

Climatography of the United States No. 20

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: COLD BAY AP, AK

1971-2000

COOP ID: 502102

Climate Division: AK 3

NWS Call Sign: CDB

Elevation: 96 Feet

Lat: 55° 12N

Lon: 162° 43W

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	32.8	23.5	28.2	51	1993	13	36.1	1985	-13	2000	30	19.4	2000	1142	0	.0	.0	.1	11.6	24.1	.7
Feb	32.3	22.9	27.6	50+	1991	28	35.0	1989	-5+	1999	9	18.7	1984	1048	0	.0	.0	@	11.1	22.7	.4
Mar	35.1	24.9	30.0	56	1974	2	36.8	1996	-13	1971	12	16.3	1972	1069	0	.0	.0	.1	8.5	24.0	.8
Apr	38.2	28.8	33.5	58	1965	15	40.8	1979	4	1976	6	26.8	1985	945	0	.0	.0	.3	5.0	20.5	.0
May	44.9	34.8	39.8	67	1979	27	44.8	1981	18	1973	22	34.3	1971	780	0	.0	.0	4.9	.4	9.0	.0
Jun	50.8	41.1	45.9	72+	2001	28	50.6	1979	29	1952	5	40.5	1971	573	0	.0	@	18.6	.0	.5	.0
Jul	55.1	46.1	50.6	77	1960	13	54.0	1977	33	1982	8	46.8	1982	447	0	.0	.1	29.0	.0	.0	.0
Aug	56.2	47.4	51.8	75+	1961	1	55.2	1997	32	1999	28	48.5	1971	409	0	.0	.2	30.4	.0	@	.0
Sep	52.5	43.0	47.8	76	1985	5	50.1	1977	26	1992	21	44.5	1971	518	0	.0	@	23.8	.0	.5	.0
Oct	45.0	35.1	40.0	69+	1964	26	42.3	1989	6	1999	31	36.6	1999	774	0	.0	.0	5.5	.5	9.1	.0
Nov	39.1	29.9	34.5	59	1986	13	38.9	1985	1+	1963	29	30.0	1987	915	0	.0	.0	.9	4.0	18.6	.0
Dec	35.5	26.5	31.0	54+	1990	11	37.5	1983	-9	1950	29	21.2	1999	1054	0	.0	.0	.1	8.2	21.8	.1
Ann	43.1	33.7	38.4	77	Jul 1960	13	55.2	Aug 1997	-13+	Jan 2000	30	16.3	Mar 1972	9674	0	.0	.3	113.7	49.3	150.8	2.0

+ 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: 1950-2001

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

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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	3.08	3.07	2.85	1999	22	5.50	1999	.60	1998	20.8	8.6	1.2	.3	1.17	1.46	1.87	2.21	2.53	2.86	3.22	3.64	4.17	4.98	5.72
Feb	2.59	2.30	2.75	1996	27	7.54	2000	.50	1998	18.2	6.6	1.1	.2	.60	.84	1.22	1.56	1.90	2.26	2.66	3.14	3.78	4.79	5.73
Mar	2.48	2.28	2.06	1976	1	5.56	2000	.41	1972	19.6	7.6	.8	.1	.46	.68	1.04	1.38	1.72	2.09	2.51	3.02	3.69	4.78	5.82
Apr	2.30	1.95	2.16	1993	20	6.55	1979	.21	1973	19.1	6.6	1.0	.1	.38	.58	.91	1.23	1.55	1.91	2.31	2.80	3.46	4.52	5.54
May	2.65	2.55	2.13	1958	27	5.01	1998	.54	1992	18.7	7.4	1.2	.2	.86	1.11	1.48	1.80	2.10	2.42	2.76	3.17	3.69	4.50	5.25
Jun	2.89	2.70	2.92	1996	23	8.35	2000	.78	1973	18.0	7.8	1.1	.3	.82	1.09	1.51	1.87	2.22	2.59	3.00	3.48	4.10	5.08	5.98
Jul	2.53	2.20	1.77	1986	21	6.13	1982	.45	1991	17.9	7.4	1.0	.2	.84	1.08	1.43	1.73	2.02	2.32	2.64	3.02	3.51	4.27	4.96
Aug	3.59	3.12	2.17	1951	12	6.32	1997	1.10	1975	20.8	9.7	1.6	.4	1.49	1.82	2.28	2.66	3.01	3.37	3.76	4.21	4.77	5.63	6.41
Sep	4.51	4.24	2.78	1965	21	7.77	1989	1.30	1972	21.7	10.7	2.4	.6	1.78	2.20	2.79	3.28	3.74	4.21	4.72	5.31	6.05	7.20	8.24
Oct	4.54	4.41	4.90	1968	22	10.17	2000	1.43	1997	23.4	11.6	2.1	.5	1.96	2.37	2.94	3.41	3.85	4.29	4.76	5.30	5.99	7.03	7.98
Nov	4.79	4.69	3.78	2000	12	12.22	2000	1.15	1975	23.1	12.0	2.6	.5	1.45	1.90	2.58	3.17	3.74	4.33	4.98	5.74	6.73	8.27	9.70
Dec	4.33	3.75	3.63	2000	2	13.94	2000	1.73	1974	22.9	11.1	2.2	.5	1.45	1.86	2.46	2.97	3.46	3.96	4.51	5.16	5.98	7.27	8.45
Ann	40.28	38.61	4.90	Oct 1968	22	13.94	Dec 2000	.21	Apr 1973	244.2	107.1	18.3	3.9	25.20	27.98	31.61	34.42	36.95	39.42	42.01	44.89	48.43	53.64	58.21

+ 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: 1950-2001

(3) Derived from 1971-2000 daily data

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Elevation: 96 Feet

Lat: 55° 12N

Lon: 162° 43W

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	12.6	10.7	1	1	13.4	2000	10	51.9	2000	15	1982	14	4+	1998	12.7	3.9	.8	.4	.1	13.6	6.8	2.7	.2
Feb	11.5	9.2	2	1	16.5	1984	28	47.9	1984	33	2000	1	13	2000	12.1	3.6	.8	.3	@	12.8	6.7	4.0	1.2
Mar	12.0	9.6	1	1	8.0	1999	17	36.7	1999	29	1999	24	20	1999	13.8	3.8	.8	.1	.0	11.2	5.0	2.8	1.3
Apr	6.8	5.9	#	0	5.2	1973	4	17.0	1976	28	1999	2	8	1999	11.4	2.0	.2	@	.0	6.0	2.3	1.2	.4
May	1.6	1.0	#	0	3.0	1986	2	7.6	1971	2+	1999	5	0	0	3.9	.4	@	.0	.0	.3	.0	.0	.0
Jun	#	.0	0	0	.5	1971	1	.5	1971	0	0	0	0	0	.1	.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
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	.2	1972	30	.2+	1996	0	0	0	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Oct	2.9	1.7	#	0	8.2	1998	25	14.2	1999	11	1999	31	1	1999	3.9	.9	.1	@	.0	1.2	.3	.1	@
Nov	7.7	7.9	#	0	4.7	1989	21	16.8	1998	11	1999	1	5	1975	9.9	2.8	.4	.0	.0	7.1	2.3	1.1	.2
Dec	10.4	10.1	1	1	7.0	1975	21	21.9	1976	14	1976	20	4	1976	11.8	3.9	.4	.1	.0	10.9	4.5	2.1	.2
Ann	65.5	56.1	N/A	N/A	16.5	Feb 1984	28	51.9	Jan 2000	33	Feb 2000	1	20	Mar 1999	79.7	21.3	3.5	.9	.1	63.1	27.9	14.0	3.5

+ 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	7/06	6/29	6/23	6/19	6/14	6/10	6/05	5/31	5/24
32	6/11	6/05	6/01	5/29	5/25	5/22	5/19	5/14	5/09
28	5/21	5/16	5/13	5/10	5/07	5/04	5/01	4/27	4/22
24	5/10	5/03	4/28	4/23	4/19	4/15	4/10	4/05	3/28
20	5/01	4/22	4/15	4/09	4/04	3/30	3/24	3/17	3/08
16	4/15	4/06	3/31	3/25	3/20	3/15	3/10	3/03	2/23
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	8/27	9/03	9/08	9/12	9/16	9/20	9/24	9/29	10/06
32	9/17	9/23	9/27	9/30	10/03	10/06	10/10	10/14	10/20
28	10/08	10/12	10/15	10/18	10/21	10/23	10/26	10/29	11/03
24	10/21	10/27	11/01	11/05	11/09	11/12	11/16	11/21	11/27
20	11/02	11/09	11/14	11/18	11/22	11/25	11/29	12/04	12/11
16	11/07	11/17	11/24	11/30	12/05	12/11	12/17	12/24	1/03
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	123	112	105	99	93	87	81	73	63
32	156	147	141	135	130	125	119	113	104
28	189	181	175	170	166	161	157	151	143
24	235	224	216	209	203	197	190	182	170
20	263	252	244	237	231	224	218	210	199
16	303	288	277	268	259	251	241	230	215

* 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	1142	1048	1069	945	780	573	447	409	518	774	915	1054	9674
60	987	908	930	795	625	423	292	254	368	619	765	899	7865
57	894	824	837	705	532	333	202	166	278	526	675	806	6778
55	832	768	775	645	470	276	146	113	220	464	615	744	6068
50	677	628	628	495	318	146	47	26	95	309	465	589	4423
32	204	190	192	84	10	0	0	0	0	1	47	138	866

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	86	66	130	129	253	418	576	614	473	250	123	107	3225
55	0	0	0	0	0	3	10	14	3	0	0	0	30
57	0	0	0	0	0	0	4	5	1	0	0	0	10
60	0	0	0	0	0	0	0	0	0	0	0	0	0
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	3	54	192	337	372	240	65	16	0	0	0	0	3	57	249	586	958	1198	1263	1279	1279
45	0	0	0	0	6	65	183	217	104	10	0	0	0	0	0	0	6	71	254	471	575	585	585	585
50	0	0	0	0	0	2	52	76	17	0	0	0	0	0	0	0	0	2	54	130	147	147	147	147
55	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	1	6	6	6	6	6
60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	0	0	7	38	91	107	52	2	0	0	0	0	0	0	7	45	136	243	295	297	297	297

(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