

Climatology of the United States

No. 20

1971-2000

Station: WAKEFIELD, NE

COOP ID: 258915

Climate Division: NE 3

NWS Call Sign:

Elevation: 1,390 Feet Lat: 42° 16N

Lon: 96° 52W

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	31.4	9.7	20.6	71	1981	24	32.9	1990	-34	1970	19	6.2	1979	1379	0	.0	.0	2.6	16.2	30.5	8.8
Feb	38.0	15.8	26.9	72+	1982	22	37.5	1987	-34	1962	28	11.1	1979	1067	0	.0	.0	6.2	11.3	26.2	4.5
Mar	49.9	26.2	38.1	88+	1986	30	43.2	1985	-22	1960	5	30.1+	1984	836	0	.0	.0	14.8	3.8	23.3	1.0
Apr	63.5	37.3	50.4	96	1980	22	58.7	1981	-4	1975	3	43.6	1983	446	8	.0	.6	25.4	.3	9.8	@
May	74.5	49.9	62.2	105	1967	25	68.6	1987	19	1976	3	56.5	1997	162	76	.0	1.2	30.8	.0	1.2	.0
Jun	84.2	59.7	72.0	108	1988	21	78.5	1988	33	1950	4	67.7	1982	17	225	.5	6.9	30.0	.0	.0	.0
Jul	87.8	64.1	76.0	107+	1995	12	81.3	1974	40	1971	30	69.1	1992	5	346	.8	11.8	31.0	.0	.0	.0
Aug	85.4	61.7	73.6	104+	1983	16	80.8	1983	33	1950	20	67.9	1992	13	277	.5	8.0	31.0	.0	.0	.0
Sep	78.0	51.8	64.9	100+	2000	2	70.0	1998	20	1984	29	59.6	1993	86	84	.1	2.9	29.8	.0	1.2	.0
Oct	66.1	39.4	52.8	94	1963	1	56.7	1973	8+	1993	31	47.0	1976	382	2	.0	.2	28.0	.1	8.3	.0
Nov	47.0	25.9	36.5	82	1999	8	45.8	1999	-18	1959	14	27.2	1985	858	0	.0	.0	12.0	4.6	23.4	.5
Dec	34.1	14.1	24.1	70+	1984	7	32.1	1979	-28	1989	23	6.0	1983	1269	0	.0	.0	3.0	13.7	30.3	5.3
Ann	61.7	38.0	49.8	108	Jun 1988	21	81.3	Jul 1974	-34+	Jan 1970	19	6.0	Dec 1983	6520	1018	1.9	31.6	244.6	50.0	154.2	20.1

+ 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/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

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: WAKEFIELD, NE

COOP ID: 258915

Climate Division: NE 3

NWS Call Sign:

Elevation: 1,390 Feet Lat: 42°16N

Lon: 96°52W

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	.68	.54	1.53	1949	3	2.00	1975	.04	1981	5.5	2.1	.2	@	.11	.16	.26	.36	.45	.56	.68	.83	1.03	1.35	1.66
Feb	.83	.58	1.58	1984	18	3.38	1971	.03	1996	5.5	2.0	.4	.1	.07	.13	.24	.35	.48	.62	.79	1.01	1.30	1.80	2.28
Mar	2.35	1.89	2.57	1981	29	6.59	1987	.15	1994	8.2	4.4	1.6	.4	.22	.39	.71	1.04	1.40	1.80	2.28	2.87	3.69	5.05	6.38
Apr	3.06	2.66	2.21	2001	11	11.23	1984	.42	1981	10.3	6.5	1.9	.6	.55	.83	1.27	1.69	2.12	2.58	3.10	3.73	4.58	5.94	7.23
May	4.08	4.07	2.47	1952	23	9.14	1982	1.24	1989	11.3	7.7	2.8	1.0	1.81	2.18	2.68	3.09	3.48	3.87	4.28	4.76	5.36	6.27	7.10
Jun	4.14	4.08	4.23	1956	26	8.40	1999	.99	1988	10.0	7.1	2.8	1.1	1.17	1.56	2.16	2.67	3.18	3.71	4.30	4.99	5.88	7.29	8.60
Jul	3.35	2.75	4.78	1972	17	10.28	1972	.36	1974	9.4	5.6	2.0	.8	.60	.90	1.38	1.84	2.31	2.81	3.39	4.08	5.01	6.50	7.93
Aug	2.77	2.91	3.58	1998	15	7.91	1998	.49	1976	8.6	4.9	1.7	.7	.57	.82	1.22	1.60	1.97	2.37	2.82	3.37	4.09	5.24	6.33
Sep	2.61	2.52	2.44	1965	29	4.90	1995	.27	1999	7.7	4.4	2.0	.8	.61	.85	1.23	1.57	1.91	2.28	2.68	3.16	3.79	4.80	5.74
Oct	2.13	1.69	3.01	1979	30	6.28	1982	.04	1988	7.0	4.1	1.4	.5	.20	.35	.64	.94	1.26	1.62	2.05	2.59	3.33	4.57	5.77
Nov	1.81	1.70	2.06	1998	10	4.47	1983	.05+	1980	6.7	3.5	1.2	.4	.18	.31	.55	.80	1.08	1.39	1.75	2.21	2.83	3.87	4.89
Dec	.84	.74	1.48	1953	3	3.03	1982	.15	1975	5.8	2.3	.4	.1	.14	.22	.34	.46	.57	.70	.85	1.03	1.27	1.65	2.02
Ann	28.65	28.59	4.78	Jul 1972	17	11.23	Apr 1984	.03	Feb 1996	96.0	54.6	18.4	6.5	18.18	20.12	22.66	24.61	26.37	28.09	29.88	31.88	34.32	37.92	41.07

+ 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

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

Station: WAKEFIELD, NE

COOP ID: 258915

Climate Division: NE 3

NWS Call Sign:

Elevation: 1,390 Feet

Lat: 42° 16N

Lon: 96° 52W

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	6.7	5.5	3	3	12.4	1982	22	22.6	1975	17	1982	23	8	1975	5.2	2.2	.8	.2	@	17.0	11.7	6.6	1.2
Feb	6.3	5.2	3	1	16.0	1984	18	26.0	1993	22	1993	26	10	1993	4.4	2.0	.5	.2	.1	11.0	7.7	5.4	1.0
Mar	6.6	5.1	1	#	13.0	1983	26	22.1	1983	15	1983	27	4	1993	3.6	2.0	.8	.3	.1	5.6	3.5	1.8	.7
Apr	2.5	1.7	#	0	7.0	1992	21	12.5	1997	7+	1997	11	1	1997	1.5	.9	.2	.1	.0	.6	.3	.1	.0
May	#	.0	0	0	#	1979	12	#	1979	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	#	.0	0	0	#	1985	29	#	1985	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.7	.0	#	0	5.7	1980	27	5.7	1980	5	1980	27	#+	1997	.4	.2	.1	@	.0	.2	.2	@	.0
Nov	5.7	4.3	1	#	8.0	1983	27	20.4	1983	15	1983	28	3	1991	3.5	1.8	.6	.2	.0	4.4	2.1	1.2	.1
Dec	8.4	8.0	2	2	8.0	1972	12	17.3	1972	14	1983	21	11	1983	4.9	2.5	.8	.4	.0	15.8	9.2	5.0	1.5
Ann	36.9	29.8	N/A	N/A	16.0	Feb 1984	18	26.0	Feb 1993	22	Feb 1993	26	11	Dec 1983	23.5	11.6	3.8	1.4	.2	54.6	34.7	20.1	4.5

+ 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:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: WAKEFIELD, NE

COOP ID: 258915

Climate Division: NE 3

NWS Call Sign:

Elevation: 1,390 Feet

Lat: 42° 16N

Lon: 96° 52W

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	5/23	5/17	5/14	5/10	5/07	5/04	5/01	4/27	4/22
32	5/13	5/09	5/06	5/04	5/01	4/29	4/26	4/23	4/19
28	5/11	5/05	5/01	4/28	4/25	4/22	4/18	4/14	4/09
24	4/28	4/22	4/19	4/15	4/12	4/09	4/06	4/02	3/28
20	4/17	4/11	4/07	4/04	4/01	3/29	3/26	3/22	3/16
16	4/05	3/31	3/27	3/23	3/20	3/17	3/14	3/10	3/04
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	9/12	9/16	9/18	9/20	9/22	9/24	9/26	9/29	10/02
32	9/14	9/19	9/22	9/25	9/28	10/01	10/04	10/07	10/12
28	9/23	9/28	10/02	10/05	10/08	10/11	10/14	10/18	10/23
24	10/05	10/10	10/13	10/16	10/19	10/22	10/25	10/29	11/02
20	10/12	10/18	10/23	10/26	10/30	11/02	11/06	11/11	11/17
16	10/19	10/26	10/30	11/03	11/07	11/11	11/15	11/20	11/26
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	158	151	146	141	137	133	129	124	117
32	166	160	156	152	149	146	142	138	132
28	185	178	173	169	165	162	157	153	146
24	210	203	198	193	189	185	180	175	168
20	235	227	221	216	211	206	201	195	187
16	255	247	241	236	231	226	221	216	207

* 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:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

**Climatography
of the United States
No. 20
1971-2000**

Station: WAKEFIELD, NE

COOP ID: 258915

Climate Division: NE 3

NWS Call Sign:

Elevation: 1,390 Feet Lat: 42°16N

Lon: 96°52W

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	1379	1067	836	446	162	17	5	13	86	382	858	1269	6520
60	1224	927	681	313	84	3	0	2	28	240	708	1114	5324
57	1131	850	590	243	52	1	0	0	11	168	620	1021	4687
55	1070	798	534	201	36	0	0	0	5	127	563	959	4293
50	920	668	393	115	12	0	0	0	0	56	427	810	3401
32	435	283	71	2	0	0	0	0	0	0	94	339	1224

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	79	140	258	554	937	1198	1364	1287	988	643	226	93	7767
55	1	11	8	63	260	508	651	574	303	56	5	0	2440
57	0	7	3	45	214	448	589	512	249	35	2	0	2104
60	0	0	0	25	153	361	496	420	176	14	0	0	1645
65	0	0	0	8	76	225	346	277	84	2	0	0	1018
70	0	0	0	1	29	116	208	156	30	0	0	0	540

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	2	26	108	329	671	942	1093	1028	737	399	75	3	2	28	136	465	1136	2078	3171	4199	4936	5335	5410	5413
45	0	6	50	210	518	792	938	873	587	268	31	0	0	6	56	266	784	1576	2514	3387	3974	4242	4273	4273
50	0	1	21	120	370	642	783	718	442	159	11	0	0	1	22	142	512	1154	1937	2655	3097	3256	3267	3267
55	0	0	6	59	237	493	628	563	307	78	2	0	0	0	6	65	302	795	1423	1986	2293	2371	2373	2373
60	0	0	1	32	131	349	473	408	190	32	0	0	0	0	1	33	164	513	986	1394	1584	1616	1616	1616
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	3	27	86	222	420	620	732	687	476	264	59	4	3	30	116	338	758	1378	2110	2797	3273	3537	3596	3600

(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