

Climatography of the United States

No. 20

1971-2000

Station: MINDEN, NE

COOP ID: 255565

Climate Division: NE 8

NWS Call Sign:

Elevation: 2,160 Feet Lat: 40° 31N

Lon: 98° 57W

Temperature (°F)

Mean (1)				Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
Month	Daily Max	Daily Min	Mean	Highest Daily(2)	Year	Day	Highest Month(1) Mean	Year	Lowest Daily(2)	Year	Day	Lowest Month(1) Mean	Year	Heating	Cooling	Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	35.2	11.0	23.1	78	1990	10	33.8	1986	-24	1950	26	9.2	1979	1299	0	.0	.0	5.7	10.8	30.4	5.7
Feb	42.0	15.9	29.0	81	1962	11	37.8	1976	-20+	1993	23	15.3	1978	1010	0	.0	.0	10.4	7.4	25.6	3.0
Mar	51.6	24.6	38.1	88+	1989	10	45.4	1986	-17	1960	3	31.2	1998	833	0	.0	.0	19.1	2.3	21.6	.6
Apr	63.1	35.6	49.4	96	1989	23	56.5	1981	9	1994	6	42.9	1983	472	2	.0	.5	26.5	.1	9.5	.0
May	73.0	48.6	60.8	99	1994	31	65.9	1977	23	1967	2	55.7	1995	177	46	.0	1.1	31.0	.0	.7	.0
Jun	83.8	58.3	71.1	107	1988	21	74.8	1994	36	1964	2	65.1	1982	24	204	.8	8.5	30.0	.0	.0	.0
Jul	89.0	63.6	76.3	112	1954	12	81.2	1974	44	1971	30	70.3	1992	1	351	2.2	15.6	31.0	.0	.0	.0
Aug	86.3	60.6	73.5	107	1983	16	81.2	1983	41	1950	20	68.3	1992	16	278	.9	12.5	31.0	.0	.0	.0
Sep	78.6	50.5	64.6	107	1984	1	70.9	1998	20	1984	29	59.3	1996	96	82	.1	5.4	29.9	.0	.8	.0
Oct	67.1	37.6	52.4	95	1963	1	56.1	1975	1	1997	27	47.6	1976	393	1	.0	.4	28.9	.2	6.2	.0
Nov	48.8	23.7	36.3	82+	1999	14	45.7	1999	-15	1976	28	26.3	1985	862	0	.0	.0	15.9	3.0	22.5	.4
Dec	37.2	14.4	25.8	80	1964	23	32.9	1979	-31	1989	22	7.4	1983	1215	0	.0	.0	7.0	9.0	29.9	2.8
Ann	63.0	37.0	50.0	112	Jul 1954	12	81.2+	Aug 1983	-31	Dec 1989	22	7.4	Dec 1983	6398	964	4.0	44.0	266.4	32.8	147.2	12.5

+ Also occurred on an earlier date(s)

@ Denotes mean number of days greater than 0 but less than .05

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

(3) Derived from 1971-2000 serially complete daily data

075-A

Climatology of the United States

No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: MINDEN, NE

COOP ID: 255565

Climate Division: NE 8

NWS Call Sign:

Elevation: 2,160 Feet Lat: 40°31N

Lon: 98°57W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.44	.40	.90	1965	23	1.50	1992	.00+	1986	3.6	1.5	.1	.0	.00	.07	.16	.23	.30	.37	.45	.54	.67	.87	1.07
Feb	.51	.42	1.63	1971	19	2.10	1971	.00+	1996	3.5	1.5	.2	@	.00	.04	.12	.20	.28	.38	.49	.63	.83	1.15	1.47
Mar	2.03	1.65	3.11	1979	22	7.72	1987	.16	1988	6.3	3.7	1.2	.4	.15	.28	.54	.82	1.13	1.49	1.92	2.47	3.23	4.50	5.77
Apr	2.18	2.10	2.33	1984	21	6.44	1984	.00	1989	7.2	4.8	1.3	.4	.28	.55	.92	1.23	1.54	1.87	2.24	2.69	3.27	4.21	5.09
May	4.12	3.68	2.85	1950	29	8.01	1996	.88	1992	10.1	7.1	3.0	1.0	1.26	1.66	2.24	2.74	3.23	3.73	4.29	4.94	5.78	7.10	8.32
Jun	3.42	3.10	5.30	1967	14	7.91	1975	.08	1978	8.0	5.9	2.1	1.0	.85	1.17	1.67	2.11	2.55	3.01	3.52	4.13	4.93	6.19	7.38
Jul	3.95	3.04	4.21	1993	27	16.13	1993	.40	1997	8.0	5.9	2.7	1.2	.58	.91	1.48	2.03	2.60	3.22	3.94	4.82	6.01	7.94	9.80
Aug	3.18	2.34	3.28	1985	3	8.29	1999	.03	1976	7.7	5.2	2.2	.8	.43	.69	1.15	1.59	2.05	2.56	3.15	3.88	4.86	6.47	8.02
Sep	2.22	1.59	3.75	1950	20	9.40	1973	.00	1984	5.6	4.0	1.4	.6	.12	.32	.66	.98	1.33	1.72	2.17	2.73	3.49	4.76	5.99
Oct	1.53	1.12	2.27	1992	8	4.16	1997	.00	1988	4.7	2.8	1.1	.4	.05	.17	.39	.61	.85	1.13	1.46	1.88	2.45	3.41	4.35
Nov	1.32	1.04	1.99	1996	16	3.39	1975	.00	1989	4.7	2.9	.8	.3	.04	.13	.32	.50	.71	.96	1.24	1.61	2.12	2.97	3.81
Dec	.51	.40	.82	1991	12	1.64	1972	.00+	1988	3.4	1.6	.2	.0	.00	.03	.10	.17	.26	.36	.48	.62	.83	1.19	1.54
Ann	25.41	25.61	5.30	Jun 1967	14	16.13	Jul 1993	.00+	Feb 1996	72.8	46.9	16.3	6.1	15.97	17.71	19.98	21.74	23.33	24.87	26.49	28.29	30.51	33.76	36.60

+ Also occurred on an earlier date(s)

Denotes amounts of a trace

@ Denotes mean number of days greater than 0 but less than .05

** Statistics not computed because less than six years out of thirty had measurable precipitation

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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Station: MINDEN, NE

COOP ID: 255565

Climate Division: NE 8

NWS Call Sign:

Elevation: 2,160 Feet

Lat: 40°31N

Lon: 98°57W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										Snow Fall >= Thresholds					Snow Depth >= Thresholds			
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	5.0	4.5	2	2	8.0	1994	27	13.0	1993	14	1993	21	8	1993	2.9	2.1	.4	.2	.0	14.3	6.3	2.7	.5
Feb	4.9	3.0	2	1	12.0	1978	13	17.1	1994	17	1993	28	11	1993	2.2	1.8	.4	.3	.1	9.6	5.6	3.5	1.2
Mar	5.3	3.5	1	#	14.0	1984	19	18.0	1984	21	1993	3	6	1993	2.2	1.6	.7	.3	.1	4.6	2.5	1.4	.5
Apr	2.6	.0	#	#	8.0	1980	3	19.0	1984	7	1980	3	1	1997	.9	.9	.3	.2	.0	1.0	.5	.1	.0
May	#	.0	0	0	#	1994	1	#	1994	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.3	.0	#	0	5.0	1985	29	8.0	1985	5	1985	29	#	1985	.1	.1	.1	@	.0	.1	.1	@	.0
Oct	.7	.0	#	0	9.0	1997	26	9.0	1997	8	1997	28	1+	1997	.2	.2	.1	.1	.0	.4	.3	.2	.0
Nov	3.8	3.0	#	#	15.0	1983	28	19.5	1983	10	1983	28	2+	2000	1.7	1.5	.5	.2	@	3.6	1.5	.7	@
Dec	4.0	3.1	1	1	8.0	1974	15	13.0	1974	11	1973	31	6	1983	2.4	1.6	.5	.2	.0	9.0	3.5	1.2	.1
Ann	26.6	17.1	N/A	N/A	15.0	Nov 1983	28	19.5	Nov 1983	21	Mar 1993	3	11	Feb 1993	12.6	9.8	3.0	1.5	.2	42.6	20.3	9.8	2.3

+ Also occurred on an earlier date(s) #Denotes trace amounts

@ Denotes mean number of days greater than 0 but less than .05

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

(1) Derived from Snow Climatology and 1971-2000 daily data

(2) Derived from 1971-2000 daily data

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Climate Division: NE 8

NWS Call Sign:

Elevation: 2,160 Feet

Lat: 40°31N

Lon: 98°57W

Freeze Data									
Spring Freeze Dates (Month/Day)									
Temp (F)	Probability of later date in spring (thru Jul 31) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	5/18	5/14	5/11	5/09	5/06	5/04	5/02	4/29	4/25
32	5/14	5/09	5/06	5/03	4/30	4/27	4/24	4/21	4/16
28	5/01	4/26	4/23	4/21	4/19	4/16	4/14	4/11	4/07
24	4/19	4/14	4/11	4/08	4/06	4/03	3/31	3/28	3/24
20	4/13	4/08	4/04	4/01	3/30	3/27	3/24	3/20	3/16
16	4/08	3/31	3/26	3/21	3/17	3/13	3/08	3/03	2/23
Fall Freeze Dates (Month/Day)									
Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	9/16	9/20	9/23	9/25	9/28	9/30	10/02	10/05	10/09
32	9/18	9/23	9/27	9/30	10/03	10/06	10/09	10/13	10/18
28	10/02	10/07	10/10	10/13	10/16	10/19	10/22	10/25	10/30
24	10/05	10/10	10/14	10/18	10/21	10/24	10/27	10/31	11/05
20	10/13	10/20	10/24	10/28	11/01	11/05	11/09	11/14	11/20
16	10/23	10/29	11/03	11/07	11/11	11/14	11/18	11/23	11/30
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	159	154	150	147	143	140	137	133	128
32	175	168	163	159	155	151	147	142	136
28	196	191	186	183	180	176	173	169	163
24	216	210	205	201	197	193	189	185	178
20	239	231	225	220	216	211	206	200	192
16	267	257	250	244	238	232	226	219	209

* Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

Derived from 1971-2000 serially complete daily data

Complete documentation available from:

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Degree Days to Selected Base Temperatures (°F)													
Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1299	1010	833	472	177	24	1	16	96	393	862	1215	6398
60	1144	870	678	331	88	5	0	3	34	247	712	1060	5172
57	1051	792	586	255	52	1	0	0	15	173	622	967	4514
55	989	739	526	209	34	0	0	0	7	129	565	905	4103
50	837	609	384	115	9	0	0	0	0	55	427	754	3190
32	352	235	58	1	0	0	0	0	0	0	89	288	1023

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	76	149	248	522	893	1171	1373	1286	976	631	217	96	7638
55	0	10	3	40	214	481	660	573	293	47	3	0	2324
57	0	6	0	26	169	422	598	511	240	28	0	0	2000
60	0	0	0	12	112	336	505	421	170	10	0	0	1566
65	0	0	0	2	46	204	351	278	82	1	0	0	964
70	0	0	0	0	13	103	210	159	31	0	0	0	516

Growing Degree Units (2)																								
Base	Growing Degree Units (Monthly)												Growing Degree Units (Accumulated Monthly)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	8	48	153	371	685	962	1146	1080	793	455	105	17	8	56	209	580	1265	2227	3373	4453	5246	5701	5806	5823
45	1	16	82	247	530	812	991	925	644	320	47	2	1	17	99	346	876	1688	2679	3604	4248	4568	4615	4617
50	0	1	42	145	381	662	836	770	496	201	16	0	0	1	43	188	569	1231	2067	2837	3333	3534	3550	3550
55	0	0	10	76	243	514	681	615	357	104	3	0	0	0	10	86	329	843	1524	2139	2496	2600	2603	2603
60	0	0	2	33	134	370	526	462	229	42	0	0	0	0	2	35	169	539	1065	1527	1756	1798	1798	1798
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	20	59	131	255	427	631	762	715	511	309	88	23	20	79	210	465	892	1523	2285	3000	3511	3820	3908	3931

(1) Derived from the 1971-2000 Monthly Normals

(2) Derived from 1971-2000 serially complete daily data

Note: For corn, temperatures below 50 are set to 50, and temperatures above 86 are set to 86

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

Notes

- a. The monthly means are simple arithmetic averages computed by summing the monthly values for the period 1971-2000 and dividing by thirty. Prior to averaging, the data are adjusted if necessary to compensate for data quality issues, station moves or changes in station reporting practices. Missing months are replaced by estimates based on neighboring stations.
- b. The median is defined as the middle value in an ordered set of values. The median is being provided for the snow and precipitation elements because the mean can be a misleading value for precipitation normals.
- c. Only observed validated values were used to select the extreme daily values.
- d. Extreme monthly temperature/precipitation means were selected from the monthly normals data.
Monthly snow extremes were calculated from daily values quality controlled to be consistent with the Snow Climatology.
- e. Degree Days were derived using the same techniques as the 1971-2000 normals.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/usnormals.html
- f. Mean "number of days statistics" for temperature and precipitation were calculated from a serially complete daily data set.
Documentation of the serially complete data set is available from the link below:
- g. Snowfall and snow depth statistics were derived from the Snow Climatology.
Documentation for the Snow Climatology project is available from the link under references.

Data Sources for Tables

Several different data sources were used to create the Clim20 climate summaries. In some cases the daily extremes appear inconsistent with the monthly extremes and or the mean number of days statistics. For example, a high daily extreme value may not be reflected in the highest monthly value or the mean number of days threshold that is less than and equal to the extreme value. Some of these difference are caused by different periods of record. Daily extremes are derived from the station's entire period of record while the serial data and normals data were for the 1971-2000 period. Therefore extremes observed before 1971 would not be included in the 1971-2000 normals or the 1971-2000 serial daily data set. Inconsistencies can also occur when monthly values are adjusted to reflect the current observing conditions or were replaced during the 1971-2000 Monthly Normals processing and are not reconciled with the Summary of the Day data.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html
Snow Climatology Project Description, www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html
Eischeid, J. K., P. Pasteris, H. F. Diaz, M. Plantico, and N. Lott, 2000: Creating a serially complete, national daily time series of temperature and precipitation for the Western United States. J. Appl. Meteorol., 39, 1580-1591,
www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf