

## South Dakota December Summary

Dennis Todey and Chirag Shukla

December started with fairly moderate temperatures. But the state saw several Arctic outbreaks and winter storms throughout the month dropping temperatures well below 0 F frequently across the state with extremely cold wind chills. A few daily temperature records were tied. No new records were set. But overall the month was one of about the top 15 coldest on record because of consistently cold temperatures in the middle of the month. Individual stations ranked somewhat around 10<sup>th</sup> coldest to around 20<sup>th</sup> coldest. The lowest temperature of these reporting stations in December was -26 F in Britton. The highest temperature was 60 F in Porcupine. Monthly average temperatures ranged from 3 – 8 F below average across the state.

Several storms dropped frequent snowfalls across the state causing travel problems and creating a significant snow pack in the northeast. Many daily precipitation/snowfall records were set across the state. For the month, total snowfall amounts were near record amounts at many locations. Brookings and Milbank had the second snowiest Decembers on record. Total precipitation was lightest in the southwest part of the state. Porcupine reported 0.17" for the month. Britton had the highest total at 1.64" of liquid equivalent precipitation. The 1.53" reported in Yankton is the 5<sup>th</sup> wettest December on record.

Most of the state has at least some snow cover. The deepest snow pack is northeast of a Mobridge to Sioux Falls line where generally more than 6" is on the ground with over 12" in the far northeast corner.

Drought (D0) conditions continued over the far southwest corner of the state. Edgemont continues to be much drier than average. Edgemont (in this area) has had its third driest Sept-Dec. on record at 1.86" of precip (or about half average during this time). This seems very isolated as other stations north and east are dry but closer to average over the time.

### Dec. 13-14 blizzard

Blizzard conditions developed on 13th and 14th. Visibility was down to less than 1/4 mile on the western part. Deadwood estimated 3" of new snow by 5 pm on 13th with visibility near zero. Custer and Edgemont reported near-zero visibility with blizzard conditions. The blizzard continued east. Roscoe estimated 8" of snow and blizzard conditions. Brookings received 5" of snow with drifts over 2 feet. The Interstate I-29 was closed from Brookings to the Canadian border. Wind chills were in the range of -30 to -50F. I-90 was also closed for a period of time.

### Dec. 16-17 storm

Another round of snowfall hit the eastern central and southeastern part of the state on the 16th and 17th. Mitchell received 4.5" of snow whereas Brookings received about 2" on 17th.

The southeastern corner received even more snow on the 19th with Sioux City and surrounding areas receiving 5-8" of snow and Sioux Falls area receiving 1-4 inches of new snow.

The following day (20th) brought blizzard conditions to central and eastern part of the state.

Faulton reported blizzard conditions with near zero visibility. Blowing snow caused difficulties in traveling in Watertown and surrounding areas.

Northcentral parts reported wind chills of -35 to -45F on 21st and 22nd. Brookings hit -16F for overnight low. Many parts of the state received snow on the 23rd but the heaviest snow of around 6" was received in Harding county. Scattered snow reports were received from the Black Hills area on the 26th. On the 29th and 30th, wind gusts in the western part of the state ranged from 50 to 70 mph, especially in Lawrence, Custer and Pennington counties.

#### Records-storm events

Sioux Falls recorded nine consecutive days of snow – longest on record is 14. Records set in the month are as follows:

Station	Type	Record	Previous record
Watertown	Daily precip	0.29" on 3rd	0.16" in 1957
Rapid City AP	Snowfall	2" on 3rd	1.9" in 1955
Huron	Daily precip	0.38" on 8th	0.17" in 1924
Huron	Snowfall	2.1" on 8th	2.1" in 1961 and 1995
Pierre	Daily precip	0.31" on 9th	0.16" in 1995
Watertown	Daily precip	0.4" on 9th	0.3" in 1961
East Rapid City	Snowfall	2.5" on 14th	2.3" in 1937
East Rapid City	Min temp	-19F on 15th	14F in 1901
Pierre	Daily precip	0.48" on 15th	0.23" in 1996
Pierre	Snowfall	4" on 15th	2.3" in 1996
Watertown	Snowfall	6" on 15th	5.2" in 1955
Sisseton	Snowfall	4.3" on 15th	4" in 1973
Sioux Falls	Max temp	-4F on 15th	Tied with 1951
Watertown	Snowfall	4" on 20th	2.1" in 1990
Sisseton	Snowfall	6" on 20th	3" in 1990
Sisseton	Low temp	-22F on 22nd	Tied with 1983

#### Precipitation Records

Yankton 5<sup>th</sup> wettest December

Victor 4 NNE 4<sup>th</sup> wettest December

Brookings 2<sup>nd</sup> snowiest December 20.9 – record 22"

December temperature ranking for longer term stations and the period of record involved

Cottonwood 23<sup>rd</sup> (100 years)

Bison 11th (63)

Dupree 15<sup>th</sup> (84)

Milesville 12<sup>th</sup> (64)

Lemmon 17<sup>th</sup> (95)

Lead 10<sup>th</sup> (98)  
Ft. Mead 14<sup>th</sup> (72)  
Kennebec 21<sup>st</sup> (103)  
Pierre 9<sup>th</sup> (72)  
Timber Lake 14<sup>th</sup> (86)  
McIntosh 14<sup>th</sup> (83)  
Ipswich 14<sup>th</sup> (85)  
Aberdeen 12<sup>th</sup> (106)  
Milbank 10<sup>th</sup> (89)  
Brookings 8<sup>th</sup> (108)  
Clark 12<sup>th</sup> (104)  
Huron 18<sup>th</sup> (109)  
Forestburg 19<sup>th</sup> (108)  
Watertown 11<sup>th</sup> (105)  
Centerville 11<sup>th</sup> (101)  
Vermillion 12<sup>th</sup> (100)