

Climatography of the United States

No. 20

1971-2000

Station: RAVENNA, NE

COOP ID: 257040

Climate Division: NE 5

NWS Call Sign:

Elevation: 2,050 Feet Lat: 41°02N

Lon: 98°55W

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	35.7	11.8	23.8	78	1950	21	33.8	1992	-27+	1974	12	9.3	1979	1279	0	.0	.0	4.9	12.0	30.6	7.0
Feb	41.9	17.3	29.6	80	1995	25	39.3	1992	-26+	1981	11	16.3	1978	991	0	.0	.0	8.8	8.6	26.5	3.6
Mar	52.5	26.5	39.5	90	1986	28	45.3	1986	-21	1960	4	32.1	1996	790	0	.0	@	17.9	2.7	23.7	.6
Apr	64.4	37.1	50.8	95	1950	22	59.1	1981	5	1975	3	44.0	1983	433	5	.0	.5	25.7	.2	11.2	.0
May	73.9	48.1	61.0	99+	1967	25	67.2	1977	18	1981	10	54.2	1995	182	57	.0	.7	30.8	.0	1.7	.0
Jun	83.9	58.0	71.0	106	1988	21	76.8	1988	33	1950	4	65.2	1982	30	210	.5	7.6	30.0	.0	.0	.0
Jul	88.0	63.5	75.8	113	1954	11	80.9	1980	37	1971	30	69.7	1992	1	334	1.0	12.9	31.0	.0	.0	.0
Aug	86.2	61.8	74.0	107	1955	26	80.5	1983	38+	1974	4	69.6	1992	10	289	.3	10.5	31.0	.0	.0	.0
Sep	78.3	51.0	64.7	102+	1970	6	70.4	1998	20+	1995	22	59.1	1984	96	85	@	3.9	29.8	.0	1.6	.0
Oct	66.6	38.4	52.5	95+	1963	1	56.9	1974	4	1997	27	47.5	1987	389	2	.0	.2	28.4	.1	10.0	.0
Nov	48.6	25.0	36.8	83	1980	6	45.8	1999	-15	1976	28	26.5	1985	846	0	.0	.0	14.5	3.9	24.9	.6
Dec	38.1	15.2	26.7	75	1964	23	34.2	1988	-31	1989	22	7.9	1983	1189	0	.0	.0	6.0	10.0	30.5	4.0
Ann	63.2	37.8	50.5	113	Jul 1954	11	80.9	Jul 1980	-31	Dec 1989	22	7.9	Dec 1983	6236	982	1.8	36.3	258.8	37.5	160.7	15.8

+ 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/normals/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

096-A

Climatography 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: RAVENNA, NE

COOP ID: 257040

Climate Division: NE 5

NWS Call Sign:

Elevation: 2,050 Feet Lat: 41°02N

Lon: 98°55W

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	.51	.38	1.35	1988	19	1.70	1988	.00+	1987	3.5	1.6	.2	@	.00	.05	.14	.22	.30	.39	.50	.63	.81	1.11	1.39
Feb	.57	.44	.93	1971	18	1.57	1971	.01+	1996	3.8	1.9	.2	.0	.04	.07	.14	.22	.30	.41	.53	.69	.90	1.28	1.64
Mar	2.10	1.47	2.62	1987	17	9.13	1987	.00	1994	5.7	4.0	1.4	.5	.05	.19	.47	.77	1.11	1.49	1.96	2.55	3.38	4.78	6.17
Apr	2.66	2.25	3.23	1984	21	8.32	1984	.01	1989	7.8	5.1	1.9	.8	.22	.40	.75	1.12	1.53	1.99	2.54	3.24	4.21	5.82	7.41
May	4.13	4.05	3.50	1992	16	9.12	1995	1.18	1975	9.8	7.4	2.7	1.1	1.34	1.73	2.31	2.80	3.28	3.77	4.30	4.93	5.74	7.00	8.16
Jun	4.22	3.56	7.18	1968	24	12.46	1993	.51	1978	8.1	6.1	2.5	1.0	.88	1.26	1.88	2.45	3.02	3.62	4.31	5.13	6.22	7.96	9.61
Jul	3.45	3.01	3.42	2000	4	11.57	1993	.45	1997	7.9	5.7	2.3	.9	.57	.87	1.37	1.84	2.33	2.86	3.47	4.21	5.19	6.79	8.32
Aug	2.85	2.68	3.22	1997	11	9.56	1977	.72	1976	6.8	5.2	2.1	.7	.82	1.09	1.50	1.85	2.20	2.56	2.95	3.42	4.03	4.99	5.87
Sep	2.07	1.38	2.60	1949	6	7.89	1973	.09	1992	5.7	4.2	1.4	.6	.15	.28	.54	.82	1.14	1.51	1.95	2.51	3.29	4.60	5.90
Oct	1.55	1.41	3.03	1968	16	5.20	1984	.00+	1996	4.8	3.4	1.1	.3	.00	.20	.49	.74	.99	1.26	1.57	1.93	2.43	3.23	4.01
Nov	1.43	1.38	2.12	1996	16	4.82	1983	.02	1989	4.5	3.0	1.0	.2	.06	.12	.28	.46	.68	.95	1.27	1.70	2.31	3.37	4.44
Dec	.61	.54	1.05	1953	3	1.47	1987	.03	1976	3.4	1.7	.2	.0	.06	.10	.19	.27	.36	.47	.59	.74	.95	1.30	1.64
Ann	26.15	24.87	7.18	Jun 1968	24	12.46	Jun 1993	.00+	Oct 1996	71.8	49.3	17.0	6.1	16.16	17.99	20.39	22.24	23.92	25.55	27.27	29.18	31.53	35.00	38.03

+ 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

Climatography of the United States

No. 20 1971-2000

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Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: RAVENNA, NE

COOP ID: 257040

Climate Division: NE 5

NWS Call Sign:

Elevation: 2,050 Feet

Lat: 41°02N

Lon: 98°55W

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	3.9	3.3	2	#	13.5	1988	19	13.5	1988	19	1974	13	17	1974	2.1	1.6	.6	.1	@	5.4	3.7	2.5	.0
Feb	4.8	4.0	1	#	8.0	1978	13	19.8	1978	15	1978	14	9	1978	2.2	1.9	.6	.2	.0	2.1	1.0	.8	.0
Mar	4.8	3.8	#	#	11.0	1984	19	17.0	1987	10	1977	20	4	1979	1.5	1.2	.6	.4	.1	.8	.6	.5	.1
Apr	.7	.0	#	0	5.0	1984	2	8.0	1984	8	1997	12	1	1997	.4	.4	.1	@	.0	.3	.2	.1	.0
May	.0	.0	0	0	.0	0	0	.0	0	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	.1	.0	0	0	3.0	1985	28	3.0	1985	0	0	0	0	0	@	@	@	.0	.0	.0	.0	.0	.0
Oct	.9	.0	#	0	7.0	1991	31	7.0	1991	5	1997	26	#+	1997	.3	.2	.1	.1	.0	.2	.1	.1	.0
Nov	4.1	3.9	#	#	12.0	1983	28	13.0	1975	12+	2000	12	4	2000	1.5	1.2	.6	.3	@	2.2	1.6	.9	.2
Dec	5.8	5.5	1	#	10.0	1974	15	16.5	1973	15	1973	31	5	1973	1.9	1.7	.7	.3	.1	-9.9	-9.9	-9.9	-9.9
Ann	25.1	20.5	N/A	N/A	13.5	Jan 1988	19	19.8	Feb 1978	19	Jan 1974	13	17	Jan 1974	9.9	8.2	3.3	1.4	.2	-9.9	-9.9	-9.9	-9.9

+ 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

Complete documentation available from:

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No. 20 1971-2000

Station: RAVENNA, NE

COOP ID: 257040

Climate Division: NE 5

NWS Call Sign:

Elevation: 2,050 Feet

Lat: 41°02N

Lon: 98°55W

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	6/01	5/26	5/22	5/18	5/14	5/11	5/07	5/02	4/26
32	5/15	5/11	5/08	5/06	5/04	5/02	4/29	4/26	4/22
28	5/12	5/07	5/03	4/30	4/27	4/24	4/21	4/17	4/12
24	5/03	4/27	4/23	4/20	4/17	4/13	4/10	4/06	3/31
20	4/21	4/16	4/12	4/08	4/05	4/02	3/30	3/26	3/20
16	4/07	4/02	3/29	3/25	3/22	3/19	3/16	3/12	3/06
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	9/10	9/14	9/17	9/19	9/22	9/24	9/27	9/30	10/04
32	9/14	9/19	9/22	9/25	9/27	9/30	10/02	10/06	10/10
28	9/22	9/27	9/30	10/03	10/06	10/09	10/12	10/16	10/21
24	10/05	10/10	10/13	10/16	10/19	10/22	10/25	10/29	11/03
20	10/08	10/15	10/19	10/23	10/27	10/30	11/03	11/07	11/14
16	10/19	10/26	10/31	11/04	11/08	11/11	11/15	11/20	11/27
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	151	144	138	134	130	126	121	116	109
32	164	157	153	149	146	142	138	134	128
28	181	175	170	165	162	158	153	149	142
24	206	199	194	189	185	181	176	171	164
20	228	220	214	209	204	199	193	187	179
16	258	249	241	235	230	224	218	211	201

* 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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Station: RAVENNA, NE

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Climate Division: NE 5 NWS Call Sign: Elevation: 2,050 Feet Lat: 41°02N Lon: 98°55W

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	1279	991	790	433	182	30	1	10	96	389	846	1189	6236
60	1124	851	635	297	95	8	0	1	35	245	696	1034	5021
57	1031	772	543	225	58	3	0	0	15	172	607	941	4367
55	969	720	487	183	40	1	0	0	8	130	551	879	3968
50	822	590	345	97	12	0	0	0	0	57	414	735	3072
32	350	219	46	0	0	0	0	0	0	0	85	281	981

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	94	152	279	562	898	1170	1356	1302	979	636	229	114	7771
55	0	9	7	54	224	481	643	589	297	53	5	0	2362
57	0	5	1	37	181	423	581	527	244	33	1	0	2033
60	0	0	0	19	125	338	488	436	174	13	0	0	1593
65	0	0	0	5	57	210	334	289	85	2	0	0	982
70	0	0	0	0	20	111	193	163	32	0	0	0	519

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	4	37	126	331	647	923	1106	1050	730	392	84	9	4	41	167	498	1145	2068	3174	4224	4954	5346	5430	5439
45	0	12	64	214	492	773	951	895	581	263	35	0	0	12	76	290	782	1555	2506	3401	3982	4245	4280	4280
50	0	3	26	126	345	623	796	740	441	154	10	0	0	3	29	155	500	1123	1919	2659	3100	3254	3264	3264
55	0	0	5	61	216	476	641	585	305	74	0	0	0	0	5	66	282	758	1399	1984	2289	2363	2363	2363
60	0	0	1	28	111	329	486	430	190	24	0	0	0	0	1	29	140	469	955	1385	1575	1599	1599	1599
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	18	47	116	234	408	603	737	696	477	277	81	21	18	65	181	415	823	1426	2163	2859	3336	3613	3694	3715

(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/normals/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