

## A Review of the First Half of 2012

The first half of 2012 has been well above normal across the region. This was highlighted by a record warm March which saw numerous record highs and record high minimums set. A review of March 2012 can be found at [http://www.crh.noaa.gov/images/fsd/pdf/Climate\\_Records.pdf](http://www.crh.noaa.gov/images/fsd/pdf/Climate_Records.pdf). A review of June 2012 can be found at <http://www.crh.noaa.gov/images/fsd/pdf/June2012.pdf>. While March was exceptionally warm, every month in 2012 has been above normal across the region. Below is an examination of temperatures from 9 locations across the area – Huron, Sioux Falls, Brookings, Pickstown, Yankton and Academy in South Dakota, Marshall and Pipestone in Minnesota and Sioux City, Iowa. For reference to records, here is a table showing how long each site has been recording temperatures and precipitation.

Location	Period of Record
Huron	1882-present
Sioux City	1890-present
Sioux Falls	1893-present
Brookings	1893-present
Marshall	1935-present
Pipestone	1905-1919,1921-present
Pickstown	1948-present
Yankton	1932-1983,1985-present
Academy	1899-present

Notice that Marshall, Pickstown and Yankton do not include data from all of the 1930s which is considered the warmest decade since records began in the late 19<sup>th</sup> century.

Following a discussion of the 6 month period, charts and tables of the monthly average temperature for each location can be found.

**Links to 6 month summary for:**

[Maximum Temperature](#)

[Minimum Temperature](#)

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**Links for Monthly Mean Temperatures for:**

[Huron, South Dakota](#)

[Sioux City, Iowa](#)

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[Brookings, South Dakota](#)

[Marshall, Minnesota](#)

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[Yankton, South Dakota](#)

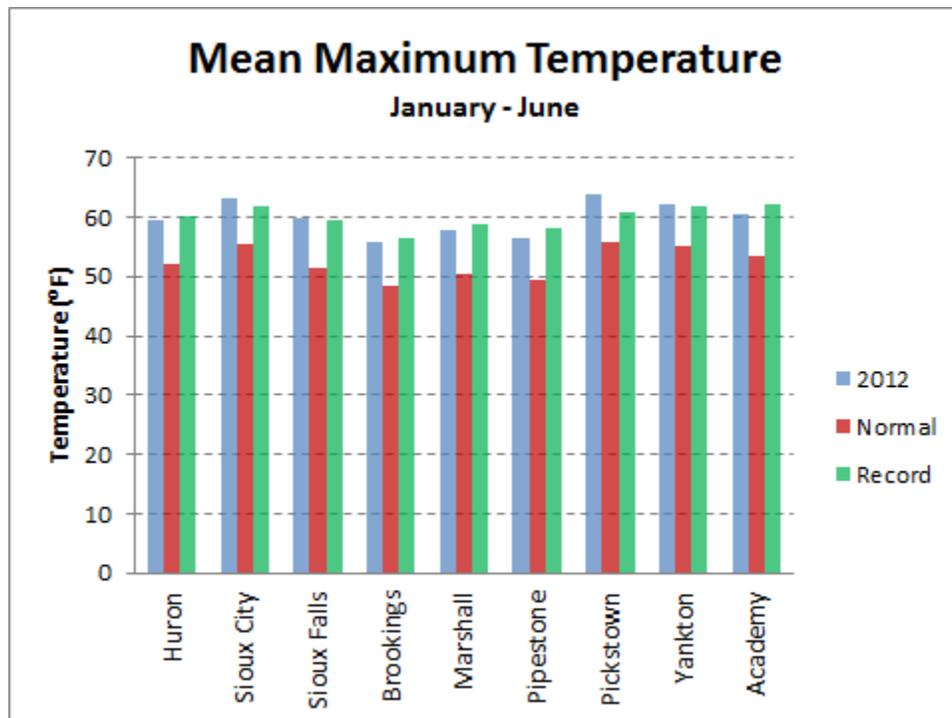
[Academy, South Dakota](#)

*Note: Data for January 1, March 30, April 10, April 12, April 20 and April 22, 2012 were missing for Pipestone. Data for April 15 were missing for Pickstown.*

## Maximum Temperature

Maximum temperatures at all of these locations have averaged 7 to 8 degrees above normal for the first six months of 2012. For Sioux City, Sioux Falls, Pickstown and Yankton, it is the warmest first months of the year on record while it is in the top 5 for the other 5 locations.

Location	2012	Normal	Departure from Normal	Rank	Record	Year of Record
Huron	59.5	52.1	7.4	2	60.0	1987
Sioux City	63.3	55.3	8.0	1	61.8	1987
Sioux Falls	59.8	51.5	8.3	1	59.5	1934
Brookings	55.7	48.4	7.3	2	56.3	1987
Marshall	57.9	50.4	7.5	2	58.8	1987
Pipestone	56.5	49.4	7.1	3	58.3	1987
Pickstown	63.9	55.7	8.2	1	60.9	1987
Yankton	62.0	55.0	7.0	1	61.8	1987
Academy	60.6	53.6	7.0	4	62.3	1931

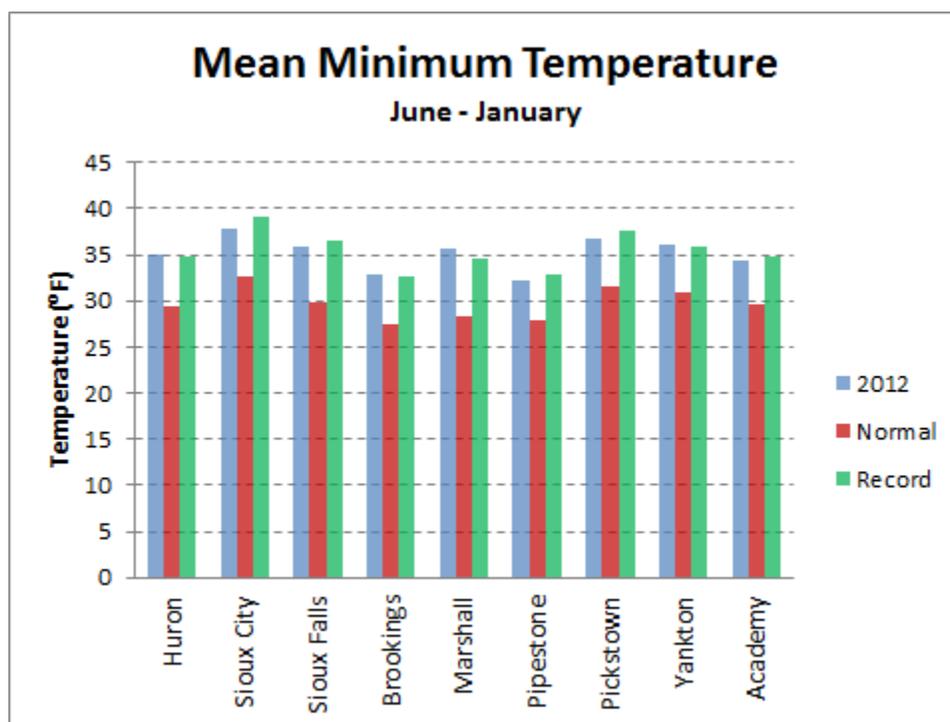


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## Minimum Temperature

Like the maximum temperature, the average minimum temperature has also been well above normal – from 4 to 7 degrees. For Huron, Brookings, Marshall, and Yankton, the first 6 months have had the warmest minimum temperatures on record while for the other locations, it has been the 2<sup>nd</sup> or 3<sup>rd</sup> warmest on record. For several locations, the record (or previous record) was from the 1921 or 1931. The other year which was also warm was 1987.

Location	2012	Normal	Departure from Normal	Rank	Record	Year of Record
Huron	34.9	29.5	5.4	1	34.7	1987
Sioux City	37.8	32.6	5.2	3	39.1	1921
Sioux Falls	35.9	29.8	6.1	2	36.5	1921
Brookings	32.9	27.4	5.5	1	32.6	1931
Marshall	35.7	28.4	7.3	1	34.5	2006
Pipestone	32.1	27.9	4.2	2	32.8	1921
Pickstown	36.7	31.6	5.1	2	37.5	1987
Yankton	36.1	31.0	5.1	1	35.9	1987
Academy	34.3	29.6	4.7	3	34.8	1931

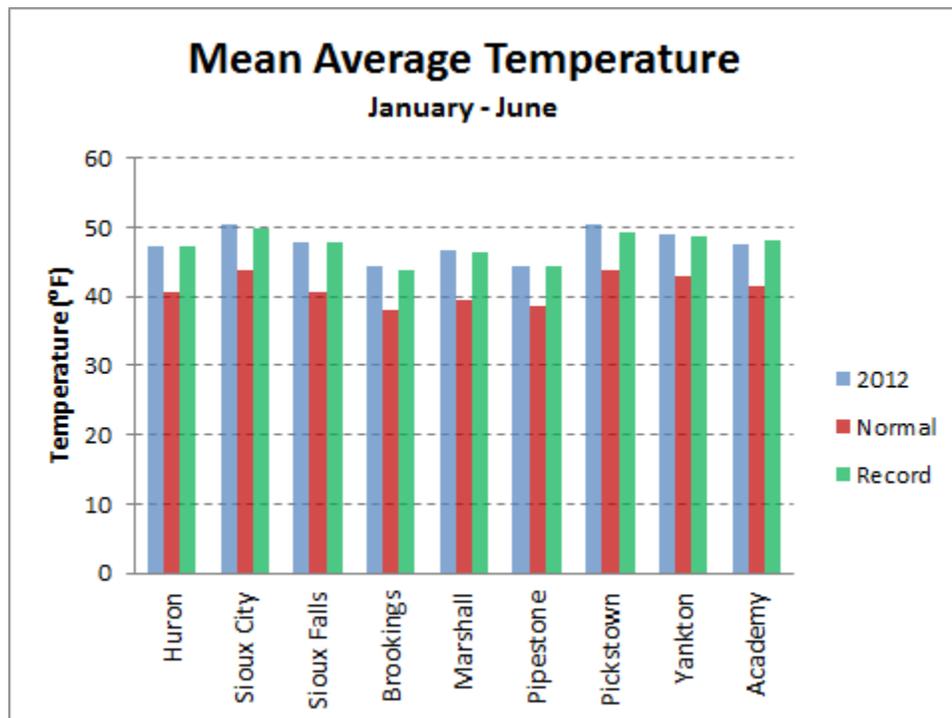


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## Average Temperature

The average temperature is the mean of the minimum and maximum temperature for each day. In terms of average temperature, all locations have been 5 to 7 degrees above normal. The average temperature for the first 6 months of 2012 is the warmest on record for 7 of the 9 locations. Only Huron and Academy did not see their record broken in 2012. In the case of Sioux City, Sioux Falls and Pipestone this ties or breaks a record from 91 years ago.

Location	2012	Normal	Departure from Normal	Rank	Record	Year of Record
Huron	47.2	40.7	6.5	2	47.3	1987
Sioux City	50.5	43.9	6.6	1	49.7	1921
Sioux Falls	47.8	40.6	7.2	1	47.7	1921
Brookings	44.3	37.9	6.4	1	43.9	1934, 1987
Marshall	46.8	39.4	7.4	1	46.4	1987
Pipestone	44.3	38.6	5.7	Tied 1	44.3	1921
Pickstown	50.3	43.7	6.6	1	49.2	1987
Yankton	49.0	42.9	6.1	1	48.8	1987
Academy	47.5	41.6	5.9	3	48.2	1934

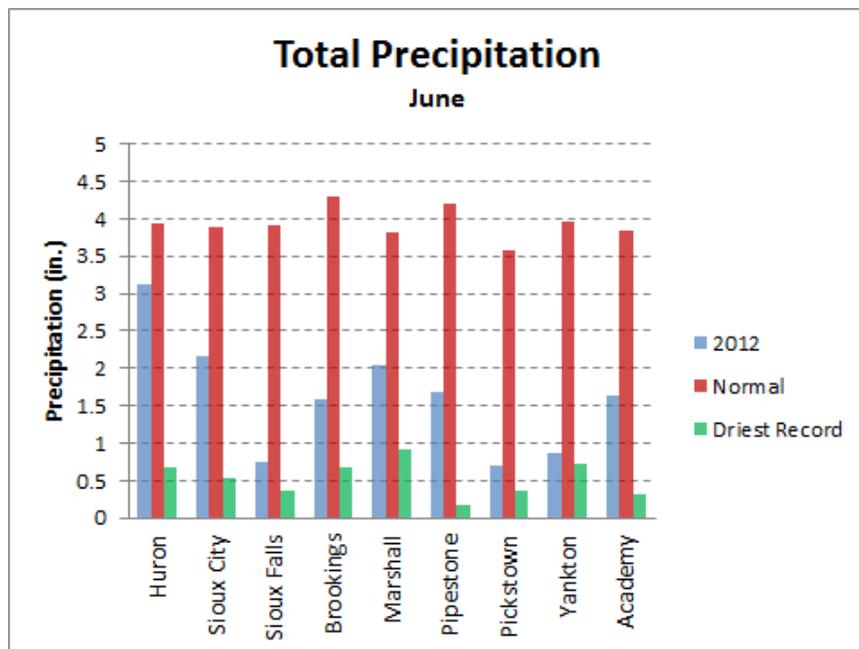


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## Precipitation

While the last 4 to 6 weeks have been dry across the region, precipitation across the area has been running from a couple of inches below normal in portions of South Dakota to well above normal in southwestern Minnesota. In fact, the first 6 months of 2012 were the 4<sup>th</sup> wettest for Pipestone. The reason for the above normal conditions was a very wet May where Pipestone and Marshall both had record rainfall for the month – 11.06 in. and 8.05 in., respectively. Brookings had 6.94 inches of rain in May which was the 4<sup>th</sup> wettest May on record. For all these sites, the May total constitutes approximately 50% of the total precipitation for the year. At the same time, the very dry June in Sioux Falls, Yankton and Pickstown has resulted in rainfall deficits of 1 to 4 inches. While nowhere near the record driest month, it is the driest start to the year since 2009 in Sioux Falls and 2002 in Yankton and Pickstown.

Location	2012	Normal	Departure from Normal	Driest Record	Year of Record
Huron	14.27	11.91	2.36	4.21	1934
Sioux City	16.65	13.87	2.78	5.16	1910
Sioux Falls	11.69	13.25	-1.56	4.80	1931
Brookings	12.63	11.32	1.31	4.42	1933
Marshall	16.03	13.30	2.73	5.77	1981
Pipestone	21.20	13.31	7.89	7.07	1980
Pickstown	9.64	12.96	-3.32	5.02	2002
Yankton	10.59	13.80	-3.21	5.51	1956
Academy	12.33	12.77	-0.44	5.55	1976



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## Days with extreme temperatures

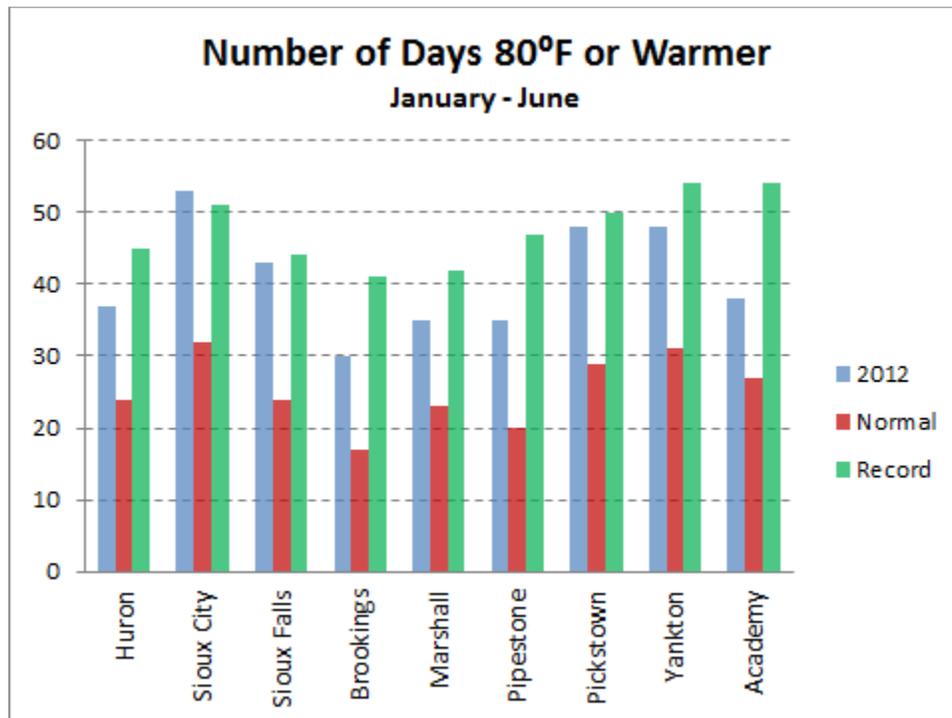
One can also count the number of days with extreme temperatures as another way to judge how warm the weather is. One measure is to examine how many days were at or above 80°F while another measure is to examine how many days had a minimum temperature at or above 60°F. While these temperatures are more typical from June to August, when they occur earlier in the year they can be another indicator of how warm it has been across the area.

Not surprisingly, all locations have had well above normal the number of days at or above 80°F. Most places have had 2 to 3 weeks more of 80 degree weather than would occur in a normal year. Sioux City has seen more 80 degrees through in the first six months of 2012 than has occurred in any other year on record while Sioux Falls is tied for the 2<sup>nd</sup> most 80 degree days. In most cases, the (old) record was from 1987 although Sioux Falls', Brookings' and Academy's record were from the 1930s.

Despite minimum temperatures being much above normal for the first 6 months of 2012, the number of days with minimum temperatures above 60 degrees was only 7 to 10 days more than normal. And at all locations, the number of days in 2012 was well below the record – many of which were set in 1991. This is likely because minimum temperatures were 5 to 15 degrees above normal from January through March primarily because of the lack of snow cover. However, for April through June minimum temperatures were only 1 to 6 degrees above normal.

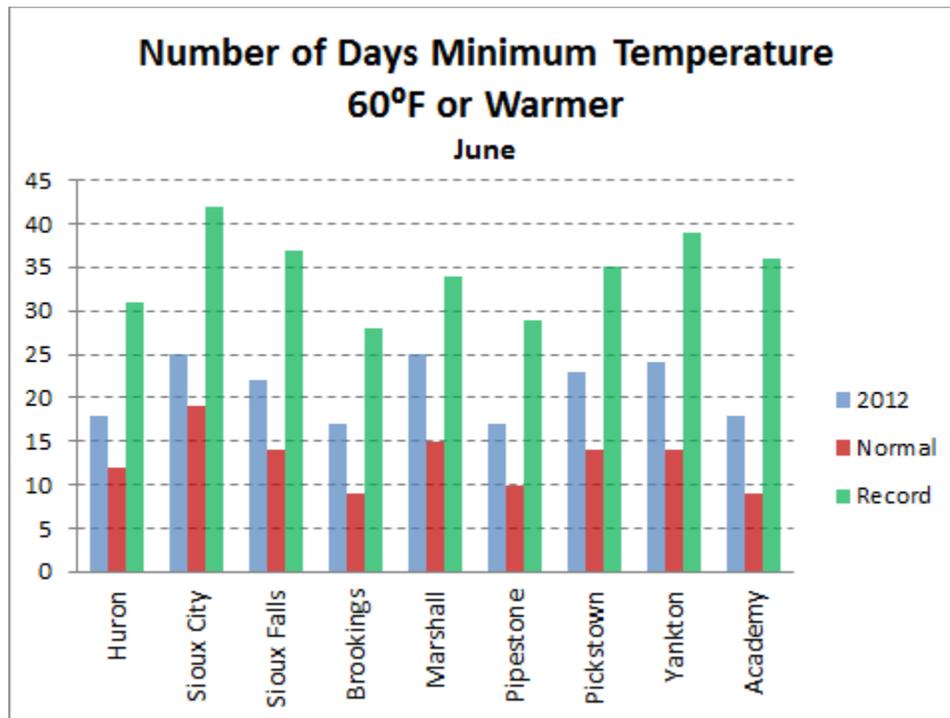
## Number of days at or above 80 Degrees

Location	2012	Normal	Departure from Normal	Record	Year of Record
Huron	37	24	13	45	1987
Sioux City	53	32	21	51	1987
Sioux Falls	43	24	19	44	1933
Brookings	30	17	13	41	1911, 1934
Marshall	35	23	12	42	1988
Pipestone	35	20	15	47	1977
Pickstown	48	29	19	50	1987
Yankton	48	31	17	54	1987
Academy	38	27	11	54	1934



## Number of days minimum temperature at or above 60 Degrees

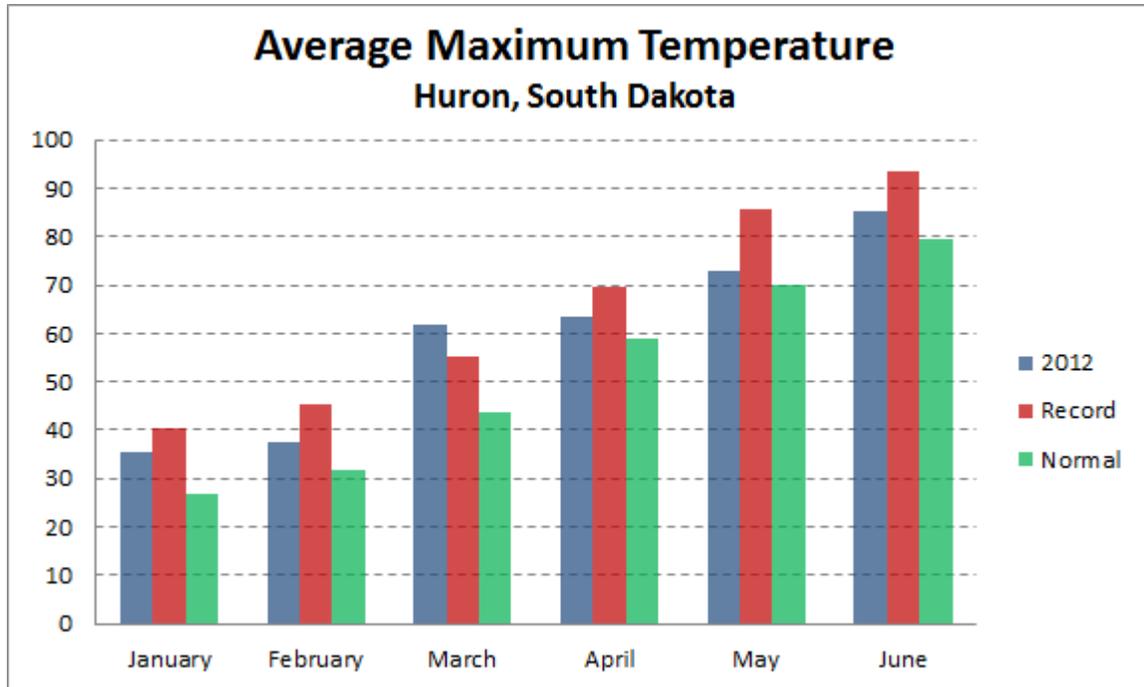
Location	2012	Normal	Departure from Normal	Record	Year of Record
Huron	18	12	6	31	1991
Sioux City	25	19	6	42	1991
Sioux Falls	22	14	8	37	1991
Brookings	17	9	8	28	1991
Marshall	25	15	10	34	1991
Pipestone	17	10	7	29	1991
Pickstown	23	14	9	35	1991
Yankton	24	14	10	39	1934
Academy	18	9	9	36	1934



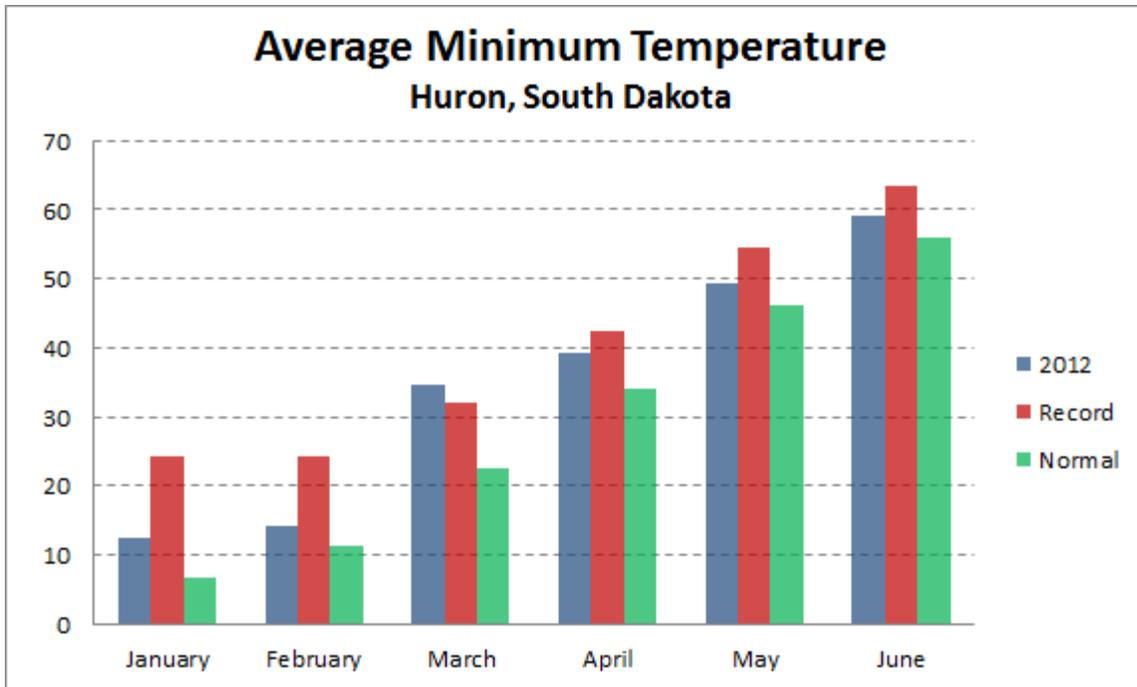
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## Monthly Temperatures

### Huron, South Dakota



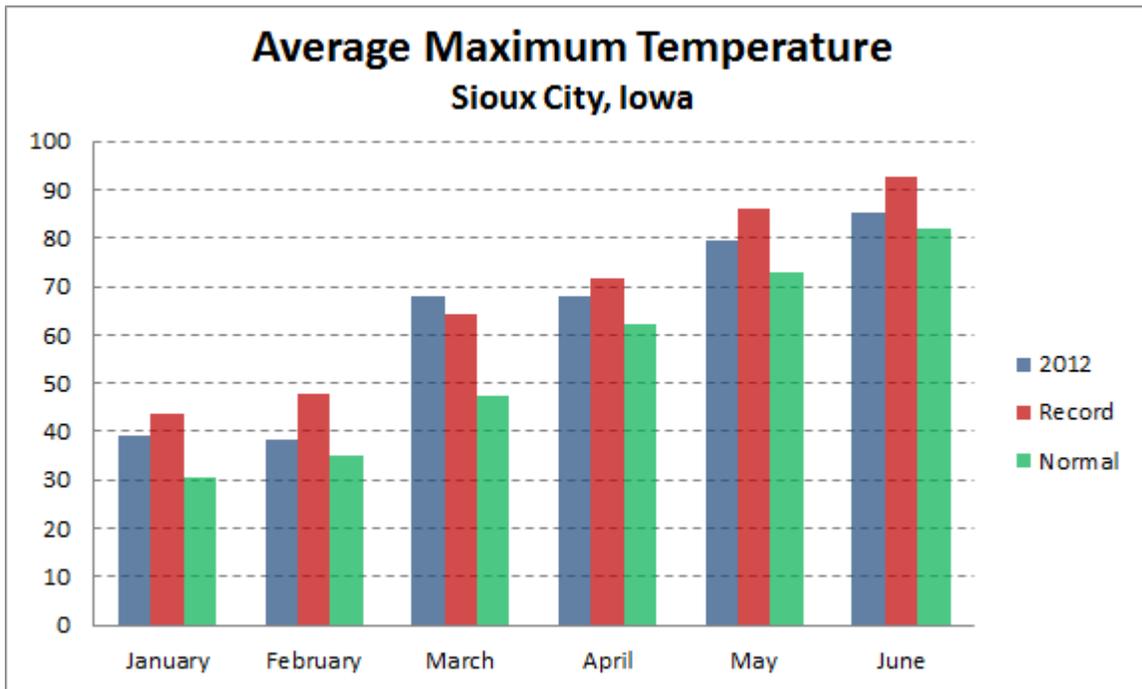
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	35.3	26.8	8.5	Tied 9	40.4	1931
February	37.4	31.8	5.6	Tied 18	45.3	1954
March	61.7	43.7	18.0	1	55.1	2000
April	63.3	59.0	4.3	20	69.5	1895
May	73.0	70.2	2.8		85.5	1934
June	85.2	79.6	5.6	Tied 11	93.3	1933



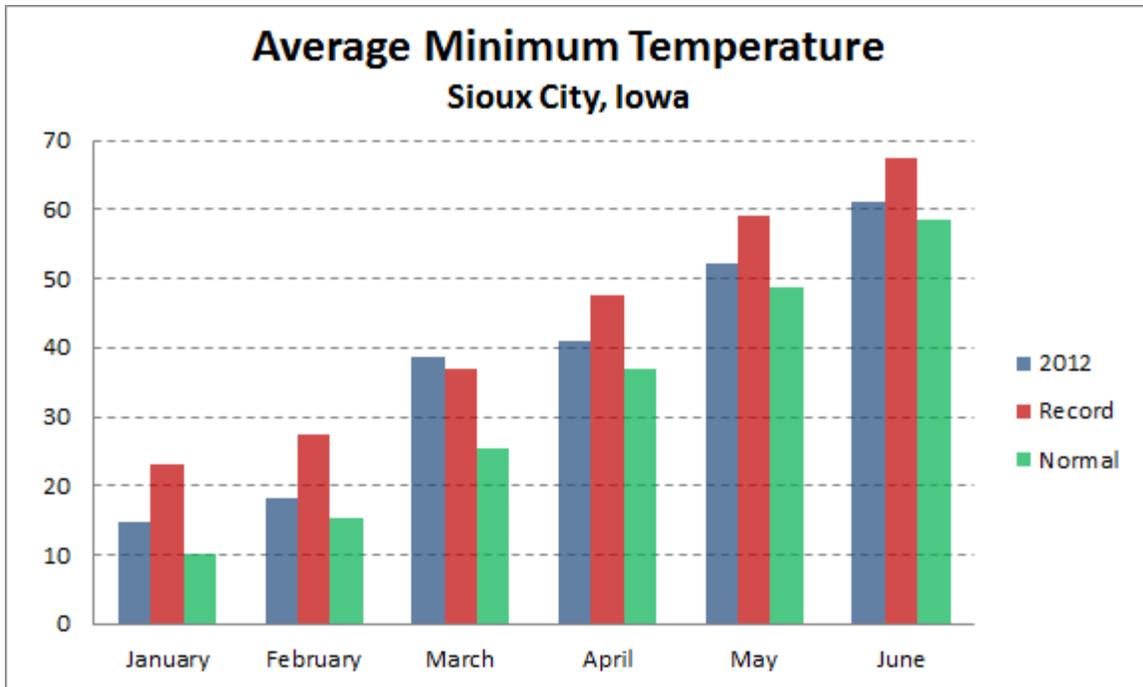
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	12.5	6.6	5.9	Tied 14	24.1	2006
February	14.2	11.4	2.8		24.3	1935, 1998
March	34.5	22.6	11.9	1	32.1	1973
April	39.2	34.0	5.2	Tied 8	42.5	1915
May	49.2	46.0	3.2	Tied 19	54.5	1934
June	59.2	55.9	3.3	13	63.4	1933, 1991

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## Sioux City, Iowa



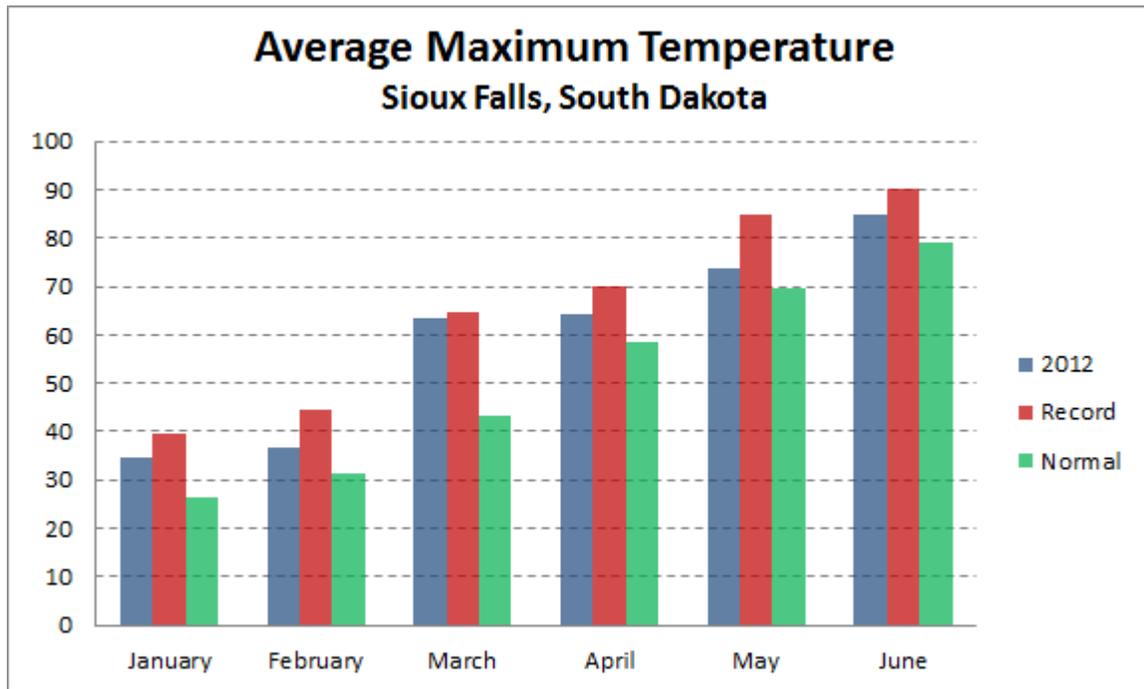
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	39.3	30.5	8.8	8	43.8	2006
February	38.4	34.9	3.5		47.8	1954
March	67.8	47.5	20.3	1	64.3	1910
April	68.1	62.3	5.8	7	71.8	1955
May	79.3	73.0	6.3	4	86.0	1934
June	85.1	82.1	3.0	Tied 16	92.6	1933



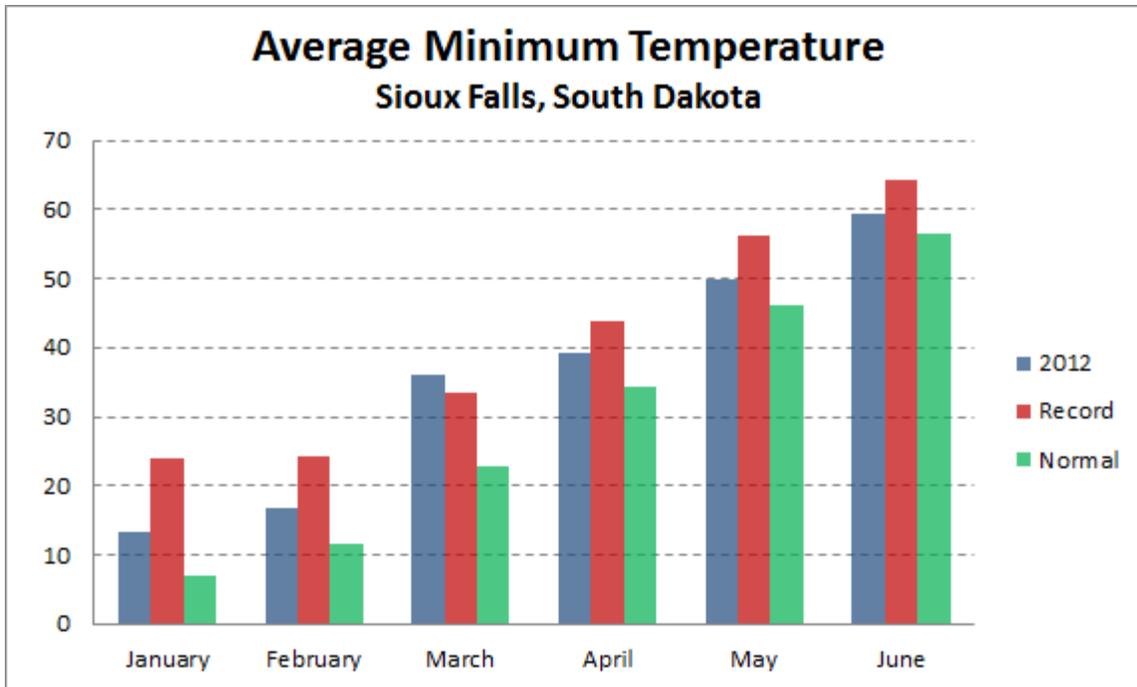
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	14.8	10.2	4.6		23.1	2006
February	18.3	15.2	3.1		27.5	1954
March	38.6	25.5	13.1	1	36.9	1910
April	40.9	36.8	4.1		47.5	1925
May	52.1	48.7	3.4		59.1	1934
June	61.2	58.6	2.6		67.4	1933

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## Sioux Falls, South Dakota



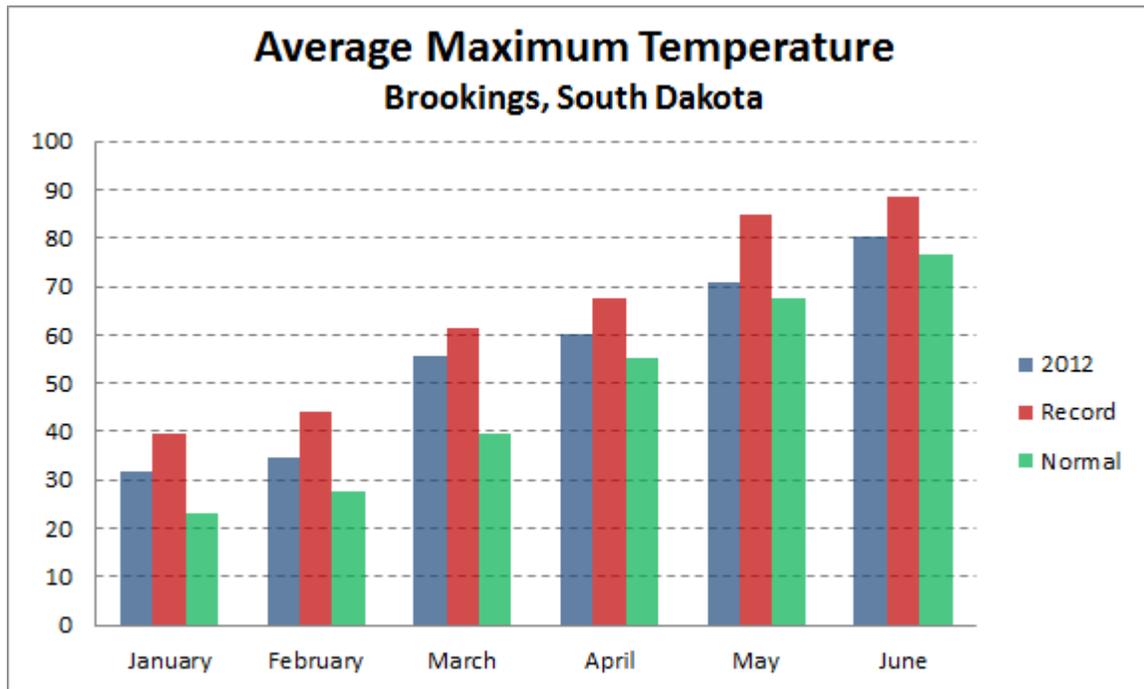
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	34.6	26.4	8.2	14	39.5	1990
February	36.5	31.3	5.2	17	44.5	1987
March	63.5	43.1	20.4	2	64.8	1910
April	64.2	58.5	5.7	16	69.9	1895
May	73.6	69.8	3.8		85.0	1934
June	84.7	79.2	5.5	11	90.3	1933



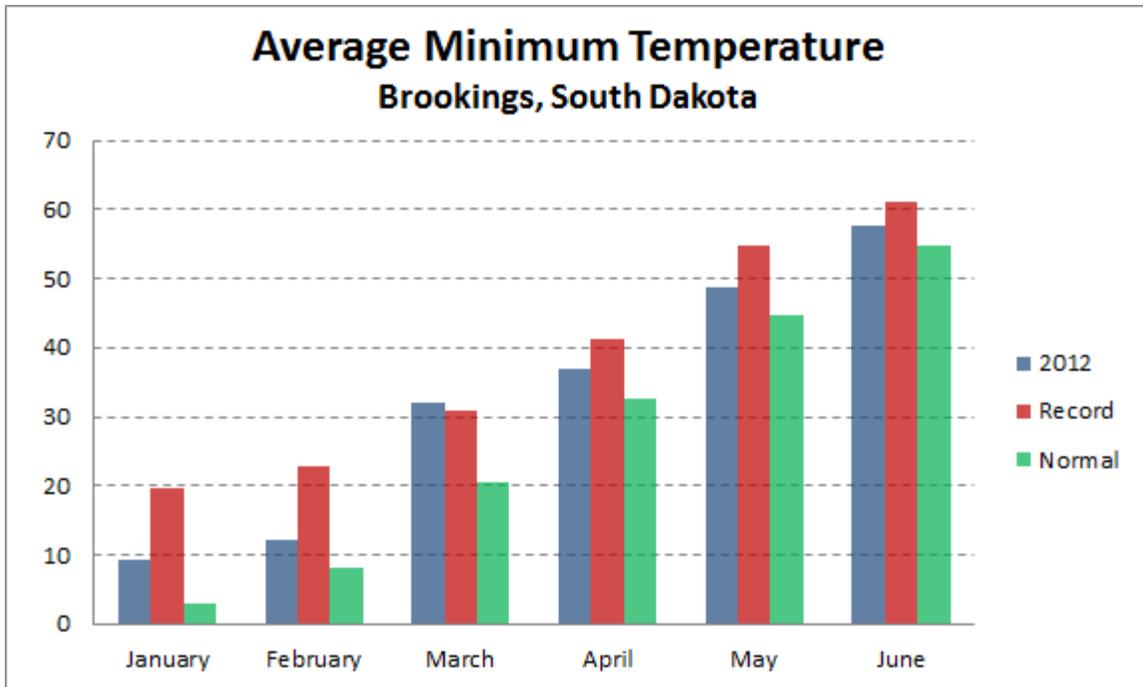
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	13.3	6.9	6.4	15	24.0	2006
February	16.7	11.7	5.0	20	24.1	1998
March	36.1	22.7	13.4	1	33.5	1910
April	39.1	34.4	4.7	15	43.8	1925
May	49.8	46.2	3.6		56.1	1977
June	59.5	56.4	3.1	Tied 16	64.3	1991

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## Brookings, South Dakota



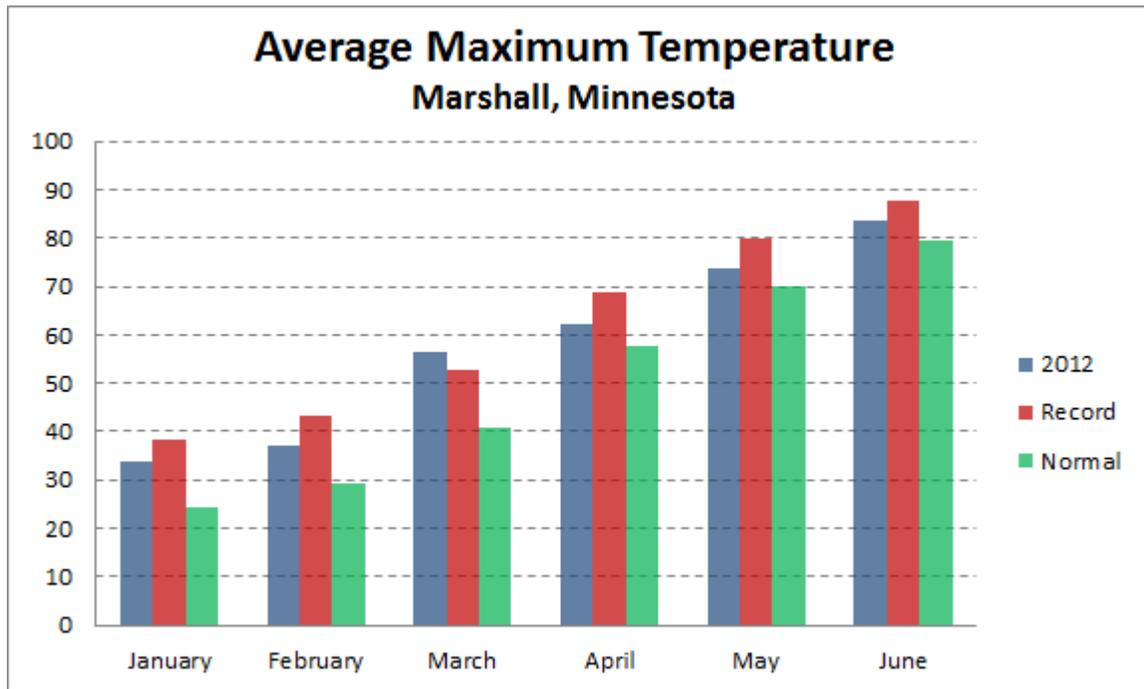
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	31.7	22.9	8.8	15	39.7	1944
February	34.6	27.8	6.8	17	44.2	1931
March	55.5	39.4	16.1	2	61.4	1910
April	60.3	55.4	4.9		67.7	1925
May	70.7	67.5	3.2		85.0	1934
June	80.2	76.6	3.6		88.7	1911



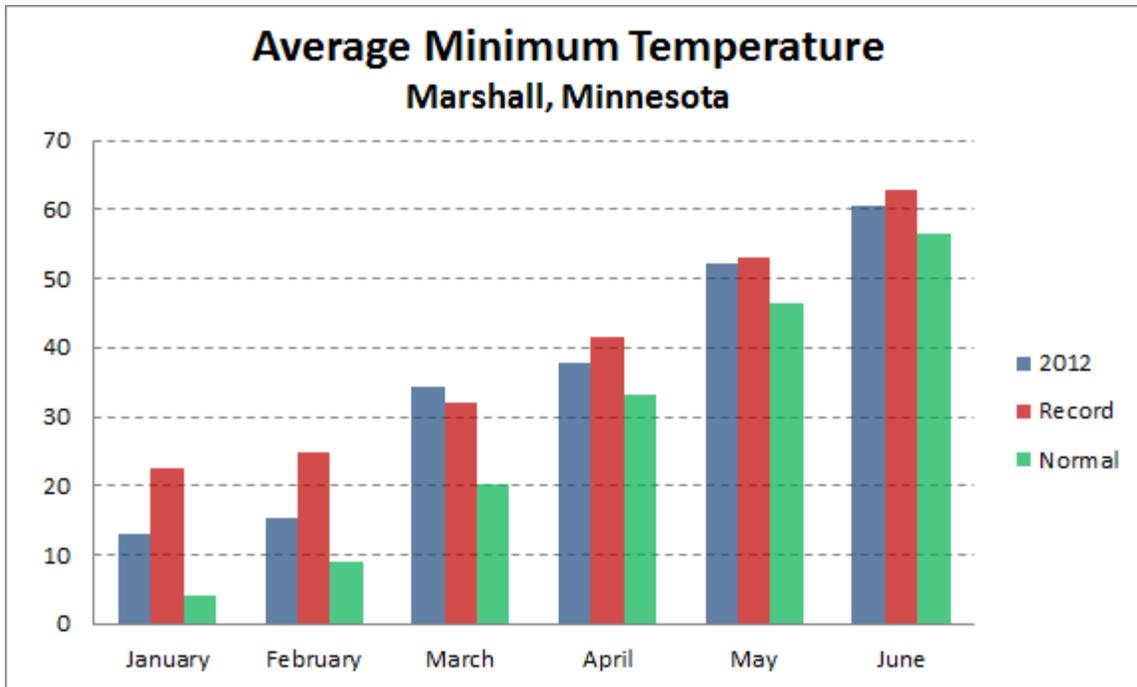
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	9.2	2.9	6.3	17	19.5	2006
February	12.2	8.1	4.1		22.7	1954
March	31.9	20.6	11.3	1	30.9	1910
April	36.9	32.7	4.2	9	41.1	1915
May	48.8	44.6	4.2	11	54.7	1934
June	57.7	54.8	2.9	14	61.2	1991

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## Marshall, Minnesota



Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	33.9	24.5	9.4	4	38.2	1990
February	37.3	29.2	8.1	6	43.1	1987
March	56.4	40.7	16.1	1	52.8	2000
April	62.1	57.6	4.5	Tied 12	69.0	1987
May	73.6	70.2	3.4	15	80.1	1939
June	83.5	79.7	3.8	6	87.8	1988

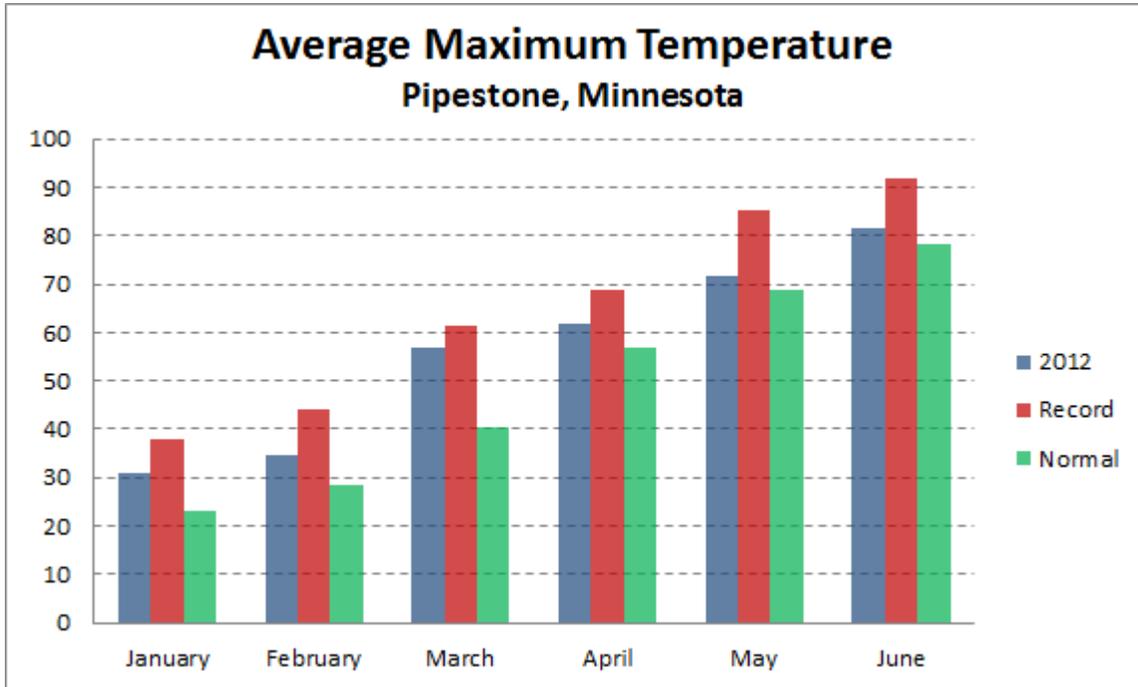


Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	13.0	4.1	8.9	8	22.4	2006
February	15.4	9.0	6.4	14	24.9	1954
March	34.3	20.1	14.2	1	32.0	1946
April	37.8	33.2	4.6	11	41.5	2006
May	52.2	46.5	5.7	Tied 4	53.1	1998
June	60.6	56.6	4.0	8	63.0	1991

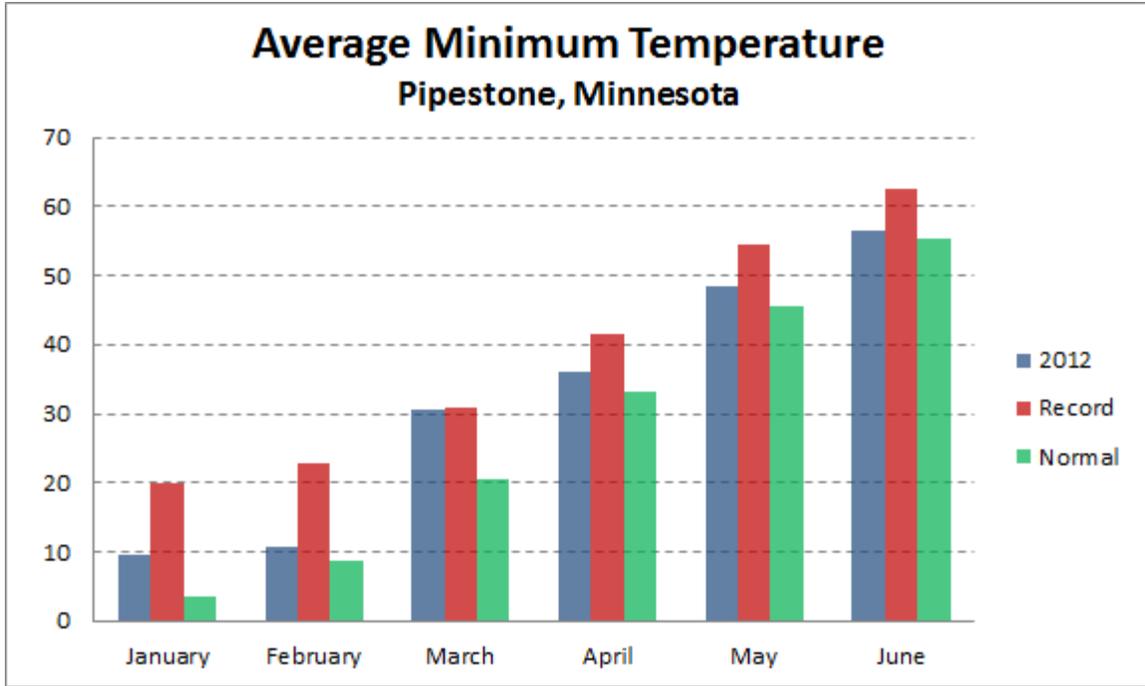
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## Pipestone, Minnesota

*Note: Data for January 1, 2012, March 30, April 10, April 12, April 20 and April 22, 2012.*



Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	31.1	23.3	7.8	17	37.9	1944
February	34.8	28.4	6.4	16	44.1	1931, 1987
March	56.7	40.3	16.4	2	61.3	1910
April	62.0	56.8	5.2	Tied 14	68.8	1925
May	71.8	69.0	2.8		85.3	1934
June	81.6	78.1	3.5		91.8	1933

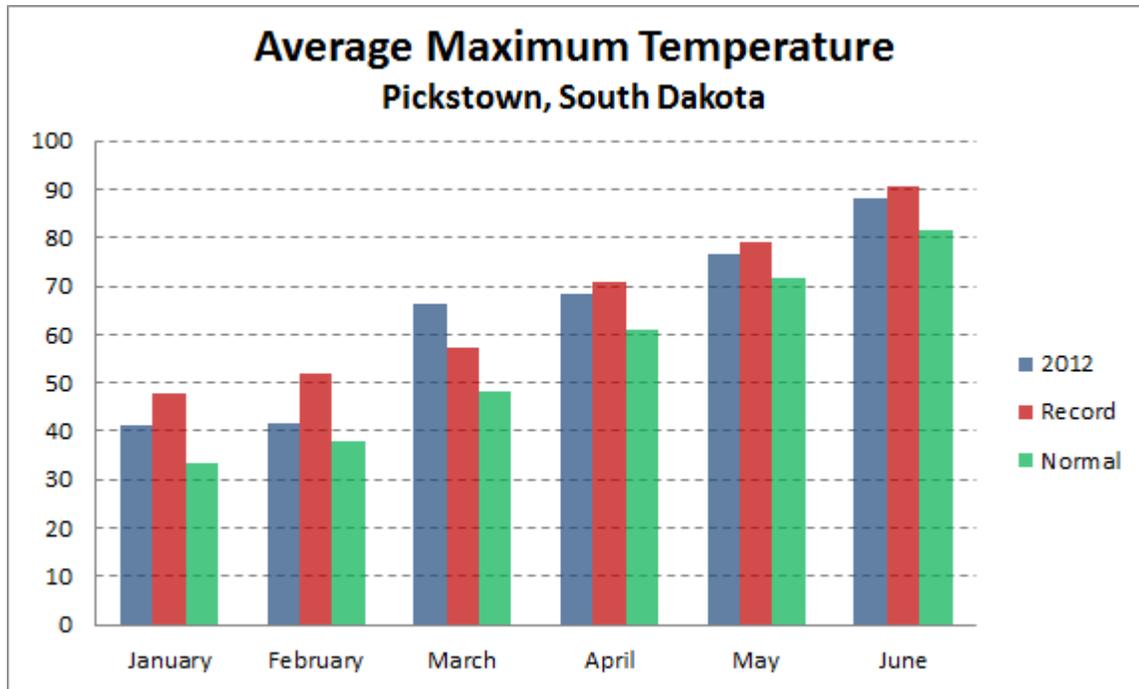


Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	9.4	3.4	6.0	19	19.9	2006
February	10.8	8.6	2.2		22.9	1998
March	30.5	20.6	9.9	Tied 2	30.8	1910
April	36.0	33.2	2.8		41.5	1915
May	48.5	45.6	2.9	Tied 15	54.5	1934
June	56.6	55.4	1.2		62.7	1933

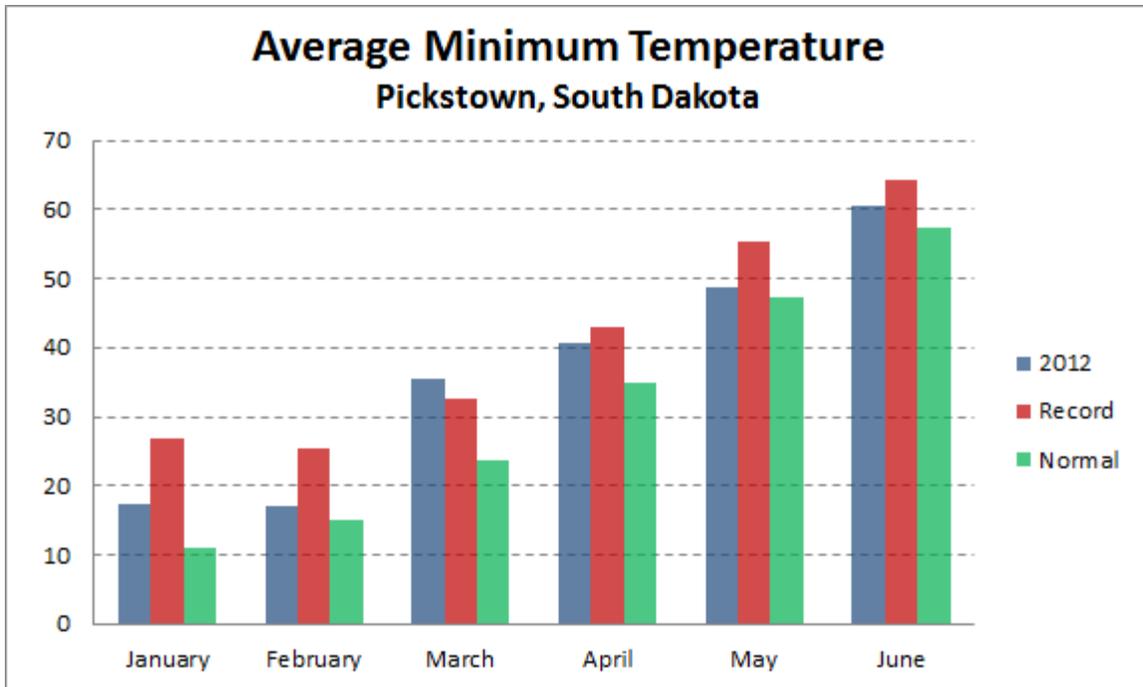
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## Pickstown, South Dakota

Data for April 15 were missing.



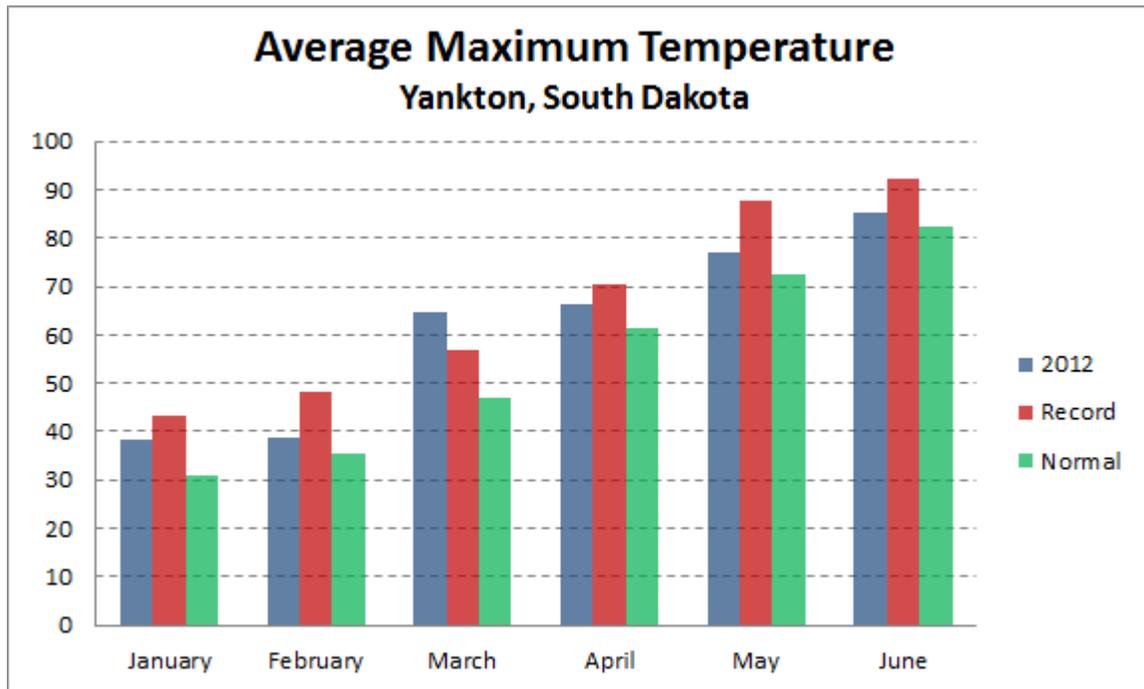
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	41.3	33.5	7.8	5	47.8	2006
February	41.5	38.1	3.4	18	51.9	1954
March	66.5	48.1	18.4	1	57.3	1968
April	68.2	60.9	7.3	4	71.0	1955
May	76.5	71.7	4.8	8	78.9	1977
June	88.3	81.4	6.9	4	90.6	1956



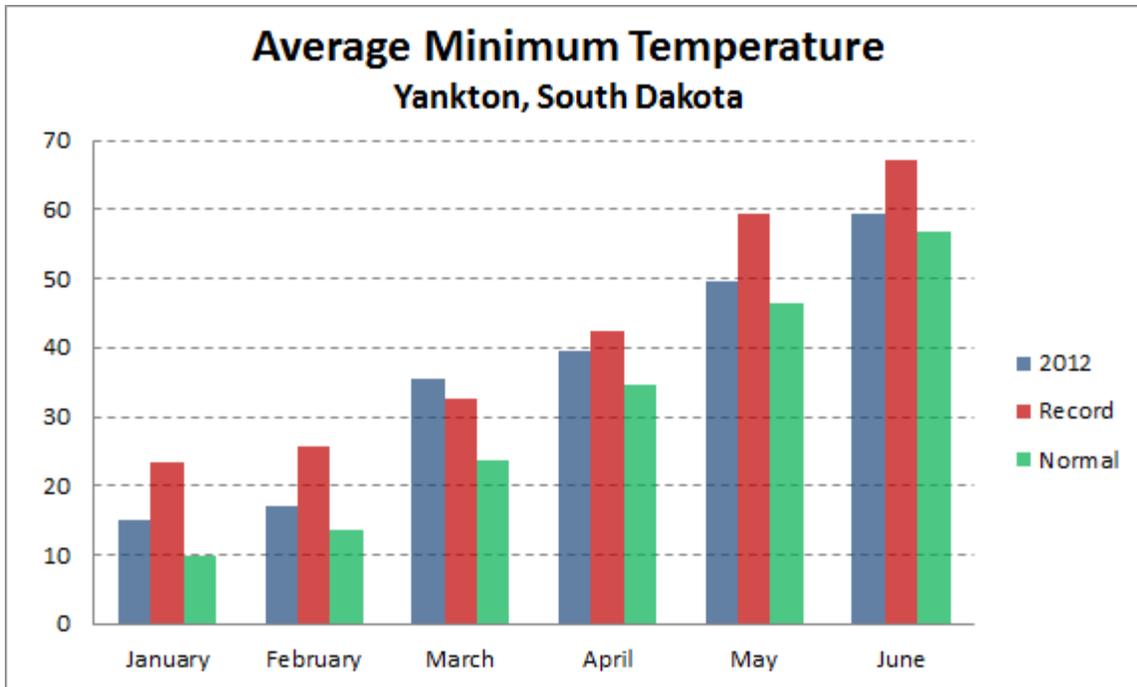
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	17.2	11.1	6.1	Tied 7	26.7	2006
February	16.9	14.9	2.0		25.4	1987
March	35.5	23.7	11.8	1	32.6	1973
April	40.7	35.0	5.7	4	43.1	1955
May	48.8	47.2	1.6		55.5	1977
June	60.6	57.4	3.2	11	64.3	1956

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## Yankton, South Dakota



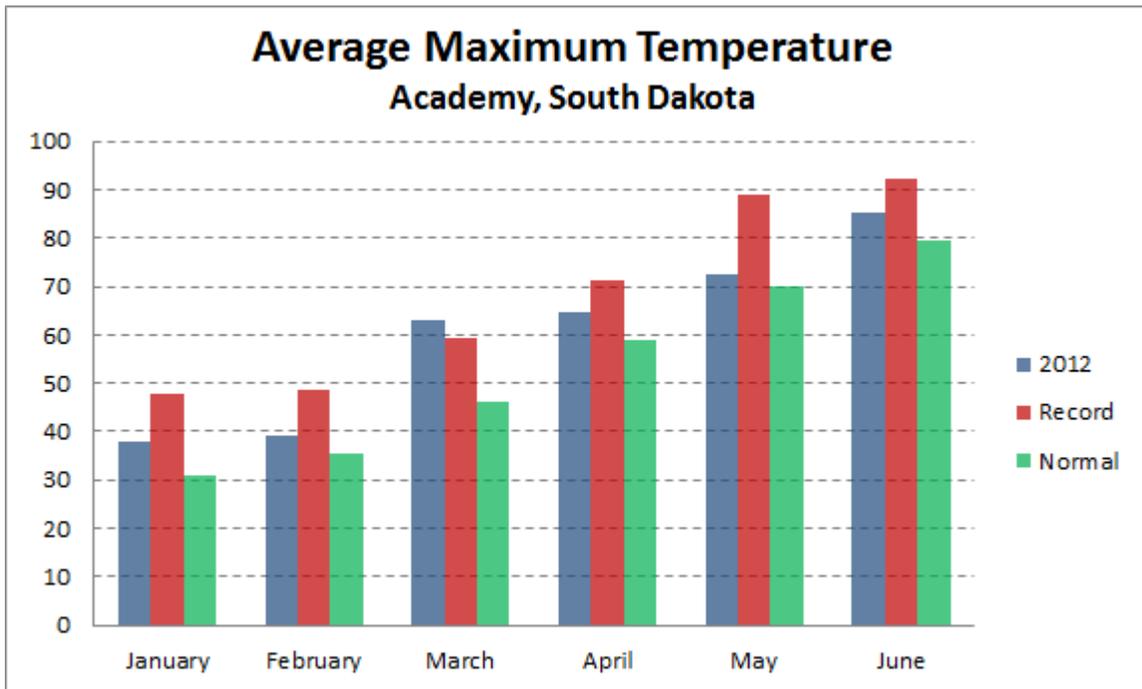
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	38.4	30.9	7.5	7	43.4	1933
February	38.7	35.6	3.1	20	48.2	1954
March	64.8	46.8	18.0	1	56.9	1968
April	66.5	61.2	5.3	Tied 8	70.5	1955
May	77.2	72.5	4.7	9	87.8	1934
June	85.2	82.3	2.9	8	92.3	1933



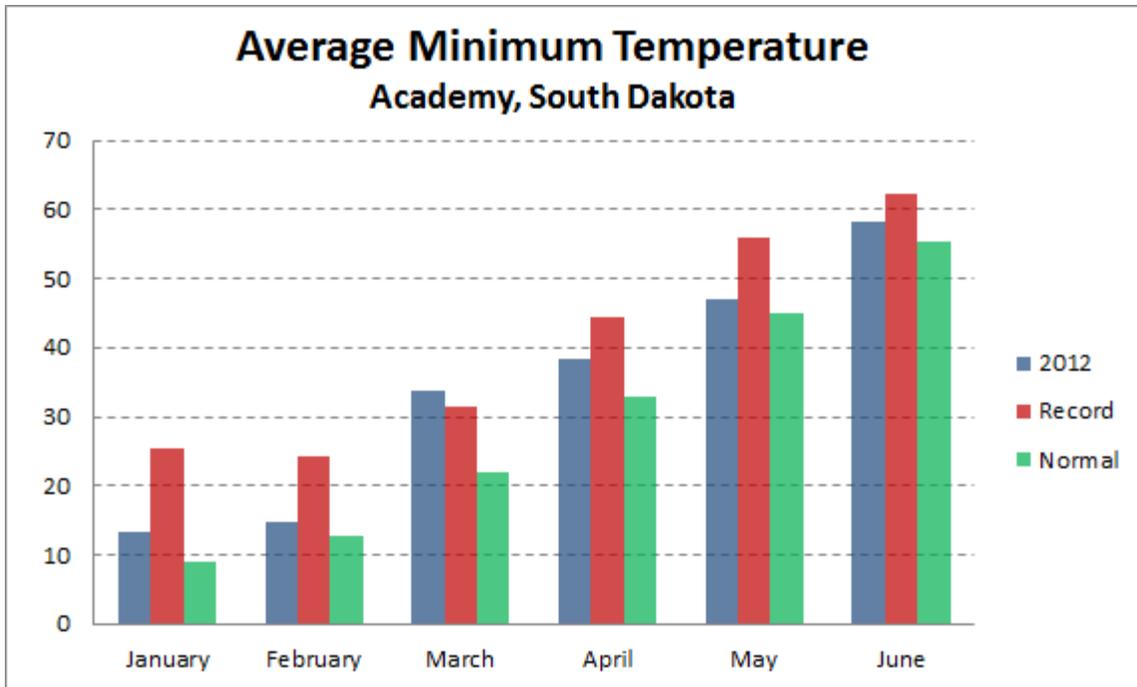
Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	15.0	9.7	5.3	9	23.3	2006
February	16.9	13.7	3.2	16	25.7	1998
March	35.5	23.8	11.7	1	32.5	1973
April	39.4	34.5	4.9	12	42.3	1932
May	49.5	46.3	3.2		59.4	1934
June	58.2	56.8	2.6	17	67.2	1933

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## Academy, South Dakota



Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	37.8	31.0	6.8		47.6	1931
February	39.3	35.6	3.7		48.7	1931
March	63.2	46.0	17.2	1	59.2	1968
April	64.8	58.9	5.9		71.2	1981
May	72.5	69.9	2.6		88.9	1934
June	85.1	79.5	5.6		92.1	1956



Month	2012 Average	Normal	Departure from Normal	Rank	Record	Year of Record
January	13.2	9.0	4.2		25.3	2006
February	14.8	12.8	2.0		24.3	1935, 1998
March	33.8	21.9	11.9	1	31.4	1973
April	38.5	33.0	5.5	12	44.5	1915
May	46.9	45.1	1.8		55.9	1934
June	58.2	55.3	2.9	17	62.2	1931

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