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: 509790

Station: WHITES CROSSING, AK

Climate Division: AK 5 NWS Call Sign: Elevation: 270 Feet Lat: 61°42N Lon: 150°00W

									r	Гетре	eratur	e (°F)									
	Mea	n (1)						Extr	emes			- C	Days (1) emp 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 >= 90	Max >= 70	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	14.9	-5.7	4.6	47+	2001	19	25.9	1977	-50	1989	28	-12.6	1971	1874	0	.0	.0	.0	27.2	30.9	17.1
Feb	23.3	-2.3	10.5	47	1977	19	26.5	1977	-48	1999	4	-7.8	1979	1529	0	.0	.0	.0	21.8	28.1	14.0
Mar	35.0	6.2	20.6	54	1973	31	31.0	1981	-36	1992	5	8.3	1972	1376	0	.0	.0	.4	11.2	30.6	10.3
Apr	46.6	21.2	33.9	65	1995	30	38.3	1995	-21	1985	2	23.2	1972	933	0	.0	.0	9.5	1.3	27.1	1.6
May	59.0	33.2	46.1	82	1993	30	51.3	1981	16	1992	2	40.9	1971	586	0	.0	2.4	28.6	.0	14.0	.0
Jun	66.9	43.5	55.2	88	1986	16	59.2	1990	28+	1997	1	51.7	1985	297	2	.0	10.1	29.9	.0	1.0	.0
Jul	69.3	48.7	59.0	89+	1999	3	62.5	1997	31	1971	2	55.9	1971	192	6	.0	13.8	31.0	.0	@	.0
Aug	66.0	45.4	55.7	83	1977	22	59.9	1977	22+	1987	31	51.6	1980	290	2	.0	8.5	30.9	.0	1.5	.0
Sep	56.0	36.2	46.1	76	1974	4	51.3	1995	5	1992	26	36.5	1992	568	0	.0	.4	25.4	.0	9.8	.0
Oct	38.1	20.6	29.4	59	1979	1	35.7	1979	-20	1982	31	17.9	1996	1105	0	.0	.0	3.0	7.9	26.7	2.2
Nov	22.1	3.8	13.0	50	1997	9	27.6	1979	-40	1990	30	-2.0	1990	1561	0	.0	.0	@	25.1	29.5	12.1
Dec	16.0	-2.1	7.0	49	2001	26	21.6	1986	-42	1990	1	-20.4	1980	1802	0	.0	.0	.0	27.5	30.8	15.8
Ann	42.8	20.7	21.9	89+	Jul 1999	3	62.5	Jul 1997	-50	Jan 1989	28	-20.4	Dec 1980	12113	10	0	35.2	158.7	122.0	230.0	73.1
Ann	42.8	20.7	31.8	89+	1999	3	62.5	1997	-50	1989	28	-20.4	1980	12113	10	.0	35.2	158./	122.0	230.0	/3.1

⁺ Also occurred on an earlier date(s)

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

Issue Date: May 2005 050-A

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

⁽¹⁾ From the 1971-2000 Monthly Normals

⁽²⁾ Derived from station's available digital record: 1971-2001

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

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										Pı	recipi	tation	(incl	nes)													
	Me	ans/	P	recip	itatio	on Total	s			M	ean N	Numb Oays (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			D	aily Pre	cipitatio	n	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	1.08	.58	2.50	1990	16	4.66	2000	.00	1974	6.9	3.3	.4	.1	.04	.13	.29	.45	.62	.81	1.04	1.32	1.72	2.37	3.01			
Feb	.88	.54	1.35	1972	1	3.40	1990	.00+	1998	5.7	2.5	.5	.1	.00	.07	.22	.36	.51	.67	.86	1.09	1.41	1.95	2.47			
Mar	.81	.87	.77	1979	22	3.41	1979	.02	1983	5.8	3.0	.2	.0	.04	.09	.18	.29	.41	.56	.74	.97	1.30	1.85	2.40			
Apr	.92	.40	1.60	1989	25	4.32	1975	.02	1997	5.2	2.6	.4	.1	.03	.07	.16	.27	.41	.58	.80	1.08	1.49	2.20	2.93			
May	1.04	1.04	1.00	1995	24	2.31	1995	.23	1991	9.3	3.4	.2	.0	.26	.36	.51	.64	.77	.91	1.07	1.25	1.50	1.88	2.24			
Jun	1.51	1.60	1.25	1980	18	4.32	1980	.02	1986	9.5	4.1	.6	.1	.15	.27	.47	.68	.91	1.16	1.46	1.84	2.35	3.20	4.03			
Jul	2.14	1.91	1.35	1980	12	4.53	1981	.09	1993	12.0	6.5	1.1	.1	.34	.53	.84	1.13	1.44	1.77	2.15	2.61	3.23	4.24	5.20			
Aug	3.12	2.53	2.90	1989	26	9.49	1989	.64	1978	13.0	7.6	1.9	.5	.70	.98	1.44	1.85	2.26	2.70	3.19	3.78	4.55	5.78	6.94			
Sep	3.54	2.87	1.90	1977	7	8.78	1982	1.39	1973	13.7	8.3	2.2	.4	1.06	1.40	1.90	2.34	2.76	3.19	3.68	4.24	4.97	6.12	7.18			
Oct	3.12	2.83	2.95	1986	10	9.40	1989	.96	1998	11.4	6.8	1.9	.3	.86	1.15	1.60	2.00	2.38	2.79	3.24	3.76	4.45	5.53	6.54			
Nov	1.59	1.45	1.40	1976	27	4.77	1979	.10	1975	8.8	5.0	.8	.1	.16	.27	.49	.71	.95	1.22	1.54	1.94	2.49	3.39	4.28			
Dec	1.91	1.52	3.25	1999	21	9.49	1999	.15	1995	10.3	5.3	.9	.2	.21	.35	.61	.88	1.17	1.49	1.86	2.33	2.97	4.03	5.06			
Ann	21.66	20.93	3.25	Dec 1999	21	9.49+	Dec 1999	.00+	Feb 1998	111.6	58.4	11.1	2.0	13.83	15.28	17.17	18.63	19.94	21.22	22.55	24.04	25.86	28.53	30.87			

⁺ 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: 1971-2001

⁽³⁾ Derived from 1971-2000 daily data

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Climate Division: AK 5 NWS Call Sign: Elevation: 270 Feet Lat: 61°42N Lon: 150°00W

										Snov	v (incl	hes)														
						Sno	ow To	tals							Mean Number of Days (1)											
	Mean	s/Medi	ans (1)	1					Extre	mes (2)							ow Fa		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	9.1	6.0	23	23	13.0	1987	5	25.0	1987	69	1995	2	66	1995	4.4	3.8	1.0	.5	.1	27.7	26.8	25.5	24.2			
Feb	10.0	5.0	26	25	31.0	1972	1	49.5	1996	69	1990	28	57	1995	3.0	2.7	1.0	.5	.2	25.4	24.3	22.7	21.2			
Mar	8.2	7.0	25	23	10.0	1979	18	23.0	1985	64	1990	3	54	1990	3.0	2.9	.9	.3	@	26.9	26.3	26.0	23.5			
Apr	3.0	1.0	12	11	8.0	1983	12	15.0+	1994	46	1995	2	35	1985	1.2	1.0	.3	.2	.0	21.6	19.5	18.0	14.6			
May	#	.0	#	0	.0	0	0	.0	0	6+	1992	1	1	1992	.0	.0	.0	.0	.0	.5	.2	.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	5.0	1992	30	5.0	1992	5	1992	30	0	0	.1	.1	@	@	.0	.1	.1	@	.0			
Oct	8.5	6.0	1	0	18.0	1996	30	41.0	1996	34	1996	30	12	1996	2.6	2.5	1.2	.5	@	7.6	5.2	3.7	1.9			
Nov	13.4	10.0	9	5	23.0	1990	24	43.5	1994	56	1994	28	42	1994	5.0	4.3	1.6	.7	.1	23.2	17.8	14.2	9.2			
Dec	17.7	16.7	19	14	19.0	1998	4	51.9	1978	76	1994	23	67	1994	6.1	5.5	2.3	.8	.2	27.6	25.9	24.0	19.1			
Ann	70.2	51.7	N/A	N/A	31.0	Feb 1972	1	51.9	Dec 1978	76	Dec 1994	23	67	Dec 1994	25.4	22.8	8.3	3.5	.6	160.6	146.1	134.2	113.7			

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

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

[@] 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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1971-2000

Elevation: 270 Feet

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COOP ID: 509790

Lon: 150°00W

Lat: 61°42N

Station: WHITES CROSSING, AK

Climate Division: AK 5 NWS Call Sign:

Freeze Data Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) than indicated(*) Temp (F) .10 .20 .30 .40 .60 .70 .80 .90 36 7/15 7/08 7/03 6/28 6/24 6/20 6/16 6/11 6/04 32 6/17 6/13 6/10 6/07 6/05 6/02 5/31 5/27 5/23 28 5/30 5/27 5/24 5/21 5/19 5/17 5/15 5/12 5/08 4/22 24 5/19 5/14 5/11 5/08 5/05 5/03 4/30 4/26 20 4/30 4/27 4/25 4/23 4/21 4/20 4/18 4/16 4/13 4/22 4/13 16 4/26 4/20 4/17 4/15 4/11 4/08 4/04 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 36 8/06 8/10 8/13 8/15 8/17 8/19 8/22 8/25 8/28 32 8/12 8/18 8/22 8/26 8/29 9/01 9/05 9/09 9/15 28 8/24 8/29 9/03 9/06 9/10 9/13 9/17 9/21 9/27 24 9/04 9/10 9/15 9/18 9/22 9/25 9/29 10/03 10/10 20 9/17 9/22 9/25 9/28 10/01 10/04 10/07 10/11 10/16 9/27 10/07 10/09 10/14 10/22 16 10/01 10/04 10/12 10/18 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 71 65 59 53 48 42 35 36 81 26 32 105 98 93 89 85 80 76 71 64 28 135 127 122 117 113 103 98 90 108 24 166 157 150 144 139 134 128 121 112 151 20 179 173 169 166 162 159 155 145 16 194 188 184 180 176 173 169 165 159

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:

^{*} Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree 1	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1874	1529	1376	933	586	297	192	290	568	1105	1561	1802	12113		
60	1719	1389	1221	783	431	161	75	153	419	950	1411	1647	10359		
57	1626	1305	1128	693	340	98	31	92	334	857	1321	1554	9379		
55	1564	1249	1066	633	282	65	14	60	280	795	1261	1492	8761		
50	1416	1109	911	487	156	16	0	15	164	640	1111	1337	7362		
32	905	644	402	99	2	0	0	0	4	188	610	814	3668		

Base						Coolin	g Degree I	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	54	40	49	157	439	695	837	736	426	107	39	35	3614
55	0	0	0	0	6	70	138	83	12	0	0	0	309
57	0	0	0	0	2	43	93	53	6	0	0	0	197
60	0	0	0	0	0	16	44	21	2	0	0	0	83
65	0	0	0	0	0	2	6	2	0	0	0	0	10
70	0	0	0	0	0	0	0	0	0	0	0	0	0

	Growing Degree U																								
Base					Growing	g Degree	Units (M	Ionthly)					Growing Degree Units (Accumulated Monthly)												
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jun														Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
40	0	0	0	13	202	458	591	493	213	15	0	0	0	0	0	13	215	673	1264	1757	1970	1985	1985	1985	
45	0	0	0	0	87	308	436	339	99	1	0	0	0	0	0	0	87	395	831	1170	1269	1270	1270	1270	
50	0	0	0	0	28	166	281	194	27	0	0	0	0	0	0	0	28	194	475	669	696	696	696	696	
55	0	0	0	0	3	66	136	73	1	0	0	0	0	0	0	0	3	69	205	278	279	279	279	279	
60	0	0	0	0	0	12	42	13	0	0	0	0	0	0	0	0	0	12	54	67	67	67	67	67	
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)												
50/86	6 0 0 16 144 258 321 263 109 2 0 0												0	0	0	16	160	418	739	1002	1111	1113	1113	1113	

(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