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

COOP ID: 502112

Lon: 147°53W

Station: COLLEGE 5 NW, AK

Climate Division: AK 8 NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 90 70 50 32 32 0 6.8 -7.5 -.4 48 +1981 16 25.8 1981 -55+ 1989 29 -20.3 1971 2028 0 .0 .0 .0 28.4 30.8 18.6 Jan 13.0 -4.4 4.3 54 1977 21 19.9 1997 -48 1999 6 -16.5 1990 1700 0 .0 .0 .1 23.5 28.1 16.8 Feb Mar 25.8 5.2 15.5 56 1998 20 31.5 1981 -31+1995 14 1.6 1972 1534 0 .0 .0 .4 19.5 30.7 10.6 42.5 21.7 30 21.0 1985 25.2 Apr 32.1 69 1995 40.5 1993 -17 1986 7 987 0 .0 0. 9.0 5.3 1.9 May 59.3 37.3 48.3 84 1995 11 54.3 1981 9+ 1992 4 39.0 1992 518 0 .0 3.9 27.1 .2 6.9 .0 47.3 1983 33+ 54.0 14.5 Jun 69.1 58.2 93 25 61.1 1971 1999 1 1978 207 2 .1 29.8 .0 .0 .0 Jul 71.3 50.5 60.9 91 1977 31 64.3 1993 36 28 56.4 1981 140 13 **(**a) 19.4 30.9 0. 2000 .0 .0 65.3 45.3 55.3 89+ 1994 5 60.8 1977 26 1987 30 49.9 2000 312 11 .0 9.2 30.2 .0 .8 .0 Aug 7 2 Sep 53.7 35.1 44.4 77 1995 21 52.3 1995 1992 24 31.9 1992 620 .0 1.1 20.4 .7 9.2 .0 34.4 26 13.5 2.0 Oct 31.8 17.8 24.8 62 1979 2 1987 -18 1996 1996 1246 0 .0 .0 1.6 16.9 28.8 15.4 2.2 8.8 51 1976 13 24.5 1979 -40 1990 30 -3.0 1975 1687 0 .0 .0 @ 27.1 13.0 Nov 29.6 Dec 9.3 -4.4 2.5 47 1986 10 17.9 1985 -43 1999 31 -15.21980 1942 0 .0 .0 .0 29.0 30.9 19.4 Jun Jul Jan Jan 20.5 29.6 93 1983 25 64.3 1993 -55+ 1989 29 -20.3 1971 12921 28 48.1 149.5 150.6 221.0 82.3 38.6 .1 Ann

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: May 2005 013-A

(1) From the 1971-2000 Monthly Normals

Elevation: 950 Feet Lat: 64°56N

- (2) Derived from station's available digital record: 1976-2001
- (3) Derived from 1971-2000 serially complete daily data

⁺ Also occurred on an earlier date(s)

[@] Denotes mean number of days greater than 0 but less than .05

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Climate Division: AK 8 NWS Call Sign: Elevation: 950 Feet Lat: 64°56N Lon: 147°53W

										Pı	recipit	tation	(incl	nes)										
	Mo	Precipitation Totals Means/ Extremes									ean N	Numbo Pays (3		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										
		ans(1)				Extremes	5			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	.65	.45	.91	1993	14	3.24	1993	.12	1998	8.3	2.4	.1	.0	.09	.14	.23	.32	.42	.52	.64	.79	.99	1.31	1.63
Feb	.44	.28	.60	1980	2	1.71	1996	.02	2000	5.7	1.4	.1	.0	.03	.06	.11	.17	.24	.32	.41	.53	.70	.98	1.27
Mar	.31	.19	.85	1991	25	2.61	1991	.00+	1987	4.9	1.0	.0	.0	.00	.00	.05	.09	.15	.21	.29	.38	.51	.74	.96
Apr	.21	.10	.42	1992	6	1.01	1992	.00+	2000	3.0	.7	.0	.0	.00	.00	.01	.04	.08	.12	.18	.26	.36	.54	.72
May	.77	.64	.72	1977	31	2.23	1988	.13+	1994	7.5	2.6	.2	.0	.12	.18	.29	.40	.51	.63	.77	.93	1.16	1.53	1.88
Jun	2.09	1.92	2.31	1988	16	4.73	1988	.30	1997	12.7	5.6	1.2	.1	.73	.93	1.22	1.46	1.69	1.92	2.18	2.48	2.86	3.46	4.00
Jul	2.15	2.08	1.64	1986	20	4.59	1990	.46	1993	13.6	5.6	1.0	.2	.66	.86	1.16	1.42	1.68	1.94	2.23	2.57	3.01	3.70	4.33
Aug	2.08	1.93	1.21	1990	26	4.65	1983	.49	1977	14.2	6.8	.7	.1	.74	.93	1.22	1.45	1.68	1.91	2.17	2.46	2.84	3.42	3.96
Sep	1.46	1.36	1.04	1990	6	3.46	1993	.16	1979	11.4	4.6	.5	.0	.38	.52	.73	.91	1.10	1.29	1.51	1.76	2.09	2.62	3.11
Oct	.93	.88	.95	1986	11	2.05	1983	.31+	1998	10.6	3.1	.1	.0	.32	.40	.53	.64	.75	.86	.97	1.11	1.29	1.57	1.82
Nov	.76	.77	.67	1982	6	2.37	1994	.08	1983	9.6	2.4	.2	.0	.11	.17	.28	.38	.49	.61	.75	.92	1.15	1.53	1.89
Dec	.74	.47	.98	1990	28	3.32	1990	.05	1995	9.7	2.5	.1	.0	.08	.13	.23	.34	.45	.57	.72	.90	1.15	1.56	1.96
Ann	12.59	11.78	2.31	Jun 1988	16	4.73	Jun 1988	.00+	Apr 2000	111.2	38.7	4.2	.4	8.56	9.32	10.30	11.05	11.73	12.38	13.05	13.80	14.71	16.04	17.19

⁺ Also occurred on an earlier date(s)

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

[#] 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: 1976-2001

⁽³⁾ Derived from 1971-2000 daily data

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Station: COLLEGE 5 NW, AK

Climate Division: AK 8 NWS Call Sign: Elevation: 950 Feet Lat: 64°56N Lon: 147°53W

										Snov	w (incl	hes)												
						Sno	ow To	tals							Mean Number of Days (1)									
	Mean	s/Medi	ans (1)	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	10.5	7.5	17	15	14.3	1993	14	49.7	1993	48	1993	15	39	1993	9.0	3.1	.7	.2	.0	28.8	28.8	28.5	24.7	
Feb	7.4	5.1	19	18	8.5	1996	18	27.8	1996	40	1993	4	38	1993	7.1	2.0	.7	.2	.0	26.5	26.5	26.5	26.1	
Mar	4.4	2.5	20	20	8.2	1991	23	29.8	1991	52	1991	27	40	1991	5.0	1.2	.2	.1	.0	29.4	29.4	29.4	28.6	
Apr	2.0	.7	10	8	4.6	1992	6	10.2	1992	49	1991	1	34	1991	2.0	.7	.1	.0	.0	20.2	19.5	18.7	14.4	
May	.8	.0	#	0	6.7	1992	12	12.0	1992	14	1992	12	5	1992	.7	.4	@	@	.0	1.4	1.0	.9	.5	
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	2.3	.0	#	0	5.6	1992	14	22.4	1992	12	1992	15	5	1992	1.4	.8	.2	.1	.0	1.8	1.0	.7	.2	
Oct	11.2	9.7	3	2	12.0	1982	19	29.8	1982	18	1982	19	9+	1992	9.7	4.2	.8	.2	@	19.3	13.3	8.0	1.8	
Nov	13.4	12.9	8	8	8.5	1992	22	37.7	1994	24+	1994	22	19	1982	11.8	4.8	1.1	.2	.0	29.7	28.1	23.6	10.8	
Dec	11.6	9.6	13	13	7.5	1984	17	38.8	1984	44	1990	29	24	1992	10.5	4.0	.9	.2	.0	29.9	29.9	28.8	19.8	
Ann	63.6	48.0	N/A	N/A	14.3	Jan 1993	14	49.7	Jan 1993	52	Mar 1991	27	40	Mar 1991	57.2	21.2	4.7	1.2	@	187.0	177.5	165.1	126.9	

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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[@] 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:

Elevation: 950 Feet

				Freez	e Data										
			Spri	ng Freeze Da	ates (Month/	Day)									
Temp (F)		P	robability of	later date in	n spring (thr	u Jul 31) tha	n indicated(*)							
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	6/18	6/12	6/08	6/05	6/01	5/29	5/25	5/21	5/15						
32	5/27	5/24	5/22	5/20	5/18	5/16	5/14	5/12	5/09						
28	5/20	5/15	5/12	5/09	5/06	5/03	4/30	4/27	4/22						
24	5/09	5/05	5/01	4/28	4/26	4/23	4/20	4/16	4/12						
20	5/04	4/29	4/25	4/22	4/20	4/17	4/14	4/10	4/05						
16	4/27	4/22	4/19	4/16	4/14	4/11	4/09	4/05	4/01						
			Fal	l Freeze Dat	es (Month/D	ay)									
Toman (E)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	8/13	8/18	8/21	8/24	8/26	8/29	8/31	9/03	9/08						
32	8/24	8/29	9/02	9/05	9/08	9/11	9/14	9/18	9/23						
28	9/04	9/09	9/12	9/15	9/18	9/21	9/24	9/28	10/03						
24	9/13	9/17	9/21	9/23	9/26	9/29	10/02	10/05	10/09						
20	9/20	9/24	9/28	10/01	10/03	10/06	10/09	10/13	10/17						
16	9/29	10/03	10/06	10/09	10/11	10/14	10/16	10/19	10/24						
				Freeze F	ree Period										
Town (F)			Probability	of longer tha	an indicated	freeze free p	eriod (Days)								
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	108	100	95	90	85	81	76	70	62						
32	129	123	119	116	112	109	106	101	96						
28	157	149	144	139	135	130	125	120	112						
24	172	165	161	157	153	149	145	140	134						
20	185	178	174	170	166	162	159	154	148						
16	200	193	188	184	180	176	171	166	159						

^{*} 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						Heatin	g Degree	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	2028	1700	1534	987	518	207	140	312	620	1246	1687	1942	12921		
60	1873	1560	1379	837	370	86	45	186	477	1091	1537	1787	11228		
57	1780	1476	1286	748	288	40	15	128	396	998	1447	1694	10296		
55	1718	1420	1224	691	238	21	7	96	345	936	1387	1632	9715		
50	1569	1280	1069	551	137	3	0	40	232	783	1237	1477	8378		
32	1053	814	558	167	6	0	0	0	21	301	718	933	4571		

Base	Cooling Degree Days (1)														
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
32	48	38	47	171	512	785	896	722	392	78	22	14	3725		
55	0	0	0	5	31	116	190	105	26	0	0	0	473		
57	0	0	0	2	18	75	136	75	17	0	0	0	323		
60	0	0	0	0	7	31	73	40	8	0	0	0	159		
65	0	0	0	0	0	2	13	11	2	0	0	0	28		
70	0	0	0	0	0	0	0	0	0	0	0	0	0		

										Gro	wing	Degre	e Uni	ts (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	36	288	561	654	484	191	6	0	0	0	0	0	36	324	885	1539	2023	2214	2220	2220	2220
45	0	0	0	8	160	411	499	333	92	0	0	0	0	0	0	8	168	579	1078	1411	1503	1503	1503	1503
50	0	0	0	0	74	270	347	193	32	0	0	0	0	0	0	0	74	344	691	884	916	916	916	916
55	0	0	0	0	24	139	203	91	4	0	0	0	0	0	0	0	24	163	366	457	461	461	461	461
60	0	0	0	0	3	56	86	27	0	0	0	0	0	0	0	0	3	59	145	172	172	172	172	172
Base				Gro	wing De	gree Unit	s for Co	rn (Mont	thly)						Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		
50/86	0	0	0	24	172	316	372	255	96	1	0	0	0	0	0	24	196	512	884	1139	1235	1236	1236	1236

(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

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

- c. Snow Tables
 - 1. Cooperative Summary of the Day
- d. Freeze Data Table

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

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