U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: NORTH POLE, AK **COOP ID: 506581**

Climate Division: AK 8 **NWS Call Sign:** **Elevation: 475 Feet** **Lat: 64˚45N** **Lon: 147˚20W**

Temperature (˚F)

Month	Mean (1) Daily Max	Mean (1) Daily Min	Mean (1) Mean	Extremes Highest Daily(2)	Extremes Year	Extremes Day	Extremes Highest Month(1) Mean	Extremes Year	Extremes Lowest Daily(2)	Extremes Year	Extremes Day	Extremes Lowest Month(1) Mean	Extremes Year	Degree Days (1) Base Temp 65 Heating	Degree Days (1) Base Temp 65 Cooling	Mean Number of Days (3) Max >= 90	Max >= 70	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	-1.5	-18.7	-10.1	50	1981	15	16.5	1981	-67+	1975	6	-32.3	1971	2331	0	.0	.0	@	29.8	31.0	26.3
Feb	9.3	-13.9	-2.3	49	1980	11	15.8	1980	-59+	1999	5	-23.6	1990	1886	0	.0	.0	.0	25.8	28.3	22.6
Mar	27.9	-1.3	13.3	60	1998	20	30.4	1981	-52	1971	5	-1.3	1971	1604	0	.0	.0	1.3	19.6	30.9	17.5
Apr	45.8	18.8	32.3	76	1979	30	40.6	1993	-32	1986	7	21.2	1985	981	0	.0	.1	10.6	4.8	28.4	3.9
May	62.3	35.2	48.8	86	1995	11	55.0	1981	6	1992	4	41.4	1992	505	0	.0	4.2	28.0	@	14.2	.0
Jun	72.5	46.2	59.4	95+	1983	25	62.5	1971	25	1982	4	55.3	1978	176	6	.2	16.7	30.0	.0	.7	.0
Jul	74.9	49.9	62.4	90+	1993	15	64.8	1972	31+	1971	1	59.2	2000	99	17	.1	21.5	31.0	.0	@	.0
Aug	67.9	44.6	56.3	90	1994	5	61.2	1977	21	1986	23	50.9	2000	279	9	@	10.7	30.5	.0	2.9	.0
Sep	55.5	33.4	44.5	77	1995	21	52.4	1995	-1+	1992	30	31.4	1992	617	0	.0	1.1	20.9	.6	16.4	.1
Oct	31.7	15.3	23.5	67	1969	13	32.7	1979	-41	1975	31	11.7	1996	1287	0	.0	.0	1.9	16.8	30.2	5.0
Nov	10.0	-7.1	1.5	50	1976	13	18.8	1979	-51	1990	30	-10.8	1975	1909	0	.0	.0	@	28.4	30.0	21.4
Dec	1.4	-15.4	-7.0	47	1982	29	5.8	1985	-62	1975	8	-32.0	1980	2234	0	.0	.0	.0	30.1	31.0	26.1
Ann	38.1	15.6	26.9	95+	Jun 1983	25	64.8	Jul 1972	-67+	Jan 1975	6	-32.3	Jan 1971	13908	32	.3	54.3	154.2	155.9	244.0	122.9

\+ 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

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1968-2001

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

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	.63	.39	.61	2000	18	4.63	1984	.03	1998
Feb	.37	.17	.84	1996	18	2.03	1984	.00+	1987
Mar	.56	.26	.54	1991	23	8.15	1999	.00	1987
Apr	.29	.09	.70	1994	3	1.89	1984	.00+	2000
May	.60	.34	.89	2000	24	1.73	1973	.01	1974
Jun	1.34	1.01	2.30	1992	24	2.93	1977	.22	1983
Jul	1.67	1.29	1.76	1995	15	4.00	1998	.31	1994
Aug	1.64	1.41	1.01	1996	9	3.87	2000	.41	1977
Sep	1.15	.89	.88	1991	11	3.58	1977	.17	1994
Oct	.94	.92	.70	1987	29	2.48	1971	.22	1998
Nov	.79	.63	.90	1987	28	2.86	1987	.00	1983
Dec	.76	.47	2.00	1970	20	4.49	1984	.03	1995
Ann	10.74	9.74	2.30	Jun 1992	24	8.15	Mar 1999	.00+	Apr 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.1	1.6	.0	.0
Feb	4.0	1.0	.1	.0
Mar	3.7	.8	.0	.0
Apr	2.3	.8	.1	.0
May	4.6	1.8	.3	.0
Jun	8.2	3.9	.6	.1
Jul	9.5	4.6	.8	.1
Aug	10.5	5.3	.7	.0
Sep	8.7	3.9	.2	.0
Oct	8.9	3.4	.3	.0
Nov	8.6	2.8	.2	.0
Dec	7.2	2.3	.4	.0
Ann	82.3	32.2	3.7	.2

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.04	.08	.15	.24	.34	.45	.59	.77	1.01	1.43	1.84
Feb	.00	.00	.02	.07	.12	.20	.30	.43	.63	.98	1.34
Mar	.00	.01	.03	.08	.16	.26	.40	.61	.92	1.50	2.12
Apr	.00	.00	.00	.02	.06	.11	.20	.31	.49	.82	1.17
May	.02	.05	.11	.19	.28	.39	.53	.71	.97	1.43	1.89
Jun	.30	.43	.62	.80	.98	1.16	1.38	1.63	1.96	2.49	2.98
Jul	.34	.50	.74	.97	1.19	1.43	1.70	2.03	2.46	3.15	3.80
Aug	.48	.63	.87	1.07	1.27	1.48	1.70	1.97	2.32	2.87	3.38
Sep	.14	.23	.40	.56	.73	.91	1.13	1.40	1.77	2.37	2.95
Oct	.28	.37	.50	.62	.73	.85	.98	1.13	1.32	1.63	1.92
Nov	.06	.15	.28	.39	.51	.65	.79	.98	1.22	1.62	2.00
Dec	.03	.07	.15	.25	.37	.51	.69	.91	1.24	1.80	2.36
Ann	5.83	6.69	7.83	8.74	9.57	10.39	11.25	12.23	13.45	15.26	16.87

\+ 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: 1968-2001
(3) Derived from 1971-2000 daily data

Complete documentation available from:
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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	7.6	6.0	19	17	7.5	2000	18	22.7	2000	65	1975	31	57	1975	7.3	2.9	.5	.1	.0	30.6	30.6	30.6	27.3
Feb	4.8	2.8	22	21	10.0	1996	18	22.8	1996	66	1975	22	64	1975	4.9	1.6	.3	.1	@	28.2	28.2	28.2	26.8
Mar	3.7	3.2	21	19	6.0	1991	23	16.9	1991	58	1975	9	55	1975	4.6	1.3	.2	@	.0	30.3	30.3	30.3	29.2
Apr	1.6	.4	12	10	4.9	1992	9	10.8	1992	52	1975	12	40	1975	1.7	.5	.1	.0	.0	22.7	22.3	21.5	16.7
May	.4	.0	#	0	5.0	1999	1	5.0	1999	19	1972	1	4	1992	.2	.1	.1	@	.0	1.5	1.4	1.2	.4
Jun	#	.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	1.3	.0	#	0	7.2	1992	13	17.3	1992	12	1992	19	6	1992	.9	.4	.1	.1	.0	1.0	.7	.6	.3
Oct	9.7	8.4	3	3	6.4	1974	17	22.6	1974	18	1974	31	12	1974	8.2	3.9	.8	.1	.0	19.3	14.9	10.3	2.7
Nov	10.9	9.4	10	9	7.5	1999	20	32.1	1994	38	1974	30	27	1974	10.0	4.0	1.0	.1	.0	29.1	28.2	25.0	12.4
Dec	9.6	8.2	14	13	10.4	1990	28	48.7	1984	54	1974	31	45	1974	8.3	2.9	.8	.3	@	29.4	29.4	29.3	21.1
Ann	49.6	38.4	N/A	N/A	10.4	Dec 1990	28	48.7	Dec 1984	66	Feb 1975	22	64	Feb 1975	46.1	17.6	3.9	.8	@	192.1	186.0	177.0	136.9

+ 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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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	7/23	7/13	7/06	6/30	6/25	6/19	6/13	6/07	5/28
32	6/14	6/09	6/06	6/03	5/31	5/29	5/26	5/22	5/18
28	6/01	5/27	5/24	5/21	5/19	5/16	5/13	5/10	5/06
24	5/16	5/12	5/09	5/06	5/04	5/01	4/29	4/26	4/22
20	5/09	5/04	4/30	4/27	4/25	4/22	4/19	4/15	4/10
16	5/05	4/29	4/26	4/23	4/20	4/17	4/13	4/10	4/05

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	8/05	8/09	8/11	8/13	8/15	8/16	8/18	8/21	8/24
32	8/13	8/16	8/19	8/21	8/23	8/25	8/27	8/30	9/02
28	8/21	8/26	8/29	9/01	9/04	9/07	9/10	9/13	9/18
24	8/29	9/04	9/08	9/12	9/15	9/18	9/22	9/26	10/02
20	9/13	9/18	9/21	9/24	9/27	9/30	10/02	10/06	10/11
16	9/17	9/23	9/26	9/30	10/03	10/06	10/09	10/13	10/18

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	82	71	63	56	50	44	37	29	18
32	101	95	90	87	83	79	75	71	65
28	127	121	116	112	108	104	99	95	88
24	156	149	143	138	133	129	124	118	110
20	174	168	163	158	155	151	146	141	135
16	188	180	174	170	165	161	156	151	143

***** 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	2331	1886	1604	981	505	176	99	279	617	1287	1909	2234	13908
60	2176	1746	1449	831	358	67	21	156	471	1132	1759	2079	12245
57	2083	1662	1356	743	276	30	5	100	388	1039	1669	1986	11337
55	2021	1606	1294	686	227	16	1	72	336	977	1609	1924	10769
50	1866	1466	1139	546	129	2	0	25	220	823	1459	1769	9444
32	1330	985	621	164	5	0	0	0	17	338	930	1211	5601

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	22	24	40	173	523	820	941	753	390	74	11	0	3771
55	0	0	0	5	33	145	229	111	19	0	0	0	542
57	0	0	0	2	19	100	171	78	12	0	0	0	382
60	0	0	0	0	8	47	94	40	5	0	0	0	194
65	0	0	0	0	0	6	17	9	0	0	0	0	32
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	0	0	0	23	249	550	652	466	157	1	0	0	0	0	0	23	272	822	1474	1940	2097	2098	2098	2098
45	0	0	0	2	127	400	497	311	65	0	0	0	0	0	0	2	129	529	1026	1337	1402	1402	1402	1402
50	0	0	0	0	46	251	343	174	18	0	0	0	0	0	0	0	46	297	640	814	832	832	832	832
55	0	0	0	0	11	122	199	78	2	0	0	0	0	0	0	0	11	133	332	410	412	412	412	412
60	0	0	0	0	0	45	76	20	0	0	0	0	0	0	0	0	0	45	121	141	141	141	141	141
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	0	31	181	327	388	267	105	1	0	0	0	0	0	31	212	539	927	1194	1299	1300	1300	1300

(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:
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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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

f. Mean "number of days statistics" for temperature were calculated from a serially complete daily data set. A serial dataset was not available for precipitation,
To ensure that a station's data was adequate to estimate these statistics, the following criteria were used:
1. A station must have 80% of its data for the 1971-2000 time period.
2. Only months with at least 21 days are used.
3. There must be a least 21 months (meeting criteria 2.) in the sample.

g. Snowfall and snow depth statistics were derived daily values quality controlled to be consistent with 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 differences 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 are 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. Other inconsistencies may appear from comparing statistically modeled values such as degree days to observed temperatures.

a. Temperature/ Precipitation Tables
1. 1971-2000 Monthly Normals
2. Cooperative Summary of the Day
3. National Weather Service station records
4. 1971-2000 serially complete daily data

b. Degree Day Table
1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
1. Cooperative Summary of the Day

d. Freeze Data Table
1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/usnormalsprods.html
Snow Climatology Project Description, www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html