

TOP 5 WEATHER EVENTS OF 2017



National Weather Service – Billings, MT

These weather events were voted upon by several of our meteorologists and deemed the five most intriguing in our forecast area. Obviously, there were other impactful weather events that occurred throughout the course of the year. We apologize if there were some that you felt were more meaningful and not on this list. Enjoy!

#5: July 10: Severe Weather in Custer County

2017 did not have an active severe thunderstorm season overall, but the weather was impactful on this particular day. Severe thunderstorms along a cold front produced a peak wind gust of 71 mph at the Miles City airport during the early evening. The strong winds downed trees and power lines, and some fires were started in the city. Montana Dakota Utilities reported that the entire city was without power that night. One home was destroyed by flames. A 500 acre fire burned just 3 miles south of Miles City. Nearby, 70 mph wind gusts produced a severe dust storm near Kinsey, and a power outage was reported 18 miles southwest of Mizpah.

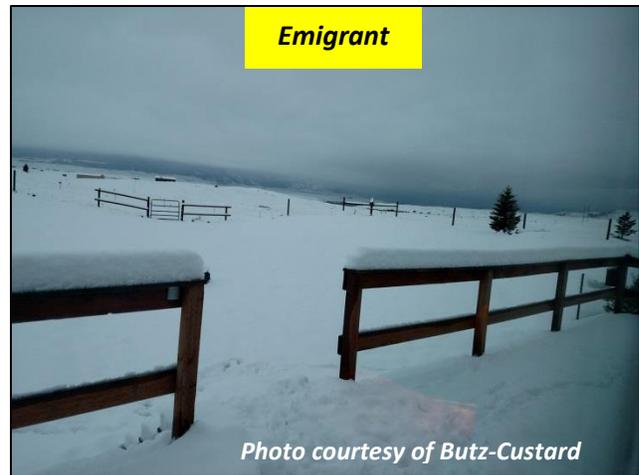


#4: May 17: Heavy Precipitation and Wet Snow across the West

A strong weather system produced significant precipitation, in the form of rain and snow, across western portions of the forecast area. Most of the area received over an inch of precipitation, and some locations picked up 3 or more inches. 4.70 inches of precipitation fell in the mountains just west of Red Lodge. Heavy wet snow fell at high elevations and along the foothills, and even some lower elevations in Park County.

Mystic Lake received a whopping 3 feet of snow. A foot fell near Pine Creek and Clyde Park, 8 inches at Livingston and McLeod, and 7 inches at Emigrant. The accumulating

snow caused travel conditions to become very difficult, resulting in several slide offs on I-90 west of Livingston. The 2.40 inches of precipitation at Livingston was a daily record for the entire month of May.



#3: January 31 – February 1: Heavy Snow

Heavy snowfall impacted the mountains and foothills. Accumulations of 8-12 inches were common from Emigrant and Livingston to Big Timber, Absarokee, Red Lodge, Fort Smith and Sheridan. Over 20 inches of snow fell in the Absaroka Mountains just southeast of Livingston. 20 inches fell at Mystic Lake, with 19 inches at Burgess Junction in the Bighorn Mountains. The Billings airport picked up 8 inches, and the 5.6 inches that fell on the 31st was a daily record.

The heavy snowfall caused severe driving conditions on Interstate 90 near Livingston. A Park County Sheriff's Office vehicle was totaled when a semitrailer lost control and hit



the car. This was one of three crashes that blocked eastbound lanes, and the interstate was closed for a few hours while the vehicles and debris were removed. Travel conditions were poor in Sheridan too. Accidents and slide offs were reported in the city and on Interstate 90 across Sheridan County. Two semis jackknifed on I-90 north of Sheridan, causing major slowdowns.



#2: December 28 – 31: Widespread Heavy Snow Followed by Arctic Air

A long-duration winter storm, a result of deep Pacific moisture overrunning a cold Canadian air mass, produced widespread heavy snowfall across the region to end the year. Accumulations were impressive, with many locations receiving a foot or more of snowfall. Some of the higher amounts included: 24.9 inches southwest of Roundup, 18-24 inches near Hardin, 12-16 inches at Livingston, 15 inches at Hysham and 10-15 inches in the Billings area. Billings' snowfall of 8.9 inches at the airport on the 29th was a daily record. The Beartooth Absaroka Mountains also received between one and two feet of snow, increasing avalanche danger in the high country. Travel conditions became treacherous due to the snow and poor visibility. The Billings airport reported a snow depth of 17 inches on the 31st, a record for New Year's Eve. The snowstorm was followed by a plunge of arctic air, the coldest air our region has seen since the 2013-14 winter. On the last day of the year, record cold high temperatures were broken at Livingston (-6), Billings (-6) and Miles City (-7). Livingston also set a daily record low with -22 degrees on the evening of the 31st. Other low temps on New Year's Eve included: Baker -31, Miles City -27, Sheridan -18 and Billings -17. Some locations were even colder on New Year's Day, including Mizpah where the temperature dropped to 41 below. BRRRR!



#1: July to early September: Hot & Dry Conditions lead to Drought and Increased Wildfire Activity

Warm and dry conditions throughout the late spring and early summer led to rapidly intensifying drought conditions across northern and eastern Montana. This “flash drought” was unpredicted and had widespread negative impacts on ranching and agriculture across the region. Precipitation amounts across northern and eastern portions of our forecast area were well below normal. In fact, for the entire year, Miles City had its 3rd driest year on record, behind only the historically dry years 1988 and 2012. Here are some precipitation statistics at a few stations:

STATION	MAY – AUGUST PRECIPITATION	PERCENT OF NORMAL
Miles City	1.32	18 %
Forsyth	3.09	41 %
Baker	3.44	40 %
Judith Gap	3.90	43 %
Ekalaka	4.74	54 %

Though our region did not experience the historic fire season that impacted western Montana, there were several grass fires as a result of the quickly drying fuels. Even without large fires nearby, skies were often smoky from the fires to our west, and air quality was quite poor at times. A few of the larger fires in our region included the following:

FIRE	LOCATION	TIME PERIOD	ACRES BURNED
Sartin Draw	Near Ashland	Late August – early September	100,000
Tongue River Complex	Near Ashland and Lame Deer	Mid-July	29,000
Buffalo	Near Broadus	Late July	3,000
Mendenhall	West Fork Boulder River	Late August	1,300

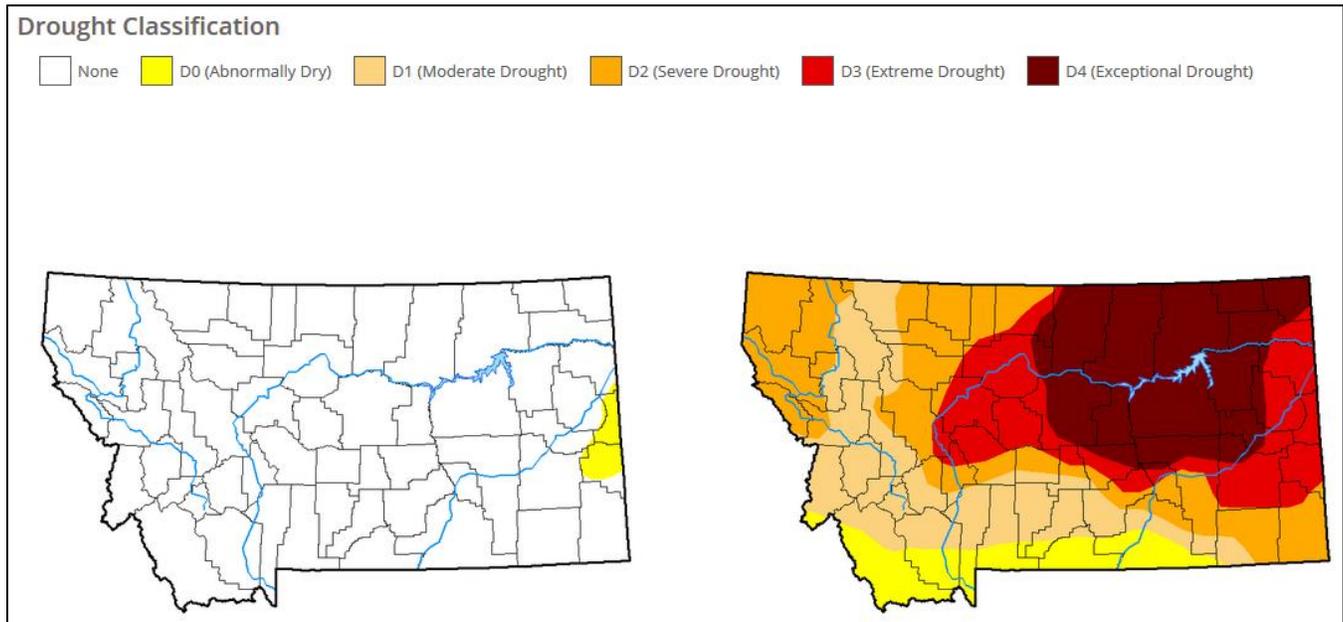
Sartin Draw Fire



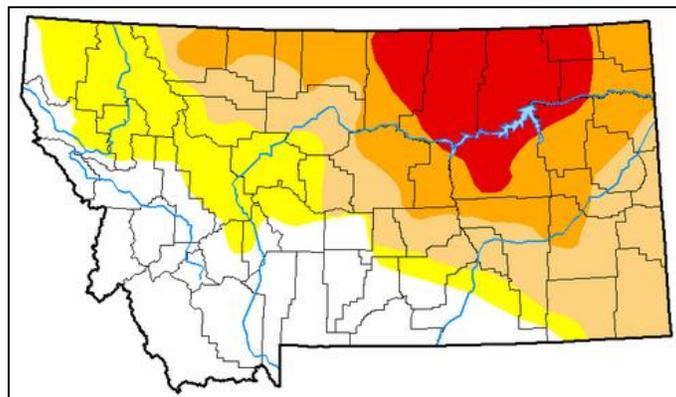
Smoky skies at Billings



Drought conditions intensified remarkably fast. In early May, Montana was entirely without drought. By late summer, drought conditions were classified as “extreme” to “exceptional” across northeast MT, including northern and eastern portions of our forecast area. See the following maps for a comparison of the U.S. Drought Monitor on May 9th (left) and September 5th (right):



In mid-September, wetter and cooler weather finally developed across the region. This helped to relieve fire weather concerns and improve overall drought conditions. However, by this time the damage had already been done. At the end of 2017, “moderate” to “severe” drought remained over parts of southeast Montana. See map below for the December 28th drought monitor:



Looking ahead, the April-May-June outlook from the Climate Prediction Center calls for equal chances of above, below or near normal temperatures and precipitation. Here’s hoping for a wet spring!