

Climatology of the United States

No. 20

1971-2000

Station: OSCEOLA, NE

COOP ID: 256375

Climate Division: NE 6

NWS Call Sign:

Elevation: 1,660 Feet Lat: 41° 11N

Lon: 97° 34W

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	32.9	12.2	22.6	73+	1990	10	33.9	1992	-28	1974	12	8.7	1979	1317	0	.0	.0	3.6	14.1	30.6	6.4
Feb	39.3	17.7	28.5	81	1972	28	38.4	1999	-24	1975	9	14.3	1979	1022	0	.0	.0	8.0	9.7	25.4	3.6
Mar	50.8	27.4	39.1	90	1986	29	44.6	1986	-20	1960	4	32.0	1998	803	0	.0	@	16.9	3.1	21.6	.5
Apr	63.7	38.2	51.0	97	1989	26	59.4	1981	3	1975	3	43.5	1983	428	6	.0	.7	26.2	.2	8.4	.0
May	73.8	50.0	61.9	100	1989	29	68.1	1977	21	1967	4	56.0	1995	166	68	@	1.1	30.9	.0	.5	.0
Jun	84.0	59.7	71.9	105	1988	21	77.0	1988	37	1951	4	67.4	1982	17	222	.6	8.1	30.0	.0	.0	.0
Jul	87.5	64.2	75.9	112	1954	11	80.9	1974	38	1971	30	69.9	1992	3	338	1.4	13.5	31.0	.0	.0	.0
Aug	85.7	62.2	74.0	107	1983	16	82.2	1983	38	1950	20	67.9	1992	16	292	.7	10.2	31.0	.0	.0	.0
Sep	78.4	52.3	65.4	103+	1976	6	71.5	1998	22	1984	29	60.6	1993	83	93	.1	4.1	29.8	.0	.5	.0
Oct	65.9	40.2	53.1	94	1975	12	57.5	1975	5	1997	27	48.4	1987	373	3	.0	.2	28.5	.2	6.6	.0
Nov	47.5	26.6	37.1	81+	1999	13	47.6	1999	-13	1964	30	26.7	1985	839	0	.0	.0	13.8	3.5	22.0	.5
Dec	35.4	16.1	25.8	71+	1998	3	33.0	1999	-29	1989	22	7.7	1983	1216	0	.0	.0	4.4	11.4	29.9	3.6
Ann	62.1	38.9	50.5	112	Jul 1954	11	82.2	Aug 1983	-29	Dec 1989	22	7.7	Dec 1983	6283	1022	2.8	37.9	254.1	42.2	145.5	14.6

+ 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

090-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: OSCEOLA, NE

COOP ID: 256375

Climate Division: NE 6

NWS Call Sign:

Elevation: 1,660 Feet Lat: 41°11N

Lon: 97°34W

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	.63	.54	1.27	1960	15	1.67	1973	.00+	1987	4.4	1.8	.3	.0	.00	.00	.26	.37	.47	.57	.67	.80	.95	1.20	1.44
Feb	.67	.58	1.97	1966	9	2.99	1971	.03	1996	4.3	2.1	.4	@	.10	.15	.25	.34	.44	.55	.67	.82	1.03	1.36	1.69
Mar	2.25	2.12	2.19+	1987	23	9.75	1987	.00+	1994	7.2	4.3	1.5	.5	.00	.18	.55	.90	1.28	1.69	2.19	2.79	3.62	5.00	6.35
Apr	3.04	2.72	3.99	1986	27	9.07	1978	.32	1989	9.0	5.6	1.9	.8	.46	.72	1.16	1.58	2.02	2.50	3.04	3.72	4.62	6.08	7.49
May	4.60	4.46	4.80	1973	27	9.21	1982	.99	1980	11.6	8.0	3.2	1.0	1.37	1.80	2.46	3.03	3.58	4.15	4.78	5.53	6.49	7.99	9.39
Jun	4.05	3.69	3.91	1991	14	10.88	1991	.68	1987	9.3	6.0	2.6	1.2	.99	1.37	1.96	2.49	3.01	3.56	4.18	4.91	5.86	7.38	8.80
Jul	3.41	3.12	4.99	1990	26	8.29	1992	.30	1974	8.3	5.3	2.4	.9	.54	.84	1.33	1.80	2.29	2.82	3.42	4.16	5.16	6.77	8.31
Aug	3.12	2.61	4.59	1960	24	8.77	1977	.45	1991	8.1	5.3	2.0	.9	.53	.80	1.26	1.68	2.12	2.60	3.15	3.81	4.69	6.12	7.48
Sep	2.60	2.26	3.52	1977	3	7.07	1973	.00	1998	6.8	4.6	1.7	.6	.20	.48	.90	1.28	1.67	2.11	2.60	3.21	4.03	5.36	6.64
Oct	1.89	1.51	2.30	1968	16	4.32	1984	.05	1988	5.8	3.7	1.1	.4	.15	.27	.52	.78	1.07	1.40	1.79	2.29	2.99	4.15	5.30
Nov	1.72	1.57	1.73	1972	14	5.70	1983	.03	1976	5.5	3.1	1.2	.5	.10	.19	.40	.63	.90	1.21	1.59	2.08	2.77	3.94	5.11
Dec	.82	.65	1.30	1982	28	2.19	1982	.06	1976	4.6	2.1	.5	.1	.12	.19	.31	.42	.54	.67	.82	1.01	1.25	1.66	2.05
Ann	28.80	28.29	4.99	Jul 1990	26	10.88	Jun 1991	.00+	Sep 1998	84.9	51.9	18.8	6.9	17.89	19.89	22.52	24.56	26.39	28.19	30.07	32.17	34.74	38.53	41.86

+ 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: OSCEOLA, NE

COOP ID: 256375

Climate Division: NE 6

NWS Call Sign:

Elevation: 1,660 Feet

Lat: 41° 11N

Lon: 97° 34W

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	6.0	5.6	3	1	8.0	1971	3	18.2	1993	19	1974	12	18	1974	3.1	1.9	.7	.2	.0	9.6	5.2	2.2	.6
Feb	5.7	5.0	2	1	10.5	1971	22	14.0	1971	17	1975	9	15	1975	2.8	2.1	.5	.2	@	8.2	4.6	1.8	.1
Mar	5.8	6.0	1	#	12.0	1987	29	17.5	1987	15	1993	2	3	1993	2.1	1.5	.8	.5	@	2.9	1.7	.8	.2
Apr	1.7	.1	#	#	6.1	1992	21	10.0	1997	9	1997	12	1	1997	.7	.5	.2	.1	.0	.4	.2	.1	.0
May	.0	.0	#	0	.0	0	0	.0	0	#	1999	15	#	1999	.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	3.5	1985	29	3.5	1985	4	1985	29	#	1985	@	@	@	.0	.0	@	@	.0	.0
Oct	.7	.0	#	0	8.0	1997	26	8.0	1997	8	1997	26	1	1997	.2	.2	.1	.1	.0	.2	.1	.1	.0
Nov	4.2	3.5	#	#	13.0	1983	28	13.3	1975	13	1983	29	3	1991	2.1	1.4	.6	.2	@	3.9	1.6	.4	.1
Dec	6.0	4.5	1	1	10.4	1973	19	24.3	1973	17	1973	29	7	2000	3.1	1.8	.8	.3	@	7.7	3.0	1.2	.6
Ann	30.2	24.7	N/A	N/A	13.0	Nov 1983	28	24.3	Dec 1973	19	Jan 1974	12	18	Jan 1974	14.1	9.4	3.7	1.6	@	32.9	16.4	6.6	1.6

+ 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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NWS Call Sign:

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Lat: 41° 11N

Lon: 97° 34W

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	5/17	5/13	5/10	5/07	5/05	5/03	4/30	4/27	4/23
32	5/12	5/07	5/03	4/30	4/27	4/24	4/21	4/18	4/13
28	4/30	4/25	4/22	4/18	4/16	4/13	4/09	4/06	4/01
24	4/18	4/14	4/11	4/08	4/06	4/04	4/01	3/29	3/25
20	4/13	4/08	4/04	3/31	3/28	3/25	3/21	3/17	3/12
16	4/02	3/28	3/24	3/20	3/17	3/14	3/11	3/07	3/01
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	9/19	9/22	9/25	9/28	9/30	10/04	10/08
32	9/21	9/26	9/29	10/03	10/05	10/08	10/12	10/15	10/20
28	9/28	10/03	10/07	10/11	10/14	10/17	10/20	10/24	10/30
24	10/07	10/13	10/17	10/21	10/24	10/27	10/31	11/04	11/09
20	10/16	10/23	10/28	11/01	11/04	11/08	11/12	11/17	11/24
16	10/26	11/02	11/07	11/11	11/15	11/19	11/23	11/28	12/05
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	154	150	146	142	138	135	130	124
32	180	173	168	164	160	157	153	148	141
28	202	195	189	185	180	176	171	166	158
24	220	213	208	204	200	196	192	187	180
20	251	240	233	227	221	215	209	201	191
16	270	260	253	247	242	236	230	223	214

* 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	1317	1022	803	428	166	17	3	16	83	373	839	1216	6283
60	1162	885	648	294	85	3	0	3	28	234	689	1061	5092
57	1069	808	558	224	52	1	0	0	11	164	601	968	4456
55	1008	755	502	183	35	0	0	0	5	125	545	906	4064
50	858	626	362	98	11	0	0	0	0	56	410	756	3177
32	380	256	58	1	0	0	0	0	0	0	85	293	1073

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	86	159	278	569	926	1196	1359	1300	1000	653	237	100	7863
55	1	13	8	61	248	506	646	587	315	65	7	0	2457
57	0	10	3	42	202	446	584	525	261	42	3	0	2118
60	0	3	0	23	143	359	491	435	188	19	0	0	1661
65	0	0	0	6	68	222	338	292	93	3	0	0	1022
70	0	0	0	1	25	113	199	172	37	0	0	0	547

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	42	133	363	694	970	1125	1065	778	436	96	13	3	45	178	541	1235	2205	3330	4395	5173	5609	5705	5718
45	0	12	70	237	539	820	970	910	630	300	41	2	0	12	82	319	858	1678	2648	3558	4188	4488	4529	4531
50	0	3	32	143	390	670	815	755	483	183	17	0	0	3	35	178	568	1238	2053	2808	3291	3474	3491	3491
55	0	0	8	73	251	521	660	600	343	94	5	0	0	0	8	81	332	853	1513	2113	2456	2550	2555	2555
60	0	0	1	35	142	375	505	447	220	36	0	0	0	0	1	36	178	553	1058	1505	1725	1761	1761	1761
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	12	36	107	235	430	637	753	712	500	282	75	14	12	48	155	390	820	1457	2210	2922	3422	3704	3779	3793

(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