

Climatography of the United States

No. 20

1971-2000

Station: RAGAN, NE

COOP ID: 257002

Climate Division: NE 8

NWS Call Sign:

Elevation: 2,240 Feet Lat: 40° 16N

Lon: 99° 15W

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	.0	.0	.0	70	1997	3	.0	0	-16	1979	31	.0	0	0	0	.0	.0	4.4	12.3	30.9	5.5
Feb	.0	.0	.0	78	1995	26	.0	0	-16	1996	2	.0	0	0	0	.0	.0	8.7	8.3	26.5	3.0
Mar	.0	.0	.0	83	1994	18	.0	0	-10	1998	11	.0	0	0	0	.0	.0	17.0	1.2	22.9	.6
Apr	.0	.0	.0	92	1994	19	.0	0	15+	1997	12	.0	0	0	0	.0	.3	25.7	.2	10.6	.0
May	.0	.0	.0	97	1994	31	.0	0	29	1994	1	.0	0	0	0	.0	.7	30.7	.0	.6	.0
Jun	.0	.0	.0	102	1998	27	.0	0	36	1998	6	.0	0	0	0	@	2.7	30.0	.0	.0	.0
Jul	.0	.0	.0	106	1995	12	.0	0	45	1992	4	.0	0	0	0	1.1	6.0	31.0	.0	.0	.0
Aug	.0	.0	.0	104+	1995	14	.0	0	43	1992	27	.0	0	0	0	1.1	11.0	31.0	.0	.0	.0
Sep	.0	.0	.0	102	1972	17	.0	0	26	1995	22	.0	0	0	0	.1	4.2	29.7	.0	.7	.0
Oct	.0	.0	.0	93	1997	3	.0	0	3	1997	27	.0	0	0	0	.0	.3	28.1	.2	6.5	.0
Nov	.0	.0	.0	82	2001	1	.0	0	0+	1993	26	.0	0	0	0	.0	.0	15.1	1.6	23.5	.4
Dec	.0	.0	.0	76	1995	1	.0	0	-17	1998	22	.0	0	0	0	.0	.0	6.1	9.5	30.3	2.6
Ann	.0	.0	.0	106	Jul 1995	12	-99.9	0	-17	Dec 1998	22	99.9	0	0	0	2.3	25.2	257.5	33.3	152.5	12.1

+ 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: 1952-2001

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

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**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: RAGAN, NE

COOP ID: 257002

Climate Division: NE 8

NWS Call Sign:

Elevation: 2,240 Feet Lat: 40°16N

Lon: 99°15W

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	.41	.35	.84	1965	23	1.63	1992	.00	1986	3.0	1.4	.1	.0	.02	.05	.11	.17	.24	.31	.39	.50	.64	.88	1.12
Feb	.49	.31	1.56	1958	27	1.95	1971	.00+	1999	2.9	1.4	.3	@	.00	.00	.06	.15	.24	.34	.46	.61	.83	1.17	1.52
Mar	1.85	1.52	2.58	1987	17	5.65	1987	.00	1994	5.5	3.9	1.2	.3	.03	.13	.36	.61	.91	1.25	1.68	2.23	3.01	4.34	5.67
Apr	2.12	1.98	1.91	1976	23	5.17	1976	.01	1989	6.8	4.4	1.4	.3	.34	.52	.82	1.12	1.42	1.75	2.12	2.58	3.20	4.20	5.16
May	4.05	4.27	4.60	1993	9	9.57	1995	.95	1994	10.2	7.5	2.7	.8	1.26	1.65	2.22	2.71	3.18	3.68	4.22	4.85	5.67	6.95	8.13
Jun	3.04	2.66	4.47	1957	16	5.67	1992	.75	1976	8.2	5.4	1.9	.7	.86	1.15	1.59	1.97	2.34	2.72	3.15	3.65	4.31	5.33	6.29
Jul	3.56	3.29	4.67	1996	20	12.75	1993	.00	1997	7.3	5.5	2.2	1.1	.17	.49	1.03	1.55	2.11	2.73	3.47	4.38	5.62	7.68	9.69
Aug	3.07	2.39	2.80	1968	10	7.35	1993	.41	1984	6.5	5.2	2.1	.8	.70	.98	1.43	1.83	2.24	2.66	3.15	3.72	4.47	5.68	6.81
Sep	2.04	1.63	3.40	1983	29	7.28	1973	.00	1984	5.2	3.8	1.2	.5	.13	.34	.66	.96	1.27	1.62	2.02	2.51	3.18	4.27	5.33
Oct	1.41	1.02	2.15	1969	5	4.85	1984	.00	1975	4.4	2.6	1.0	.3	.05	.16	.35	.56	.78	1.04	1.35	1.73	2.27	3.16	4.04
Nov	1.17	.97	2.13	1997	30	2.97	1975	.00+	1989	4.2	2.7	.7	.2	.00	.09	.28	.46	.66	.88	1.14	1.45	1.89	2.62	3.34
Dec	.46	.31	1.82	1953	3	1.76	1982	.00+	1996	2.7	1.4	.1	.0	.00	.02	.09	.15	.23	.32	.42	.56	.75	1.07	1.38
Ann	23.67	23.04	4.67	Jul 1996	20	12.75	Jul 1993	.00+	Feb 1999	66.9	45.2	14.9	5.0	14.87	16.49	18.61	20.24	21.72	23.16	24.67	26.35	28.41	31.43	34.09

+ 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: 1952-2001

(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: RAGAN, NE

COOP ID: 257002

Climate Division: NE 8

NWS Call Sign:

Elevation: 2,240 Feet

Lat: 40° 16N

Lon: 99° 15W

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	4.1	3.8	2	1	8.0	1994	27	11.3	1994	18	1974	13	14	1974	2.3	1.7	.4	.1	.0	9.0	4.8	1.6	.0
Feb	4.2	2.3	2	1	13.0	1994	22	15.3	1994	14	1994	27	7	1993	1.7	1.5	.5	.3	.1	8.0	5.0	3.0	1.1
Mar	5.6	5.0	1	#	13.0	1984	19	17.5	1987	14	1993	2	3	1987	1.7	1.5	.6	.3	.1	3.5	2.0	1.3	.3
Apr	1.4	.0	#	#	8.0	1994	12	10.0	1984	8	1997	12	1	1997	.6	.6	.3	.1	.0	.7	.4	.1	.0
May	.0	.0	#	0	.0	0	0	.0	0	#+	1995	12	#+	1995	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	#	0	.0	0	0	.0	0	#+	1988	17	#+	1988	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	#	0	.0	0	0	.0	0	#+	1994	14	#+	1994	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	#	0	.0	0	0	.0	0	#	1993	30	#	1993	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.2	.0	#	0	5.5	1985	29	5.5	1985	5	1985	29	#+	1995	@	@	@	@	.0	.1	.1	@	.0
Oct	.7	.0	#	0	9.0	1997	26	9.0	1997	9	1997	27	1	1997	.2	.2	.1	@	.0	.3	.3	.1	.0
Nov	4.3	2.5	#	#	11.0	1983	27	16.5	1983	14	1983	29	3	1975	1.6	1.3	.5	.2	@	3.7	1.7	.9	.4
Dec	4.5	3.8	1	1	7.0	1973	19	15.8	1973	13	1983	1	8	1983	1.9	1.5	.6	.2	.0	7.0	3.0	1.5	.6
Ann	25.0	17.4	N/A	N/A	13.0+	Feb 1994	22	17.5	Mar 1987	18	Jan 1974	13	14	Jan 1974	10.0	8.3	3.0	1.2	.2	32.3	17.3	8.5	2.4

+ 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

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Climate Division: NE 8

NWS Call Sign:

Elevation: 2,240 Feet

Lat: 40° 16N

Lon: 99° 15W

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	5/20	5/15	5/12	5/09	5/07	5/04	5/02	4/29	4/24
32	5/14	5/09	5/06	5/03	4/30	4/27	4/24	4/20	4/15
28	4/27	4/23	4/20	4/18	4/16	4/14	4/11	4/08	4/05
24	4/19	4/15	4/12	4/09	4/07	4/05	4/02	3/30	3/26
20	4/10	4/05	4/01	3/29	3/26	3/23	3/20	3/16	3/10
16	4/05	3/29	3/24	3/20	3/16	3/12	3/08	3/03	2/24
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	9/14	9/19	9/22	9/25	9/28	9/30	10/03	10/07	10/11
32	9/20	9/26	10/01	10/05	10/09	10/12	10/16	10/21	10/27
28	10/02	10/08	10/12	10/15	10/18	10/21	10/25	10/29	11/03
24	10/15	10/20	10/24	10/27	10/30	11/02	11/06	11/10	11/15
20	10/21	10/27	10/31	11/04	11/08	11/12	11/15	11/20	11/26
16	10/31	11/05	11/09	11/13	11/16	11/19	11/22	11/26	12/01
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	161	155	150	147	143	140	136	131	125
32	184	176	170	165	161	156	152	146	138
28	205	198	193	189	185	181	176	171	164
24	222	217	212	209	205	202	198	194	188
20	252	243	237	231	226	221	216	210	201
16	268	260	254	249	244	239	234	228	220

* 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

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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	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	3	39	86	315	647	884	1097	953	735	413	61	14	3	42	128	443	1090	1974	3071	4024	4759	5172	5233	5247
45	0	12	32	200	492	734	942	798	589	281	20	1	0	12	44	244	736	1470	2412	3210	3799	4080	4100	4101
50	0	1	8	110	345	586	787	643	446	170	3	0	0	1	9	119	464	1050	1837	2480	2926	3096	3099	3099
55	0	0	0	55	216	436	632	488	307	84	0	0	0	0	0	55	271	707	1339	1827	2134	2218	2218	2218
60	0	0	0	21	112	289	477	337	192	30	0	0	0	0	0	21	133	422	899	1236	1428	1458	1458	1458
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	16	44	70	220	391	584	747	606	465	271	47	24	16	60	130	350	741	1325	2072	2678	3143	3414	3461	3485

(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