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: CANELO 1 NW, AZ **COOP ID: 021231**

Climate Division: AZ 7 **NWS Call Sign:** **Elevation: 5,010 Feet** **Lat: 31˚34N** **Lon: 110˚32W**

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	58.3	28.3	43.3	81	1950	20	46.9	2000	-6	1949	4	39.4	1992	673	0	.0	.0	26.3	.1	22.4	.0
Feb	61.8	30.1	46.0	86	1921	12	50.3	1996	4	1948	12	42.5	1990	534	0	.0	.0	25.8	.2	18.3	.0
Mar	66.3	33.1	49.7	88	1989	11	55.6	1972	8	1948	5	44.7	1973	474	0	.0	.0	30.1	.0	15.3	.0
Apr	73.6	37.6	55.6	99	1932	12	62.0	1989	11	1976	17	49.9	1975	290	8	.0	.3	29.7	.0	7.7	.0
May	81.4	45.1	63.3	101	2000	29	69.1	2000	19	1950	5	59.8	1975	119	64	.1	3.3	31.0	.0	.9	.0
Jun	90.7	53.7	72.2	106	1990	26	77.4	1990	30	1932	1	68.3	1983	9	223	1.6	17.2	30.0	.0	.0	.0
Jul	88.8	60.4	74.6	109	1926	1	77.2	1994	40	1926	24	71.7	1975	0	298	.7	14.6	31.0	.0	.0	.0
Aug	86.0	59.1	72.6	99+	1995	5	75.6	1995	40	1938	2	69.7	1990	0	234	.0	6.7	31.0	.0	.0	.0
Sep	83.8	53.7	68.8	99	1950	1	72.0	1998	28	1945	28	65.7	1985	16	129	.0	3.0	30.0	.0	.0	.0
Oct	75.7	43.4	59.6	94	1940	6	62.8	1987	16	1971	30	54.8	1971	188	18	.0	.5	30.9	.0	2.5	.0
Nov	65.5	33.3	49.4	86	1945	4	54.1	1999	6+	1956	20	44.0	2000	468	0	.0	.0	28.6	.0	14.0	.0
Dec	58.5	28.6	43.6	80	1954	7	48.2	1977	-4	1978	8	39.4	1997	664	0	.0	.0	26.6	.1	22.4	.1
Ann	74.2	42.2	58.2	109	Jul 1926	1	77.4	Jun 1990	-6	Jan 1949	4	39.4+	Dec 1997	3435	974	2.4	45.6	351.0	.4	103.5	.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: 1910-2001

(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	1.40	1.16	2.52	1993	18	7.99	1993	.00	1999
Feb	1.18	.90	2.20	1928	11	3.85	1998	.00+	1984
Mar	1.10	.66	1.99	1912	10	3.74	1992	.00+	1984
Apr	.49	.31	1.62	1986	29	1.90	1988	.00+	1993
May	.24	.10	.91	1916	1	1.74	1992	.00+	2000
Jun	.59	.37	2.30	1958	21	3.76	2000	.00+	1998
Jul	3.66	3.69	3.00	1912	16	6.99	1984	1.16	1987
Aug	3.73	3.98	4.30	1929	7	7.20	1984	1.08	1981
Sep	1.78	1.53	3.81	1926	27	7.47	1983	.27	1973
Oct	1.50	.84	2.30	1977	8	9.16	2000	.00+	1999
Nov	.96	.76	1.67	1978	24	3.56	1994	.00+	1999
Dec	1.41	.58	3.32	1965	10	5.54	1984	.00+	1996
Ann	18.04	17.75	4.30	Aug 1929	7	9.16	Oct 2000	.00+	May 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.5	3.3	.8	.1
Feb	4.5	2.7	.8	.1
Mar	4.6	2.9	.7	.1
Apr	2.3	1.2	.2	.1
May	1.8	.8	.1	.0
Jun	3.2	1.4	.3	.1
Jul	12.8	8.1	2.4	.4
Aug	13.4	8.5	2.5	.5
Sep	7.1	4.2	1.1	.2
Oct	4.6	2.7	1.0	.5
Nov	3.6	2.2	.6	.2
Dec	4.8	2.9	1.0	.3
Ann	68.2	40.9	11.5	2.6

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	.01	.07	.21	.38	.60	.87	1.21	1.66	2.30	3.42	4.57
Feb	.00	.00	.14	.34	.56	.80	1.09	1.46	1.98	2.83	3.68
Mar	.00	.00	.23	.41	.60	.82	1.07	1.38	1.79	2.48	3.16
Apr	.00	.00	.00	.06	.15	.26	.39	.58	.84	1.30	1.76
May	.00	.00	.00	.00	.02	.09	.18	.28	.43	.68	.93
Jun	.00	.00	.02	.08	.17	.29	.45	.67	1.00	1.59	2.20
Jul	1.14	1.49	2.00	2.45	2.87	3.32	3.80	4.38	5.11	6.27	7.33
Aug	1.23	1.58	2.10	2.54	2.97	3.41	3.89	4.45	5.17	6.29	7.32
Sep	.35	.51	.77	1.01	1.25	1.51	1.81	2.16	2.64	3.39	4.11
Oct	.00	.00	.11	.31	.57	.89	1.28	1.80	2.54	3.82	5.12
Nov	.00	.06	.21	.35	.51	.70	.91	1.18	1.56	2.19	2.82
Dec	.00	.00	.10	.27	.50	.78	1.15	1.65	2.37	3.66	4.97
Ann	10.93	12.21	13.91	15.22	16.41	17.58	18.80	20.17	21.85	24.33	26.51

\+ 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: 1910-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	.0	.0	#	0
Feb	.1	.0	0	0
Mar	.4	.0	#	0
Apr	.2	.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	#	.0	0	0
Dec	.6	.0	#	0
Ann	1.3	.0	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	.0	0	0	.0	0	2	1983	1	#+	1983
Feb	2.0	1993	15	2.0	1993	0	0	0	0	0
Mar	3.5	1976	4	3.5	1976	4	1976	4	#+	1976
Apr	3.0	1976	16	3.0	1976	3	1976	16	#	1976
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	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	.0	0	0	.0	0	0	0	0	0	0
Nov	#	1972	12	#	1972	0	0	0	0	0
Dec	11.0	1978	7	11.0	1978	11	1978	7	1	1978
Ann	11.0	Dec 1978	7	11.0	Dec 1978	11	Dec 1978	7	1	Dec 1978

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.0	.0	.0	.0	.0
Feb	.1	.1	.0	.0	.0
Mar	.2	.2	.1	.0	.0
Apr	.1	.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	.0
Nov	.0	.0	.0	.0	.0
Dec	.1	.1	.1	.1	.1
Ann	.5	.5	.3	.1	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.0	.0	.0	.0
Mar	.1	@	.0	.0
Apr	@	@	.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	.0	.0	.0	.0
Dec	.1	.1	@	@
Ann	.2	.1	@	@

+ 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	5/30	5/25	5/20	5/17	5/14	5/10	5/07	5/02	4/27
32	5/16	5/10	5/06	5/03	4/30	4/27	4/23	4/19	4/13
28	5/06	4/29	4/24	4/20	4/16	4/12	4/08	4/03	3/27
24	4/23	4/14	4/07	4/01	3/27	3/22	3/16	3/09	2/28
20	3/30	3/20	3/12	3/06	2/28	2/22	2/16	2/08	1/29
16	3/14	3/01	2/20	2/12	2/04	1/27	1/18	1/07	12/17

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	10/08	10/12	10/15	10/18	10/20	10/23	10/25	10/28	11/01
32	10/11	10/16	10/19	10/22	10/25	10/28	10/30	11/03	11/07
28	10/24	10/28	10/31	11/03	11/05	11/08	11/10	11/14	11/18
24	11/04	11/08	11/11	11/14	11/17	11/20	11/22	11/26	11/30
20	11/07	11/14	11/19	11/24	11/28	12/02	12/06	12/11	12/18
16	11/22	12/02	12/10	12/17	12/24	12/31	1/08	1/18	0/00

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	180	172	167	163	159	155	150	145	138
32	199	192	186	182	177	173	169	163	156
28	225	217	212	207	203	198	193	188	180
24	262	252	246	240	234	229	223	216	206
20	307	295	286	279	272	265	258	249	237
16	>365	>365	>365	336	320	308	296	284	268

***** 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

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Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	673	534	474	290	119	9	0	0	16	188	468	664	3435
60	518	394	324	166	48	1	0	0	1	84	321	509	2366
57	425	311	240	109	23	0	0	0	0	44	238	416	1806
55	363	257	189	78	13	0	0	0	0	27	187	355	1469
50	214	134	90	25	2	0	0	0	0	5	87	212	769
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	350	390	549	708	969	1205	1321	1257	1103	853	522	359	9586
55	0	3	25	96	268	515	608	544	413	167	19	1	2659
57	0	0	14	67	217	455	546	482	353	123	10	0	2267
60	0	0	5	34	149	365	453	389	265	69	3	0	1732
65	0	0	0	8	64	223	298	234	129	18	0	0	974
70	0	0	0	0	19	107	150	94	38	2	0	0	410

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	146	198	315	475	724	975	1081	1014	870	613	298	155	146	344	659	1134	1858	2833	3914	4928	5798	6411	6709	6864
45	52	89	177	331	569	825	926	859	720	458	173	57	52	141	318	649	1218	2043	2969	3828	4548	5006	5179	5236
50	7	22	77	200	416	675	771	704	570	310	77	9	7	29	106	306	722	1397	2168	2872	3442	3752	3829	3838
55	0	0	22	92	268	525	616	549	420	178	17	0	0	0	22	114	382	907	1523	2072	2492	2670	2687	2687
60	0	0	0	25	136	375	461	394	271	74	0	0	0	0	0	25	161	536	997	1391	1662	1736	1736	1736
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	149	188	263	361	495	607	709	678	566	414	245	154	149	337	600	961	1456	2063	2772	3450	4016	4430	4675	4829

(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:
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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