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: ANCHORAGE INTL AP, AK **COOP ID: 500280**

Climate Division: AK 5 **NWS Call Sign: ANC** **Elevation: 114 Feet** **Lat: 61˚11N** **Lon: 150˚00W**

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 >= 90	Max >= 70	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	22.2	9.3	15.8	50	1961	19	31.5	1981	-34	1975	5	2.2	1971	1526	0	.0	.0	.0	24.0	30.5	8.6
Feb	25.8	11.7	18.7	48+	1991	28	32.1	1977	-28	1999	4	3.8	1990	1295	0	.0	.0	.0	19.6	27.4	6.6
Mar	33.6	18.2	25.9	51	1984	11	36.4	1984	-24	1971	7	13.5	1971	1212	0	.0	.0	.1	11.9	29.3	2.1
Apr	43.9	28.7	36.3	65	1976	30	40.6	1993	-4	1985	2	26.2	1972	861	0	.0	.0	6.7	2.1	20.5	@
May	54.9	38.9	46.9	77	1969	24	50.7	1993	17	1964	10	41.1	1971	560	0	.0	.7	25.4	.0	2.8	.0
Jun	62.3	47.0	54.7	85	1969	14	58.8	1984	33	1961	4	50.7	1971	311	0	.0	3.8	29.7	.0	.0	.0
Jul	65.3	51.5	58.4	82	1989	2	62.0	1977	36	1964	1	54.9	1971	206	3	.0	6.4	31.0	.0	.0	.0
Aug	63.3	49.4	56.4	82+	1978	2	59.7	1977	31+	1984	31	53.2	1973	268	0	.0	3.3	31.0	.0	.1	.0
Sep	55.0	41.4	48.2	73	1957	5	53.7	1995	19	1992	24	40.3	1992	505	0	.0	.1	25.5	.0	3.3	.0
Oct	40.0	28.3	34.1	61+	1993	9	40.7	1979	-5	1956	31	25.4	1996	957	0	.0	.0	4.1	5.0	20.5	.1
Nov	27.7	15.9	21.8	53+	1979	9	33.1	1979	-21	1956	17	9.9	1990	1297	0	.0	.0	.1	20.9	28.5	2.8
Dec	23.7	11.4	17.5	48+	1999	26	28.3	1986	-30+	1964	14	.8	1980	1472	0	.0	.0	.0	24.8	30.3	6.4
Ann	43.1	29.3	36.2	85	Jun 1969	14	62.0	Jul 1977	-34	Jan 1975	5	.8	Dec 1980	10470	3	.0	14.3	153.6	108.3	193.2	26.6

\+ 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/normals/usnormals.html

Issue Date: May 2005

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1952-2001

(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	.68	.54	.84	1961	21	2.71	1987	.02+	1982
Feb	.74	.65	1.16	1956	8	2.40	1996	.11	1973
Mar	.65	.51	1.25	1986	25	2.76	1979	.00	1983
Apr	.52	.38	.78	1989	25	1.91	1977	.02	1978
May	.70	.59	.97	1980	30	1.93	1989	.03	1978
Jun	1.06	.96	1.62	1962	12	3.09	1978	.17	1993
Jul	1.70	1.37	2.00	1956	31	4.39	1981	.42	1972
Aug	2.93	2.56	2.76	1997	21	9.77	1989	.43	1987
Sep	2.87	2.78	1.32	1982	13	6.64	1990	.72	1998
Oct	2.09	2.01	1.68	1952	26	4.11	1986	.54	1998
Nov	1.09	1.01	1.16	1964	18	2.84	1976	.08	1985
Dec	1.05	1.06	1.39	1955	29	2.60	1978	.09	1995
Ann	16.08	14.91	2.76	Aug 1997	21	9.77	Aug 1989	.00	Mar 1983

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.1	2.2	.1	.0
Feb	7.2	2.6	.1	.0
Mar	6.8	2.2	.1	.0
Apr	5.5	1.7	.1	.0
May	7.0	2.2	.1	.0
Jun	8.2	3.4	.4	.0
Jul	11.3	5.0	.7	.0
Aug	13.8	7.6	1.4	.3
Sep	14.5	8.1	1.4	.2
Oct	12.3	5.6	1.1	.1
Nov	9.3	3.8	.3	.0
Dec	11.1	3.5	.2	.0
Ann	115.1	47.9	6.0	.6

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	.05	.09	.18	.27	.38	.50	.64	.82	1.07	1.49	1.91
Feb	.13	.20	.31	.41	.51	.62	.75	.91	1.11	1.44	1.76
Mar	.02	.08	.17	.26	.37	.48	.62	.80	1.04	1.44	1.84
Apr	.04	.08	.15	.22	.30	.39	.50	.64	.83	1.14	1.46
May	.10	.15	.25	.35	.45	.56	.69	.85	1.06	1.41	1.75
Jun	.20	.29	.45	.59	.74	.90	1.08	1.29	1.58	2.04	2.48
Jul	.37	.53	.78	1.00	1.23	1.47	1.74	2.06	2.48	3.16	3.80
Aug	.59	.86	1.29	1.68	2.08	2.50	2.98	3.56	4.33	5.55	6.71
Sep	1.04	1.31	1.70	2.02	2.34	2.65	3.00	3.41	3.92	4.72	5.45
Oct	.67	.87	1.16	1.41	1.65	1.90	2.17	2.49	2.90	3.54	4.13
Nov	.10	.18	.33	.48	.65	.83	1.05	1.33	1.70	2.33	2.94
Dec	.18	.27	.42	.57	.71	.88	1.06	1.29	1.59	2.08	2.54
Ann	10.93	11.91	13.17	14.13	14.99	15.83	16.69	17.66	18.83	20.53	22.01

\+ 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: 1952-2001
(3) Derived from 1971-2000 daily data

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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	7.4	6.9	9	8	7.8	1987	5	25.7	2000	28	1992	31	22	1995	7.0	2.4	.6	.1	.0	26.0	22.5	21.6	13.1
Feb	9.8	6.4	10	10	13.0	1996	11	51.0	1996	32	1992	5	28	1992	5.9	2.5	1.1	.6	.1	23.5	20.9	18.7	12.0
Mar	8.7	8.1	9	9	14.3	1976	18	28.1	1976	34	1992	1	26	1995	5.8	2.4	.9	.4	.1	25.7	22.3	20.5	14.1
Apr	3.9	2.4	2	2	8.0	1977	1	16.1	1975	19	1995	1	11+	1975	3.4	1.3	.3	.1	.0	11.3	9.0	7.5	3.1
May	.1	.0	#	0	.9	1985	8	1.3	1985	3	1972	2	0	0	.2	.0	.0	.0	.0	.2	.1	.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
Sep	.2	.0	#	0	3.0	1992	30	3.0	1992	1	1992	30	0	0	.2	.1	@	.0	.0	@	.0	.0	.0
Oct	7.3	6.3	#	0	8.4	1982	7	25.6	1982	9	1992	29	2	1982	4.3	2.2	1.0	.3	.0	4.5	2.2	.8	.0
Nov	9.6	8.4	3	2	9.2	1996	30	33.4	1994	28	1996	30	16	1996	7.0	3.0	.9	.4	.0	17.8	11.6	9.1	2.0
Dec	12.6	11.2	7	7	13.9	1998	4	27.9	1998	29	1994	27	22	1994	8.8	3.7	1.2	.6	.1	23.4	20.0	18.0	8.2
Ann	59.6	49.7	N/A	N/A	14.3	Mar 1976	18	51.0	Feb 1996	34	Mar 1992	1	28	Feb 1992	42.6	17.6	6.0	2.5	.3	132.4	108.6	96.2	52.5

+ 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	6/03	5/31	5/28	5/26	5/24	5/22	5/20	5/17	5/14
32	5/19	5/15	5/13	5/10	5/08	5/06	5/04	5/02	4/28
28	5/05	5/01	4/28	4/26	4/24	4/22	4/20	4/17	4/14
24	4/23	4/20	4/17	4/14	4/12	4/10	4/08	4/05	4/01
20	4/17	4/12	4/08	4/05	4/02	3/30	3/27	3/23	3/18
16	4/16	4/09	4/05	4/01	3/28	3/24	3/20	3/15	3/09

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

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	130	123	118	114	110	106	102	97	90
32	154	149	144	141	137	134	130	126	120
28	178	171	167	163	159	156	152	147	141
24	198	193	189	186	183	180	177	174	169
20	222	214	209	205	200	196	191	186	179
16	234	226	220	216	211	207	202	196	188

***** 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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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	1526	1295	1212	861	560	311	206	268	505	957	1297	1472	10470
60	1371	1155	1057	711	406	173	78	130	358	802	1147	1317	8705
57	1278	1071	964	621	316	107	31	70	274	709	1057	1224	7722
55	1216	1015	902	561	259	72	13	41	223	647	997	1162	7108
50	1073	875	747	417	138	18	0	7	117	495	847	1007	5741
32	578	424	270	63	1	0	0	0	1	100	365	485	2287

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	75	53	81	192	464	680	820	755	486	167	59	36	3868
55	0	0	0	0	9	62	120	84	18	0	0	0	293
57	0	0	0	0	4	36	76	50	9	0	0	0	175
60	0	0	0	0	0	13	30	17	3	0	0	0	63
65	0	0	0	0	0	0	3	0	0	0	0	0	3
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	24	229	453	584	519	265	30	0	0	0	0	0	24	253	706	1290	1809	2074	2104	2104	2104
45	0	0	0	1	103	303	429	364	138	6	0	0	0	0	0	1	104	407	836	1200	1338	1344	1344	1344
50	0	0	0	0	30	158	274	213	43	0	0	0	0	0	0	0	30	188	462	675	718	718	718	718
55	0	0	0	0	4	52	126	80	4	0	0	0	0	0	0	0	4	56	182	262	266	266	266	266
60	0	0	0	0	0	4	29	11	0	0	0	0	0	0	0	0	0	4	33	44	44	44	44	44
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	0	0	10	93	203	287	243	93	4	0	0	0	0	0	10	103	306	593	836	929	933	933	933

(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.
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