

Climatography of the United States

No. 20

1971-2000

Station: SEWARD, AK

COOP ID: 508371

Climate Division: AK 2

NWS Call Sign:

Elevation: 75 Feet

Lat: 60°06N

Lon: 149°26W

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	31.1	21.3	26.2	51+	1994	29	37.7	1977	-15	1989	29	12.8	1971	1203	0	.0	.0	@	13.2	24.4	1.8
Feb	32.6	21.8	27.2	51+	1980	11	36.2	1977	-15	1999	4	16.1	1979	1058	0	.0	.0	@	11.3	22.6	.8
Mar	37.9	26.1	32.0	54	1965	23	37.9	1984	-6	1971	7	21.9	1972	1023	0	.0	.0	.2	5.5	24.1	.3
Apr	44.8	32.3	38.6	65+	1998	22	42.9	1990	1+	1989	1	31.2	1972	794	0	.0	.0	4.3	.6	14.0	.0
May	52.4	39.2	45.8	76	1964	31	49.7	1996	20	1964	10	39.5	1971	596	0	.0	.4	18.4	.0	1.1	.0
Jun	58.6	45.5	52.1	84	1997	26	55.9	1997	30	2000	28	47.4	1972	390	0	.0	1.7	28.8	.0	@	.0
Jul	62.4	50.3	56.4	87	1999	4	60.4	1993	40	1980	1	53.6	1971	269	0	.0	3.5	31.0	.0	.0	.0
Aug	62.1	49.6	55.9	95	1966	12	59.3	1994	34	1955	30	52.9	1986	284	0	.0	2.9	31.0	.0	.0	.0
Sep	55.6	43.6	49.6	73	1996	2	52.7	1997	30+	1992	26	45.4	1992	462	0	.0	.2	26.5	.0	.5	.0
Oct	45.0	34.5	39.8	64	1964	1	43.8	1993	8	1975	31	34.9	1996	784	0	.0	.0	4.7	1.4	10.2	.0
Nov	36.9	26.5	31.7	58	1979	7	37.6+	1979	-2	1990	30	24.2	1977	1000	0	.0	.0	.3	8.3	22.6	@
Dec	33.3	22.9	28.1	52	1969	20	35.8	1985	-19	1977	12	14.3	1980	1144	0	.0	.0	.0	12.2	25.3	.5
Ann	46.1	34.5	40.3	95	Aug 1966	12	60.4	Jul 1993	-19	Dec 1977	12	12.8	Jan 1971	9007	0	.0	8.7	145.2	52.5	144.8	3.4

+ 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: May 2005

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1949-2001

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

040-A

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: SEWARD, AK

COOP ID: 508371

Climate Division: AK 2

NWS Call Sign:

Elevation: 75 Feet

Lat: 60°06N

Lon: 149°26W

Precipitation (inches)

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	7.19	6.09	4.10	1986	3	25.43	1981	.25	1996	14.7	10.5	4.6	2.4	.83	1.39	2.39	3.40	4.47	5.66	7.06	8.79	11.14	15.02	18.80
Feb	5.82	5.69	4.09	1996	10	13.31	1980	.07	1979	13.5	9.5	3.9	1.7	.75	1.22	2.04	2.85	3.71	4.66	5.76	7.11	8.95	11.96	14.87
Mar	4.14	3.97	2.95	1954	1	12.29	1981	.14	1989	13.7	8.6	2.9	.8	.61	.96	1.56	2.13	2.73	3.38	4.13	5.06	6.30	8.31	10.25
Apr	4.71	4.59	4.32	1977	1	14.87	1998	.28	1981	14.6	9.5	3.3	1.0	.48	.82	1.47	2.12	2.83	3.63	4.57	5.75	7.35	10.02	12.62
May	4.75	3.61	6.64	1985	18	15.93	1985	.42	1974	15.8	9.2	2.5	.9	.53	.89	1.55	2.21	2.92	3.71	4.64	5.80	7.37	9.97	12.51
Jun	2.32	1.91	3.53	1965	7	5.76	1987	.78	1984	12.4	6.0	1.2	.2	.77	1.00	1.32	1.59	1.86	2.13	2.42	2.77	3.22	3.91	4.55
Jul	2.24	2.22	2.91	1958	27	6.01	1990	.14	1982	12.3	6.0	1.1	.3	.40	.60	.93	1.23	1.54	1.88	2.26	2.73	3.34	4.34	5.28
Aug	5.49	4.84	4.17	1989	25	12.22	1993	.93	1987	14.2	9.7	3.3	1.2	1.36	1.88	2.68	3.39	4.09	4.83	5.66	6.64	7.93	9.96	11.87
Sep	10.36	10.24	9.81	1995	20	29.72	1995	2.10	1992	17.4	12.8	7.0	3.4	2.65	3.63	5.14	6.47	7.78	9.16	10.69	12.52	14.90	18.66	22.18
Oct	9.81	9.20	15.05	1986	10	24.00	1986	2.09	1985	17.0	13.0	6.9	3.2	2.59	3.52	4.94	6.19	7.42	8.71	10.14	11.84	14.06	17.55	20.81
Nov	7.15	5.11	3.50	1993	22	25.22	1976	.21	1975	13.7	9.5	5.0	2.1	.43	.84	1.72	2.69	3.79	5.08	6.64	8.64	11.45	16.22	20.96
Dec	7.84	6.33	5.02	2001	26	19.67	1985	.96	1972	16.5	11.4	5.6	2.5	1.34	2.03	3.17	4.25	5.35	6.55	7.91	9.57	11.78	15.36	18.77
Ann	71.82	72.34	15.05	Oct 1986	10	29.72	Sep 1995	.07	Feb 1979	175.8	115.7	47.3	19.7	47.66	52.21	58.11	62.64	66.69	70.64	74.73	79.29	84.84	92.97	100.04

+ 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: 1949-2001

(3) Derived from 1971-2000 daily data

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

Climatography of the United States

No. 20

1971-2000

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Station: SEWARD, AK

COOP ID: 508371

Climate Division: AK 2

NWS Call Sign:

Elevation: 75 Feet

Lat: 60°06N

Lon: 149°26W

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	11.8	10.1	4	2	12.0+	2000	26	38.8	2000	32	1999	1	20	1999	5.4	3.4	1.5	.7	.1	18.5	13.8	10.4	5.0
Feb	16.0	13.0	5	3	12.2	1980	21	54.5	1974	30	2000	1	18	1999	5.7	3.9	1.8	1.1	.2	16.8	13.2	11.0	8.0
Mar	10.5	7.4	5	2	15.5	1991	18	41.1	1999	35	1999	14	24	1971	5.9	3.2	1.1	.4	.1	16.0	12.1	10.9	8.1
Apr	5.7	3.1	2	0	12.0	1988	12	23.7	1999	25	1971	17	20	1971	3.2	1.8	.6	.2	.1	6.5	4.7	4.1	2.5
May	.3	.0	#	0	4.0	1998	9	4.1	1975	5	1971	1	1	1971	.2	.1	.1	.0	.0	.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	#	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	1.7	.3	#	0	14.0	1976	28	15.3	1976	15	1976	31	2	1976	1.0	.4	.1	.1	@	.8	.3	.2	.1
Nov	8.5	8.0	#	1	22.0	1974	21	23.9	1974	17	1974	21	5	1973	3.7	2.4	.9	.4	.1	7.0	3.7	2.4	.8
Dec	16.6	14.0	3	2	28.0	1998	29	59.2	1998	38	1998	30	14	1974	6.4	4.5	1.9	.9	.2	16.0	11.6	9.5	4.4
Ann	71.1	55.9	N/A	N/A	28.0	Dec 1998	29	59.2	Dec 1998	38	Dec 1998	30	24	Mar 1971	31.5	19.7	8.0	3.8	.8	81.8	59.5	48.5	28.9

+ 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

Complete documentation available from:

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NWS Call Sign:

Elevation: 75 Feet

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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	6/09	6/03	5/29	5/25	5/21	5/17	5/13	5/08	5/01
32	5/24	5/18	5/13	5/09	5/05	5/01	4/26	4/21	4/15
28	4/27	4/22	4/19	4/16	4/13	4/11	4/08	4/04	3/31
24	4/20	4/13	4/08	4/04	3/31	3/27	3/23	3/18	3/12
20	4/14	4/07	4/01	3/27	3/23	3/19	3/14	3/08	3/01
16	4/04	3/28	3/23	3/18	3/14	3/09	3/05	2/27	2/20
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	9/11	9/16	9/19	9/21	9/24	9/26	9/29	10/02	10/06
32	9/26	9/30	10/03	10/06	10/08	10/10	10/13	10/15	10/19
28	10/06	10/11	10/15	10/18	10/21	10/24	10/27	10/30	11/04
24	10/15	10/21	10/24	10/28	10/31	11/03	11/06	11/10	11/15
20	10/19	10/26	10/31	11/04	11/08	11/12	11/16	11/21	11/28
16	10/22	10/29	11/04	11/08	11/13	11/17	11/22	11/28	12/05
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	149	141	135	130	125	121	116	110	102
32	180	172	166	160	156	151	146	140	131
28	212	204	199	194	190	185	181	175	167
24	241	231	224	218	213	207	201	194	184
20	264	252	244	236	229	222	215	206	194
16	278	266	258	250	244	237	229	221	209

* 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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Climate Division: AK 2 NWS Call Sign: Elevation: 75 Feet Lat: 60°06N Lon: 149°26W

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	1203	1058	1023	794	596	390	269	284	462	784	1000	1144	9007
60	1048	918	868	644	441	243	127	141	313	629	850	989	7211
57	955	834	775	554	349	162	65	77	226	536	760	896	6189
55	900	778	713	494	290	117	35	45	171	474	700	834	5551
50	755	642	558	347	158	38	4	6	66	320	550	682	4126
32	315	226	132	22	0	0	0	0	0	13	126	224	1058

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	135	92	132	218	428	600	755	739	528	253	116	103	4099
55	8	0	0	0	4	27	77	71	9	0	0	0	196
57	0	0	0	0	1	12	45	41	3	0	0	0	102
60	0	0	0	0	0	3	13	13	0	0	0	0	29
65	0	0	0	0	0	0	0	0	0	0	0	0	0
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	32	176	358	502	492	283	58	7	0	0	0	0	32	208	566	1068	1560	1843	1901	1908	1908
45	0	0	0	3	65	208	347	337	142	8	0	0	0	0	0	3	68	276	623	960	1102	1110	1110	1110
50	0	0	0	0	14	80	192	183	39	0	0	0	0	0	0	0	14	94	286	469	508	508	508	508
55	0	0	0	0	0	20	65	57	2	0	0	0	0	0	0	0	0	20	85	142	144	144	144	144
60	0	0	0	0	0	0	12	9	0	0	0	0	0	0	0	0	0	0	12	21	21	21	21	21
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	0	9	57	131	211	209	87	6	0	0	0	0	0	9	66	197	408	617	704	710	710	710

(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/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 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