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: CALLAO, UT **COOP ID: 421144**

Climate Division: UT 1 **NWS Call Sign:** **Elevation: 4,330 Feet** **Lat: 39˚54N** **Lon: 113˚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 >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	39.3	14.8	27.1	68+	1969	8	35.0	1998	-24	1963	12	15.8	1984	1176	0	.0	.0	5.7	9.4	29.6	3.2
Feb	46.0	20.2	33.1	74	1972	29	40.8	1986	-23	1989	7	18.2	1984	893	0	.0	.0	11.0	3.3	25.9	1.2
Mar	56.1	28.0	42.1	80+	1968	30	48.0	1986	2+	1964	17	36.4	1976	712	0	.0	.0	23.3	.1	22.4	.0
Apr	64.0	34.0	49.0	86+	1980	20	54.9	1992	12	1982	21	41.4	1975	480	1	.0	.0	27.9	.0	12.5	.0
May	72.4	42.1	57.3	93+	2000	24	61.9	1992	19	1965	6	53.2	1977	254	15	.0	.4	30.7	.0	2.6	.0
Jun	82.8	50.2	66.5	100	2001	23	71.5	1986	30	1976	14	61.7	1995	69	114	.0	7.0	30.0	.0	.2	.0
Jul	90.5	56.6	73.6	104	2001	4	76.3	2000	38	2001	23	68.9	1993	3	269	.5	19.5	31.0	.0	.0	.0
Aug	89.2	55.0	72.1	106	2000	2	75.8	2000	28	1992	27	68.4	1976	8	229	.3	16.0	31.0	.0	.1	.0
Sep	79.3	44.7	62.0	97+	1990	10	66.6	1979	23	1965	18	58.3	1971	132	42	.0	3.1	29.9	.0	1.8	.0
Oct	66.0	33.6	49.8	90	1963	1	55.5	1988	12	1970	28	45.8+	1984	472	0	.0	.0	29.1	.1	13.5	.0
Nov	51.1	23.6	37.4	76	1980	8	42.8	1995	-2	1976	28	31.5	1993	830	0	.0	.0	16.3	.6	26.0	.1
Dec	41.2	15.4	28.3	72	1995	1	36.9	1977	-23	1990	23	17.8	1990	1138	0	.0	.0	6.3	5.4	29.2	1.6
Ann	64.8	34.9	49.9	106	Aug 2000	2	76.3	Jul 2000	-24	Jan 1963	12	15.8	Jan 1984	6167	670	.8	46.0	272.2	18.9	163.8	6.1

\+ 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

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

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

Issue Date: February 2004

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: CALLAO, UT **COOP ID: 421144**

Climate Division: UT 1 **NWS Call Sign:** **Elevation: 4,330 Feet** **Lat: 39°54N** **Lon: 113°43W**

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	.41	.36	.90	1949	13	1.54	1993	.02	1989
Feb	.35	.31	1.20	1949	12	1.21	1998	.00+	1988
Mar	.45	.32	.91	1998	28	1.27	1998	.00+	1997
Apr	.52	.42	.75	1997	10	1.79	1999	.01+	1992
May	.95	.73	1.51	1989	12	3.08	1977	.00	1972
Jun	.53	.31	1.67	1991	1	2.56	1997	.00+	1978
Jul	.53	.28	.86	1992	1	2.27	1984	.01	1989
Aug	.65	.48	1.41	1983	18	3.11	1983	.00	1981
Sep	.55	.45	2.12	1982	27	4.08	1982	.00+	1987
Oct	.76	.61	1.05	1979	20	3.00	1981	.00+	1995
Nov	.36	.22	.68	1993	12	1.04	1974	.00	1977
Dec	.22	.16	.70	1970	17	.85	1983	.00+	1999
Ann	6.28	5.75	2.12	Sep 1982	27	4.08	Sep 1982	.00+	Dec 1999

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	4.5	1.5	.1	.0
Feb	3.6	1.3	.1	.0
Mar	4.0	1.5	.1	.0
Apr	4.5	1.6	.1	.0
May	6.1	3.0	.2	.1
Jun	4.0	1.4	.2	@
Jul	4.0	1.7	.2	.0
Aug	4.3	1.8	.3	.1
Sep	4.1	1.3	.3	@
Oct	4.3	2.0	.4	@
Nov	3.6	1.3	.1	.0
Dec	3.3	.8	@	.0
Ann	50.3	19.2	2.1	.2

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	.03	.05	.11	.16	.23	.30	.39	.50	.65	.91	1.17
Feb	.00	.01	.06	.11	.16	.23	.31	.42	.57	.83	1.09
Mar	.00	.00	.08	.16	.24	.33	.43	.57	.74	1.05	1.34
Apr	.01	.03	.09	.15	.23	.33	.45	.62	.86	1.27	1.70
May	.03	.11	.24	.38	.53	.70	.90	1.16	1.52	2.11	2.70
Jun	.00	.00	.04	.10	.19	.29	.43	.62	.89	1.38	1.87
Jul	.01	.03	.08	.15	.22	.32	.45	.62	.86	1.29	1.73
Aug	.02	.07	.17	.26	.36	.48	.62	.80	1.04	1.45	1.85
Sep	.00	.00	.10	.19	.29	.39	.52	.69	.91	1.28	1.65
Oct	.00	.05	.16	.28	.41	.55	.73	.94	1.24	1.74	2.24
Nov	.02	.05	.10	.15	.21	.27	.35	.44	.57	.78	.99
Dec	.00	.00	.03	.06	.10	.15	.20	.27	.37	.53	.70
Ann	3.26	3.77	4.47	5.03	5.54	6.05	6.58	7.19	7.95	9.09	10.11

\+ 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: 1948-2001
(3) Derived from 1971-2000 serially complete daily data

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: CALLAO, UT **COOP ID: 421144**

Climate Division: UT 1 **NWS Call Sign:** **Elevation: 4,330 Feet** **Lat: 39°54N** **Lon: 113°43W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	3.7	4.0	1	#
Feb	2.4	1.0	1	#
Mar	1.1	.0	#	0
Apr	.3	.0	#	0
May	#	.0	#	0
Jun	#	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.0	.0	0	0
Nov	1.6	.3	#	0
Dec	1.8	.8	#	0
Ann	10.9	6.1	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	8.0	1988	6	13.5	1988	18	1993	19	11	1993
Feb	5.5	1987	24	10.6	1993	14	1993	10	11	1993
Mar	7.0	1985	3	7.0	1985	9	1993	1	1	1993
Apr	3.0	1984	1	3.0	1984	1	1984	1	#+	1997
May	#	1974	20	#	1974	2	1975	20	#	1975
Jun	#	1990	1	#	1990	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	.5	1979	31	.5	1979	0	0	0	0	0
Nov	8.0	1985	12	15.0	1985	9	1985	12	2	1985
Dec	5.3	1978	19	5.4	1978	8	1983	23	4	1978
Ann	8.0+	Jan 1988	6	15.0	Nov 1985	18	Jan 1993	19	11+	Feb 1993

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	2.3	1.7	.5	.3	.0
Feb	1.0	.8	.2	@	.0
Mar	.4	.4	.1	.1	.0
Apr	.1	.1	@	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	@	.0	.0	.0	.0
Nov	.8	.5	.2	.1	.0
Dec	1.2	.8	.1	@	.0
Ann	5.8	4.3	1.1	.5	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	1.1	.6	.3	.0
Feb	1.9	.8	.3	.0
Mar	.3	.1	.1	.0
Apr	@	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.6	.4	.4	.0
Dec	.2	.1	.1	.0
Ann	4.1	2.0	1.2	.0

+ 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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: CALLAO, UT **COOP ID: 421144**

Climate Division: UT 1 **NWS Call Sign:** **Elevation: 4,330 Feet** **Lat: 39˚54N** **Lon: 113˚43W**

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	6/18	6/13	6/08	6/05	6/02	5/29	5/26	5/22	5/16
32	6/04	5/28	5/24	5/20	5/16	5/13	5/09	5/04	4/28
28	5/09	5/05	5/02	4/30	4/27	4/25	4/22	4/19	4/15
24	5/04	4/28	4/23	4/20	4/16	4/13	4/09	4/05	3/30
20	4/22	4/14	4/09	4/04	3/31	3/27	3/22	3/17	3/09
16	4/12	4/03	3/27	3/22	3/17	3/11	3/06	2/27	2/18

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	9/03	9/08	9/12	9/15	9/17	9/20	9/23	9/27	10/02
32	9/12	9/17	9/21	9/24	9/27	9/30	10/03	10/07	10/13
28	9/19	9/26	10/01	10/05	10/09	10/12	10/16	10/21	10/28
24	10/07	10/12	10/16	10/19	10/22	10/25	10/28	11/01	11/06
20	10/17	10/22	10/26	10/29	11/01	11/04	11/07	11/11	11/16
16	10/27	11/01	11/05	11/08	11/11	11/14	11/17	11/21	11/26

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	122	117	112	107	103	98	92	84
32	156	148	142	138	133	129	124	118	110
28	184	177	172	167	163	160	155	150	143
24	208	201	197	192	188	185	180	176	169
20	244	234	226	220	214	209	202	195	185
16	270	259	252	245	239	233	226	218	208

***** 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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: CALLAO, UT **COOP ID: 421144**

Climate Division: UT 1 **NWS Call Sign:** **Elevation: 4,330 Feet** **Lat: 39˚54N** **Lon: 113˚43W**

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	1176	893	712	480	254	69	3	8	132	472	830	1138	6167
60	1021	753	557	339	138	23	0	1	52	320	680	983	4867
57	928	669	465	261	86	10	0	0	24	235	590	890	4158
55	866	613	405	214	60	5	0	0	13	185	530	828	3719
50	720	481	266	119	18	0	0	0	2	84	384	673	2747
32	267	116	13	0	0	0	0	0	0	0	44	198	638

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	114	147	324	511	784	1035	1289	1243	901	551	204	83	7186
55	0	0	4	35	130	350	576	530	223	23	0	0	1871
57	0	0	1	22	95	294	514	468	175	12	0	0	1581
60	0	0	0	10	54	218	421	376	112	3	0	0	1194
65	0	0	0	1	15	114	269	229	42	0	0	0	670
70	0	0	0	0	2	46	134	107	10	0	0	0	299

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	13	34	141	294	545	800	1046	1000	663	325	67	16	13	47	188	482	1027	1827	2873	3873	4536	4861	4928	4944
45	0	11	61	174	392	650	891	845	516	195	25	4	0	11	72	246	638	1288	2179	3024	3540	3735	3760	3764
50	0	1	20	91	256	500	736	690	373	98	7	0	0	1	21	112	368	868	1604	2294	2667	2765	2772	2772
55	0	0	5	39	145	358	581	536	241	35	0	0	0	0	5	44	189	547	1128	1664	1905	1940	1940	1940
60	0	0	0	10	68	229	426	383	133	7	0	0	0	0	0	10	78	307	733	1116	1249	1256	1256	1256
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	17	40	129	229	363	515	660	640	450	262	70	18	17	57	186	415	778	1293	1953	2593	3043	3305	3375	3393

(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 and precipitation were calculated from a serially complete daily data set .
Documentation of the serially complete data set is available from the link below:

g. Snowfall and snow depth statistics were derived from 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 difference 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.

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. Snow Climatology
   2. 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
Eischeid, J. K., P. Pasteris, H. F. Diaz, M. Plantico, and N. Lott, 2000: Creating a serially complete, national daily time series of temperature and precipitation for the Western United States. J. Appl. Meteorol., 39, 1580-1591,
www1.ncdc.noaa.gov/pub/data/special/ serialcomplete_jam_0900.pdf