

Climatology of the United States

No. 20

1971-2000

Station: LODGEPOLE, NE

COOP ID: 254900

Climate Division: NE 1

NWS Call Sign:

Elevation: 3,832 Feet Lat: 41°09N

Lon: 102°38W

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	40.5	15.1	27.8	70	1950	21	34.2	1990	-28	1963	19	15.7	1979	1153	0	.0	.0	8.0	7.3	30.4	4.8
Feb	47.1	19.7	33.4	77+	1992	29	40.6	1992	-25	1982	5	22.3	1978	885	0	.0	.0	12.9	4.2	26.9	2.8
Mar	54.7	26.2	40.5	85	1967	29	48.4	1986	-23	1960	3	34.4	1980	760	0	.0	.0	20.6	2.0	25.5	.6
Apr	64.2	34.5	49.4	93+	1992	30	56.0	1981	-7	1975	2	43.6	1997	471	1	.0	.2	26.0	.2	14.1	@
May	73.8	45.0	59.4	97	2000	29	64.7	1994	17	1989	1	54.2	1995	207	32	.0	1.4	30.5	.0	2.0	.0
Jun	85.0	54.1	69.6	108	1954	23	76.0	1988	29	1951	2	63.8	1982	40	176	1.0	11.0	30.0	.0	.0	.0
Jul	92.0	60.3	76.2	110	1954	11	78.7	1980	41	1959	1	71.2	1972	1	345	4.3	20.6	31.0	.0	.0	.0
Aug	90.0	58.5	74.3	105+	2001	27	79.8	1983	37+	1964	30	69.6	1992	8	294	1.6	17.8	31.0	.0	.0	.0
Sep	81.0	48.1	64.6	102	1959	4	70.8	1998	15	1985	30	60.8	1973	98	84	.2	7.2	29.6	.0	1.5	.0
Oct	68.5	36.1	52.3	94	1967	3	55.5	1974	-1	1991	31	48.8	1976	394	0	.0	.2	28.9	.2	11.2	@
Nov	50.5	24.1	37.3	80+	1999	8	46.1	1999	-13	1950	24	27.2	1985	831	0	.0	.0	15.9	2.9	26.3	.6
Dec	42.5	16.4	29.5	71+	1980	27	37.0	1980	-34	1989	22	14.8	1983	1103	0	.0	.0	9.1	6.1	30.2	3.0
Ann	65.8	36.5	51.2	110	Jul 1954	11	79.8	Aug 1983	-34	Dec 1989	22	14.8	Dec 1983	5951	932	7.1	58.4	273.5	22.9	168.1	11.8

+ 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/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

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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: LODGEPOLE, NE

COOP ID: 254900

Climate Division: NE 1

NWS Call Sign:

Elevation: 3,832 Feet Lat: 41°09N

Lon: 102°38W

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	.40	.32	1.00	1988	19	1.23	1973	.00+	1986	2.5	1.2	.2	@	.00	.06	.13	.20	.26	.33	.41	.51	.63	.84	1.04
Feb	.48	.35	1.29	1987	27	2.13	1987	.00+	1996	3.3	1.5	.1	@	.00	.02	.09	.16	.24	.33	.44	.58	.78	1.11	1.44
Mar	1.36	1.00	2.00	1981	29	3.80	1983	.00	1985	5.1	3.3	.7	.3	.06	.17	.37	.56	.78	1.02	1.31	1.67	2.17	2.99	3.80
Apr	1.89	1.66	2.50	2000	30	4.53	1977	.31	1991	6.6	4.1	1.2	.3	.29	.45	.72	.98	1.25	1.55	1.89	2.30	2.86	3.77	4.64
May	3.22	2.82	2.72	1969	5	8.38	1988	.22	1994	8.8	5.8	2.2	.6	.78	1.08	1.55	1.97	2.38	2.82	3.31	3.90	4.66	5.87	7.01
Jun	2.87	2.61	3.68	1970	11	6.35	1992	.39	1989	7.8	5.7	1.8	.5	.73	1.00	1.42	1.78	2.15	2.53	2.96	3.47	4.13	5.17	6.15
Jul	2.53	2.24	2.33	1958	2	5.67	1972	.58	1977	7.0	5.2	1.6	.5	.86	1.10	1.45	1.75	2.03	2.33	2.65	3.02	3.49	4.23	4.91
Aug	2.15	2.01	3.97	1968	14	4.46	1992	.46+	2000	6.6	4.6	1.6	.4	.55	.75	1.07	1.34	1.61	1.90	2.22	2.59	3.09	3.86	4.59
Sep	1.43	1.06	2.52	1996	19	5.24	1996	.11	1976	4.6	3.2	.7	.2	.12	.22	.41	.61	.83	1.07	1.37	1.74	2.25	3.10	3.93
Oct	.97	.56	1.60	1998	29	5.46	1994	.00+	1988	3.7	2.5	.6	.1	.00	.07	.22	.37	.53	.72	.94	1.20	1.58	2.20	2.82
Nov	.74	.51	1.19	1972	2	2.66	1983	.02	1997	3.2	2.1	.4	.1	.04	.08	.16	.26	.38	.51	.68	.89	1.20	1.71	2.23
Dec	.42	.29	1.22	1982	25	1.52	1982	.00+	1996	2.6	1.6	.1	@	.00	.00	.02	.10	.18	.27	.38	.52	.72	1.05	1.40
Ann	18.46	18.27	3.97	Aug 1968	14	8.38	May 1988	.00+	Dec 1996	61.8	40.8	11.2	3.0	13.60	14.55	15.76	16.68	17.49	18.28	19.08	19.97	21.04	22.59	23.93

+ 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

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151 Patton Avenue
Asheville, North Carolina 28801
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Station: LODGEPOLE, NE

COOP ID: 254900

Climate Division: NE 1

NWS Call Sign:

Elevation: 3,832 Feet

Lat: 41°09N

Lon: 102°38W

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	5.5	4.0	2	1	11.0	1990	20	13.0	1976	13	1988	22	6	1988	2.0	1.9	.8	.3	.1	11.1	7.9	5.2	1.0
Feb	5.4	4.0	1	#	11.0	1987	27	18.0	1987	17	1987	28	4	1993	2.3	2.2	.8	.1	@	5.6	2.6	1.5	.1
Mar	8.1	5.5	1	#	12.0	1988	11	23.0	1979	15	1987	1	5	1987	2.4	2.4	1.0	.4	.2	3.0	1.8	1.2	.4
Apr	3.6	2.0	#	0	8.0	1984	3	19.0	1984	15	1980	3	2	1980	1.3	1.2	.6	.1	.0	1.4	.8	.4	.2
May	.3	.0	#	0	6.0	1979	10	7.0	1979	6	1979	10	#+	1990	.1	.1	@	@	.0	.1	@	@	.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	.3	.0	#	0	6.0	1985	29	6.0	1985	2+	2000	24	#+	2000	.1	.1	@	@	.0	@	.0	.0	.0
Oct	1.0	.0	#	0	8.0	1973	11	8.0	1973	5	1997	26	#+	1997	.3	.3	.1	@	.0	.2	.2	@	.0
Nov	5.9	4.0	1	#	13.0	1983	27	28.0	1983	26	1983	28	5	1979	1.7	1.7	.9	.3	.1	3.6	2.5	1.3	.4
Dec	6.5	4.5	2	1	12.0	1982	25	20.5	1985	22	1983	1	11	1983	2.3	2.2	.8	.4	.1	7.8	6.5	5.1	1.6
Ann	36.6	24.0	N/A	N/A	13.0	Nov 1983	27	28.0	Nov 1983	26	Nov 1983	28	11	Dec 1983	12.5	12.1	5.0	1.6	.5	32.8	22.3	14.7	3.7

+ 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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Station: LODGEPOLE, NE

COOP ID: 254900

Climate Division: NE 1

NWS Call Sign:

Elevation: 3,832 Feet

Lat: 41°09N

Lon: 102°38W

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	6/02	5/29	5/26	5/23	5/20	5/18	5/15	5/12	5/07
32	5/18	5/14	5/11	5/09	5/07	5/05	5/02	4/30	4/26
28	5/11	5/07	5/04	5/02	4/29	4/27	4/24	4/22	4/18
24	4/29	4/25	4/22	4/19	4/16	4/14	4/11	4/08	4/03
20	4/20	4/15	4/11	4/08	4/05	4/02	3/30	3/26	3/21
16	4/13	4/06	4/01	3/28	3/24	3/21	3/16	3/12	3/05
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	9/13	9/16	9/18	9/20	9/22	9/24	9/27	9/30
32	9/13	9/18	9/21	9/24	9/26	9/29	10/02	10/05	10/10
28	9/21	9/26	9/30	10/04	10/07	10/10	10/13	10/17	10/23
24	9/30	10/06	10/10	10/13	10/17	10/20	10/23	10/27	11/02
20	10/05	10/11	10/15	10/18	10/21	10/25	10/28	11/01	11/07
16	10/21	10/26	10/30	11/02	11/05	11/08	11/11	11/14	11/19
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	138	132	128	125	122	119	116	112	107
32	161	154	150	146	142	138	134	130	123
28	181	173	168	164	160	156	151	146	139
24	202	195	191	187	183	179	175	170	163
20	222	214	208	203	199	194	189	183	175
16	251	242	235	230	225	220	214	208	199

* 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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COOP ID: 254900

Climate Division: NE 1 NWS Call Sign: Elevation: 3,832 Feet Lat: 41°09N Lon: 102°38W

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	1153	885	760	471	207	40	1	8	98	394	831	1103	5951
60	998	745	605	329	106	11	0	1	36	244	681	948	4704
57	905	661	513	252	64	4	0	0	15	164	591	855	4024
55	843	607	452	205	43	2	0	0	8	119	535	793	3607
50	689	477	311	110	12	0	0	0	0	44	396	642	2681
32	223	122	24	0	0	0	0	0	0	0	71	197	637

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	93	161	287	520	849	1126	1367	1310	976	629	230	117	7665
55	0	2	2	35	178	438	654	597	293	36	4	0	2239
57	0	0	0	22	137	380	592	535	241	19	0	0	1926
60	0	0	0	10	87	297	499	443	171	6	0	0	1513
65	0	0	0	1	32	176	345	294	84	0	0	0	932
70	0	0	0	0	8	86	199	164	33	0	0	0	490

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	11	45	127	289	592	878	1111	1055	729	388	83	17	11	56	183	472	1064	1942	3053	4108	4837	5225	5308	5325
45	0	12	61	182	438	728	956	900	584	254	35	2	0	12	73	255	693	1421	2377	3277	3861	4115	4150	4152
50	0	1	19	98	300	578	801	745	437	142	8	0	0	1	20	118	418	996	1797	2542	2979	3121	3129	3129
55	0	0	0	41	178	430	646	590	306	63	0	0	0	0	0	41	219	649	1295	1885	2191	2254	2254	2254
60	0	0	0	15	84	289	491	435	188	16	0	0	0	0	0	15	99	388	879	1314	1502	1518	1518	1518
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	26	64	135	236	383	551	693	666	476	302	91	37	26	90	225	461	844	1395	2088	2754	3230	3532	3623	3660

(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