

Climatography of the United States

No. 20

1971-2000

Station: EWING, NE

COOP ID: 252805

Climate Division: NE 2

NWS Call Sign:

Elevation: 1,850 Feet Lat: 42° 16N

Lon: 98° 21W

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	32.7	9.6	21.2	73	1981	24	33.0	1992	-31	1996	31	6.5	1979	1360	0	.0	.0	3.8	14.3	30.7	8.3
Feb	38.9	15.6	27.3	78	1982	22	36.9	1999	-32+	1981	11	13.1	1978	1057	0	.0	.0	7.9	9.8	26.4	4.4
Mar	49.7	25.1	37.4	91	1968	30	43.1	2000	-26	1960	4	29.9	1984	856	0	.0	.0	15.6	3.8	23.9	.7
Apr	62.4	36.3	49.4	96	1980	22	57.7	1981	0	1975	3	42.1	1983	475	5	.0	.5	25.2	.3	11.0	@
May	72.9	47.9	60.4	100	1967	25	67.1	1977	23+	1976	3	54.4	1995	189	46	.0	.6	30.8	.0	1.3	.0
Jun	82.6	57.3	70.0	105+	1988	22	76.6	1988	31	1956	1	65.0	1982	31	178	.3	5.0	30.0	.0	.0	.0
Jul	86.9	62.5	74.7	113	1954	11	79.7	1974	38	1971	30	67.4	1992	8	308	1.0	11.7	31.0	.0	.0	.0
Aug	85.3	60.7	73.0	106	1955	26	79.6	1983	38	1964	12	67.3	1992	14	262	.3	9.4	31.0	.0	.0	.0
Sep	77.4	50.0	63.7	102	1956	2	69.6	1998	21	1984	29	59.5	1993	107	69	.0	3.6	29.7	.0	1.3	.0
Oct	65.3	37.8	51.6	98	1963	1	55.4	1973	10	1993	31	46.1	1976	417	0	.0	.2	27.7	.2	9.3	.0
Nov	46.1	24.3	35.2	81	1953	15	44.9	1999	-20	1959	14	23.0	1985	894	0	.0	.0	12.3	4.7	24.2	1.0
Dec	35.3	13.4	24.4	72	1962	16	32.3	1979	-32+	1989	23	5.3	1983	1262	0	.0	.0	4.6	11.9	30.3	5.3
Ann	61.3	36.7	49.0	113	Jul 1954	11	79.7	Jul 1974	-32+	Dec 1989	23	5.3	Dec 1983	6670	868	1.6	31.0	249.6	45.0	158.4	19.7

+ 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

038-A

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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: EWING, NE

COOP ID: 252805

Climate Division: NE 2

NWS Call Sign:

Elevation: 1,850 Feet Lat: 42°16N

Lon: 98°21W

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	.44	1.33	1949	3	1.27	1989	.06	1987	3.8	1.5	.2	.0	.08	.12	.20	.27	.34	.42	.51	.62	.77	1.02	1.25
Feb	.56	.45	1.25	1971	18	2.59	1971	.00+	1996	4.1	1.7	.2	@	.00	.07	.17	.26	.35	.45	.57	.70	.89	1.19	1.48
Mar	1.75	1.30	3.29	1987	17	6.53	1987	.01	1994	6.1	3.8	1.0	.3	.10	.21	.42	.66	.93	1.24	1.63	2.12	2.80	3.97	5.13
Apr	2.59	2.52	2.20	1973	15	6.27	1984	.41	1981	9.3	5.8	1.7	.4	.57	.81	1.19	1.53	1.88	2.24	2.65	3.15	3.79	4.83	5.81
May	3.81	3.24	5.20	1977	21	8.91	1982	1.60	1989	10.2	7.4	2.5	.8	1.67	2.01	2.49	2.88	3.24	3.60	4.00	4.45	5.01	5.88	6.66
Jun	3.77	3.45	4.13	1966	24	8.37	1971	.50	2000	9.1	6.2	2.5	1.1	1.00	1.36	1.90	2.38	2.85	3.35	3.89	4.54	5.39	6.72	7.96
Jul	3.40	2.90	2.46	1972	20	11.45	1972	.67	1991	8.9	6.2	2.5	.9	.84	1.16	1.65	2.09	2.53	2.99	3.50	4.12	4.92	6.18	7.37
Aug	2.97	2.79	4.10	1985	12	6.60	1985	.98	1999	7.7	5.6	2.0	.7	.86	1.15	1.57	1.94	2.30	2.67	3.08	3.57	4.20	5.18	6.10
Sep	2.25	2.02	3.34	1949	11	7.09	1973	.08	1998	7.0	4.5	1.4	.6	.38	.58	.91	1.21	1.53	1.88	2.27	2.75	3.38	4.42	5.40
Oct	1.72	1.44	4.08	1950	1	4.82	1982	.15	1999	5.8	3.7	1.2	.3	.17	.30	.53	.77	1.03	1.32	1.67	2.09	2.68	3.65	4.60
Nov	1.20	1.00	2.40	1975	20	4.32	1975	.00	1980	5.4	2.7	.7	.2	.04	.14	.31	.48	.67	.89	1.15	1.47	1.92	2.67	3.41
Dec	.56	.50	1.52	1953	3	1.66	1982	.11	1975	4.6	1.9	.1	.0	.13	.19	.27	.34	.41	.49	.57	.67	.81	1.02	1.22
Ann	25.09	25.02	5.20	May 1977	21	11.45	Jul 1972	.00+	Feb 1996	82.0	51.0	16.0	5.3	16.09	17.76	19.94	21.62	23.13	24.61	26.14	27.85	29.95	33.02	35.71

+ 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

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Station: EWING, NE

COOP ID: 252805

Climate Division: NE 2

NWS Call Sign:

Elevation: 1,850 Feet

Lat: 42° 16N

Lon: 98° 21W

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	5.1	4.5	3	2	16.0	1988	19	16.0	1988	19	1988	22	10	1988	2.8	1.8	.5	.2	.1	14.9	9.4	5.2	.6
Feb	4.2	2.5	3	2	19.0	1984	18	19.0	1984	19	1984	18	10	1988	2.7	1.8	.5	.2	@	9.5	6.7	3.8	1.2
Mar	4.6	3.3	1	1	10.0	1983	26	13.0	1983	14	1978	7	5	1978	2.8	2.1	.9	.3	@	4.8	2.7	1.5	.4
Apr	3.3	1.8	#	#	12.0	1994	12	19.0	1994	10	1994	12	1	1997	1.2	1.0	.4	.2	@	.8	.5	.2	@
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	2	1994	24	#	1994	.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	#	1984	25	#	1984	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.5	.0	#	0	5.5	1982	19	5.5	1982	6	1991	31	#+	1999	.3	.3	.1	@	.0	.2	.1	.1	.0
Nov	5.1	3.5	1	#	18.0	1975	20	27.0	1975	23	1975	30	7	1975	2.5	1.9	.7	.2	@	5.0	3.3	1.5	.4
Dec	6.2	5.5	2	1	8.0	1978	2	15.5	1982	19	1975	1	8	1983	3.5	2.4	.7	.2	.0	12.6	7.2	3.5	.9
Ann	29.0	21.1	N/A	N/A	19.0	Feb 1984	18	27.0	Nov 1975	23	Nov 1975	30	10+	Feb 1988	15.8	11.3	3.8	1.3	.1	47.8	29.9	15.8	3.5

+ 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:

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Elevation: 1,850 Feet

Lat: 42° 16N

Lon: 98° 21W

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	5/26	5/21	5/18	5/15	5/12	5/09	5/06	5/03	4/28
32	5/17	5/12	5/09	5/06	5/03	4/30	4/27	4/23	4/19
28	5/10	5/05	5/01	4/28	4/25	4/22	4/19	4/15	4/10
24	4/25	4/21	4/17	4/14	4/12	4/09	4/06	4/03	3/29
20	4/15	4/11	4/08	4/06	4/03	4/01	3/30	3/27	3/23
16	4/09	4/04	3/30	3/27	3/24	3/20	3/17	3/13	3/07
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	9/11	9/14	9/17	9/19	9/21	9/24	9/26	9/29	10/02
32	9/14	9/18	9/21	9/24	9/26	9/29	10/01	10/04	10/09
28	9/19	9/25	9/29	10/02	10/05	10/08	10/11	10/15	10/21
24	9/29	10/05	10/09	10/13	10/16	10/20	10/23	10/28	11/03
20	10/14	10/19	10/22	10/25	10/28	10/30	11/02	11/05	11/10
16	10/19	10/25	10/30	11/03	11/06	11/10	11/14	11/18	11/25
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	140	135	132	128	124	119	112
32	166	159	154	150	146	142	138	133	126
28	184	176	171	167	162	158	154	149	141
24	205	199	194	190	187	183	180	175	169
20	223	218	213	210	207	203	200	195	190
16	256	246	239	233	227	221	215	208	197

* 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	1360	1057	856	475	189	31	8	14	107	417	894	1262	6670
60	1205	917	701	338	99	7	0	2	40	268	744	1107	5428
57	1112	838	608	264	61	2	0	0	17	190	656	1014	4762
55	1052	787	548	220	42	1	0	0	8	144	600	952	4354
50	907	656	405	128	13	0	0	0	0	64	462	804	3439
32	428	271	66	3	0	0	0	0	0	0	115	334	1217

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	91	139	233	523	880	1137	1324	1271	952	607	211	96	7464
55	2	10	2	51	209	448	611	558	270	37	6	0	2204
57	0	6	0	35	166	389	549	496	219	21	2	0	1883
60	0	0	0	18	111	304	456	405	151	6	0	0	1451
65	0	0	0	5	46	178	308	262	69	0	0	0	868
70	0	0	0	0	14	86	178	143	24	0	0	0	445

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	5	31	109	317	642	904	1084	1030	723	384	75	7	5	36	145	462	1104	2008	3092	4122	4845	5229	5304	5311
45	0	6	52	202	487	754	929	875	573	254	32	1	0	6	58	260	747	1501	2430	3305	3878	4132	4164	4165
50	0	0	22	118	343	604	774	720	431	148	9	0	0	0	22	140	483	1087	1861	2581	3012	3160	3169	3169
55	0	0	5	60	214	454	619	565	296	69	1	0	0	0	5	65	279	733	1352	1917	2213	2282	2283	2283
60	0	0	0	28	111	313	464	412	183	24	0	0	0	0	0	28	139	452	916	1328	1511	1535	1535	1535
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	12	35	95	219	400	595	723	683	467	261	65	16	12	47	142	361	761	1356	2079	2762	3229	3490	3555	3571

(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