
5.1 SE Beckton 0.52 in 0130 PM 07/16 44.68N/107.08W/4580
Banner 0.51 in 0155 PM 07/16 44.64N/106.73W/13864
2.9 E Beckton 0.48 in 0130 PM 07/16 44.76N/107.07W/3950
Big Horn 0.40 in 0130 PM 07/16 44.68N/106.99W/4040
12.9 SW Beckton 0.34 in 0115 PM 07/16 44.57N/107.21W/8200
SHERIDAN 0.02 in 0200 PM 07/16 44.75N/107.00W/4022

Observations are collected from a variety of sources with varying equipment and exposures. We thank all volunteer weather observers for their dedication. Not all data listed are considered official.