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: COLORADO CITY, AZ **COOP ID: 021920**

Climate Division: AZ 1 **NWS Call Sign:** **Elevation: 5,010 Feet** **Lat: 37˚00N** **Lon: 112˚58W**

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	48.7	23.2	36.0	70+	1994	19	44.1	1986	-9	1973	5	28.1	1973	900	0	.0	.0	12.6	1.1	26.7	.3
Feb	53.7	27.8	40.8	78	1995	21	48.7	1995	-4	1979	4	36.2	1979	679	0	.0	.0	17.6	.6	19.8	.1
Mar	58.9	31.6	45.3	87	1968	28	51.6	1972	6	1971	2	39.8	1973	613	0	.0	.0	25.0	@	15.9	.0
Apr	66.7	37.3	52.0	90	1994	20	58.3	1989	13	1975	2	44.7	1975	398	7	.0	@	28.3	.0	6.7	.0
May	76.2	45.8	61.0	97+	1984	29	66.5	1984	22	1975	6	55.9	1977	172	48	.0	1.8	30.9	.0	1.4	.0
Jun	87.2	54.5	70.9	105	1984	28	74.9	1994	28	1999	5	65.7	1998	23	198	.9	13.9	30.0	.0	@	.0
Jul	92.4	61.1	76.8	108	1985	5	80.1	1996	43+	1983	10	73.2	1999	0	365	2.6	23.3	31.0	.0	.0	.0
Aug	90.0	59.9	75.0	105	1993	2	78.6	1994	46	1999	12	72.5	1989	0	309	.7	18.4	31.0	.0	.0	.0
Sep	83.5	52.9	68.2	98+	2000	15	72.4	1979	29	1965	20	62.4	1986	36	132	.0	5.5	30.0	.0	@	.0
Oct	72.5	41.3	56.9	92	1980	1	62.4	1988	6	1971	30	50.0	1984	269	17	.0	.3	30.3	@	4.1	.0
Nov	58.7	30.1	44.4	80	1975	4	50.2	1981	1	1976	28	39.0	2000	618	0	.0	.0	22.8	.1	17.4	.0
Dec	50.3	23.2	36.8	69+	1999	1	44.6	1980	-9	1990	23	29.1	1990	876	0	.0	.0	15.6	.9	26.0	.3
Ann	69.9	40.7	55.3	108	Jul 1985	5	80.1	Jul 1996	-9+	Dec 1990	23	28.1	Jan 1973	4584	1076	4.2	63.2	305.1	2.7	118.0	.7

\+ 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: 1963-2001

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

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Climate Division: AZ 1 **NWS Call Sign:** **Elevation: 5,010 Feet** **Lat: 37°00N** **Lon: 112°58W**

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	.87	1.30	1997	13	4.95	1993	.00	1972
Feb	1.41	1.02	1.71	1969	26	3.90	1998	.00+	1974
Mar	1.69	1.35	1.25	1992	3	5.46	1992	.00+	1997
Apr	.92	.55	1.47	1988	21	3.77	1988	.00+	1991
May	.69	.46	1.00	1981	28	2.84	1981	.00+	1974
Jun	.41	.28	1.16	1972	6	1.71	1972	.00+	1996
Jul	1.31	.90	1.95	1981	12	4.78	1999	.00	1993
Aug	1.63	1.62	3.20	1982	2	4.79	1982	.05	1985
Sep	1.15	.59	2.35	1998	9	8.04	1998	.00+	1993
Oct	1.02	.80	1.18	1992	30	3.66	2000	.00+	1999
Nov	1.15	1.09	3.07	1995	1	3.07	1995	.00	1989
Dec	.79	.58	1.66	1966	6	2.92	1984	.00	1989
Ann	13.57	12.95	3.20	Aug 1982	2	8.04	Sep 1998	.00+	Oct 1999

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.7	4.1	.8	.1
Feb	6.2	4.3	1.0	.0
Mar	7.0	4.6	.9	.1
Apr	4.0	2.4	.4	.1
May	3.6	2.1	.3	@
Jun	2.1	1.1	.3	@
Jul	5.5	3.3	.7	.2
Aug	6.6	4.1	.9	.3
Sep	4.2	2.7	.6	.3
Oct	4.7	2.9	.5	.1
Nov	4.5	3.1	.7	@
Dec	4.4	2.5	.3	.0
Ann	58.5	37.2	7.4	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	.02	.08	.23	.41	.63	.90	1.23	1.67	2.30	3.38	4.48
Feb	.00	.19	.46	.68	.91	1.15	1.43	1.76	2.20	2.93	3.62
Mar	.00	.06	.27	.51	.79	1.12	1.53	2.05	2.79	4.06	5.33
Apr	.00	.04	.15	.28	.43	.61	.83	1.11	1.51	2.19	2.87
May	.00	.02	.10	.20	.31	.44	.61	.83	1.14	1.68	2.22
Jun	.00	.00	.00	.03	.10	.19	.31	.48	.71	1.12	1.54
Jul	.01	.05	.17	.33	.53	.78	1.11	1.54	2.17	3.27	4.40
Aug	.28	.42	.66	.88	1.11	1.36	1.65	1.99	2.45	3.20	3.92
Sep	.00	.00	.08	.21	.39	.62	.93	1.34	1.94	3.01	4.11
Oct	.00	.07	.23	.39	.56	.75	.98	1.27	1.66	2.31	2.96
Nov	.07	.19	.37	.54	.72	.91	1.14	1.42	1.80	2.42	3.02
Dec	.06	.15	.27	.39	.51	.64	.79	.97	1.22	1.62	2.00
Ann	7.21	8.31	9.78	10.95	12.02	13.08	14.21	15.48	17.06	19.42	21.53

\+ 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: 1963-2001
(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	6.1	4.8	1	#
Feb	3.8	2.5	1	#
Mar	3.3	2.0	#	#
Apr	1.5	.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	.4	.0	#	0
Nov	2.7	.0	#	#
Dec	3.4	1.8	#	#
Ann	21.2	11.1	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	16.0	1982	21	29.0	1982	12	1982	21	6	1989
Feb	9.0	1987	24	14.5	1987	13	1979	2	6	1979
Mar	7.5	1986	17	10.5+	1987	5	1987	2	1	1987
Apr	7.5	1975	1	13.5	1975	2	1975	1	#+	1995
May	.5	1971	8	.5+	1975	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	4.5	1991	30	8.5	1991	3+	1991	29	#+	1991
Nov	7.0	1975	29	10.0+	1985	6	1985	12	1+	1994
Dec	8.0	1982	1	17.5	1988	9	1988	26	2	1992
Ann	16.0	Jan 1982	21	29.0	Jan 1982	13	Feb 1979	2	6+	Jan 1989

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	2.5	2.1	.9	.3	@
Feb	2.2	1.9	.5	.1	.0
Mar	2.1	1.5	.4	.1	.0
Apr	.7	.5	.2	@	.0
May	.1	.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	.1	.1	.1	.0	.0
Nov	1.0	.8	.4	.2	.0
Dec	1.7	1.2	.4	.2	.0
Ann	10.4	8.1	2.9	.9	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	7.1	3.8	1.8	.1
Feb	3.0	1.3	.7	.1
Mar	.8	.2	.1	.0
Apr	.1	.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	.1	.1	.0	.0
Nov	1.9	.5	.2	.0
Dec	3.2	1.3	.4	.0
Ann	16.2	7.2	3.2	.2

+ 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	5/28	5/23	5/20	5/16	5/13	5/09	5/05	4/29
32	5/27	5/19	5/13	5/09	5/04	4/29	4/25	4/19	4/11
28	5/08	5/01	4/26	4/21	4/17	4/13	4/09	4/04	3/27
24	4/21	4/12	4/05	3/30	3/25	3/19	3/13	3/07	2/25
20	4/08	3/29	3/22	3/15	3/09	3/03	2/25	2/17	2/07
16	3/23	3/10	3/01	2/21	2/14	2/07	1/30	1/21	1/08

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	9/26	10/01	10/05	10/08	10/11	10/14	10/17	10/21	10/26
32	10/04	10/10	10/14	10/17	10/20	10/23	10/27	10/30	11/05
28	10/12	10/17	10/22	10/25	10/28	11/01	11/04	11/08	11/14
24	10/25	10/30	11/03	11/06	11/09	11/12	11/15	11/19	11/24
20	10/29	11/05	11/10	11/14	11/18	11/22	11/26	12/01	12/07
16	11/09	11/16	11/20	11/25	11/28	12/02	12/07	12/12	12/20

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	173	164	158	152	147	142	137	130	121
32	195	186	179	174	168	163	157	151	141
28	223	213	206	199	193	188	181	174	164
24	263	251	243	235	229	222	215	207	195
20	296	281	271	261	253	244	235	224	210
16	337	318	305	295	286	277	267	256	240

***** 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)

Base — Heating Degree Days (1)

Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	900	679	613	398	172	23	0	0	36	269	618	876	4584
60	745	539	460	266	85	5	0	0	8	154	469	721	3452
57	652	455	373	198	50	1	0	0	3	100	382	628	2842
55	590	399	317	160	33	0	0	0	1	72	326	566	2464
50	441	269	193	82	9	0	0	0	0	26	200	417	1637
32	59	12	5	0	0	0	0	0	0	0	5	49	130

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	182	257	415	600	899	1166	1388	1332	1086	771	377	197	8670
55	0	0	14	69	219	476	675	619	397	130	8	0	2607
57	0	0	8	48	174	417	613	557	338	96	4	0	2255
60	0	0	3	25	116	330	520	464	254	56	1	0	1769
65	0	0	0	7	48	198	365	309	132	17	0	0	1076
70	0	0	0	0	14	97	215	163	48	3	0	0	540

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	39	100	204	387	661	940	1145	1092	847	533	181	48	39	139	343	730	1391	2331	3476	4568	5415	5948	6129	6177
45	5	38	104	255	506	790	990	937	697	387	90	8	5	43	147	402	908	1698	2688	3625	4322	4709	4799	4807
50	0	8	42	143	358	641	835	782	549	250	31	0	0	8	50	193	551	1192	2027	2809	3358	3608	3639	3639
55	0	0	8	65	223	492	680	627	401	135	5	0	0	0	8	73	296	788	1468	2095	2496	2631	2636	2636
60	0	0	0	18	117	345	525	472	261	54	0	0	0	0	0	18	135	480	1005	1477	1738	1792	1792	1792
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	42	82	155	266	425	593	725	707	553	352	139	54	42	124	279	545	970	1563	2288	2995	3548	3900	4039	4093

(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