

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: CHIRICAHUA NATL MONUMENT, AZ

1971-2000

COOP ID: 021664

Climate Division: AZ 7

NWS Call Sign:

Elevation: 5,300 Feet Lat: 32°00N

Lon: 109°21W

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	57.5	30.4	44.0	80	1971	18	48.3	1986	-10	1913	7	39.7	1992	653	0	.0	.0	26.4	.2	19.3	.0
Feb	60.5	32.1	46.3	80+	1957	14	51.8	1996	7	1965	12	42.8	1990	523	0	.0	.0	25.0	.1	15.0	.0
Mar	66.1	35.2	50.7	86	1989	11	57.3	1972	10	1971	2	44.7	1973	447	1	.0	.0	30.0	.0	11.8	.0
Apr	73.3	40.0	56.7	93+	2000	28	62.8	1989	20+	1999	5	50.6	1983	266	14	.0	.2	29.5	.0	5.0	.0
May	81.4	47.2	64.3	104	1910	30	69.7	2000	23	1995	9	61.2	1971	90	68	@	1.9	31.0	.0	1.1	.0
Jun	90.2	56.4	73.3	108	1910	10	78.1	1994	35+	1999	6	70.2	1991	3	253	1.1	15.7	30.0	.0	.0	.0
Jul	89.1	60.5	74.8	109	1909	13	78.1	1980	40	1912	29	71.7	1986	0	304	.6	14.4	31.0	.0	.0	.0
Aug	86.2	59.6	72.9	103	1995	4	78.1	1995	45	1978	31	69.9	1990	2	247	@	7.1	31.0	.0	.0	.0
Sep	83.5	55.8	69.7	100	1910	6	74.4	1998	33	1913	28	66.2	1985	18	159	.0	3.5	30.0	.0	.0	.0
Oct	75.3	46.7	61.0	95	1910	14	65.7	1995	21	1971	30	55.6	1976	166	42	.0	.5	30.8	.0	1.4	.0
Nov	64.8	36.2	50.5	85	1981	6	56.9	1999	8	1957	23	45.0	2000	435	1	.0	.0	28.4	.0	9.2	.0
Dec	57.8	30.8	44.3	82	1980	29	49.7	1980	-1	1978	9	39.6	1997	642	0	.0	.0	26.3	.2	18.9	.1
Ann	73.8	44.2	59.0	109	Jul 1909	13	78.1+	Aug 1995	-10	Jan 1913	7	39.6	Dec 1997	3245	1089	1.7	43.3	349.4	.5	81.7	.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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1909-2001

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

027-A

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No. 20

1971-2000

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Station: CHIRICAHUA NATL MONUMENT, AZ

COOP ID: 021664

Climate Division: AZ 7

NWS Call Sign:

Elevation: 5,300 Feet Lat: 32°00N

Lon: 109°21W

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	1.56	1.33	2.24	1916	20	5.44	1993	.01	1999	6.3	3.6	1.1	.2	.04	.10	.26	.45	.69	.98	1.35	1.84	2.55	3.79	5.05
Feb	1.34	1.30	1.31	1995	15	3.09	1998	.00+	1999	5.2	3.4	.9	.2	.00	.00	.20	.40	.63	.90	1.23	1.64	2.22	3.20	4.17
Mar	1.34	.96	1.50	1998	31	4.03	1998	.00+	1984	5.3	3.1	1.0	.1	.00	.10	.31	.52	.74	.99	1.29	1.66	2.17	3.02	3.85
Apr	.47	.32	1.57	1919	26	2.39	1988	.00+	2000	2.5	1.2	.3	.0	.00	.00	.00	.05	.13	.23	.37	.55	.82	1.29	1.78
May	.44	.15	1.25	1917	19	2.02	1992	.00+	2000	2.8	1.3	.2	.0	.00	.00	.00	.04	.10	.18	.30	.48	.74	1.23	1.74
Jun	.94	.50	4.50	1911	11	4.70	2000	.00+	1995	4.1	2.0	.4	.2	.00	.00	.05	.14	.28	.47	.72	1.06	1.58	2.52	3.50
Jul	4.12	3.54	4.30	1919	14	8.70	1981	.00	1994	13.7	8.4	2.9	.7	1.13	1.73	2.39	2.90	3.38	3.87	4.39	4.99	5.75	6.93	8.01
Aug	3.83	3.77	3.18	1913	10	9.88	1993	.00	1994	12.8	7.7	2.5	.9	.38	.82	1.46	2.01	2.58	3.19	3.89	4.73	5.84	7.65	9.37
Sep	1.91	1.83	3.01	1983	28	7.40	1983	.00	1994	6.4	3.9	1.1	.3	.04	.16	.40	.67	.97	1.33	1.77	2.32	3.11	4.44	5.77
Oct	1.73	1.23	2.20	1983	2	6.19	2000	.00+	1999	5.4	3.2	1.2	.4	.00	.06	.26	.50	.79	1.13	1.55	2.09	2.86	4.18	5.52
Nov	1.31	.96	2.14	1983	4	4.47	1983	.00	1999	4.3	2.7	1.1	.2	.03	.11	.27	.45	.66	.91	1.20	1.58	2.12	3.03	3.94
Dec	1.96	.88	2.90	1987	18	6.21	1978	.00+	1996	5.6	3.5	1.3	.5	.00	.00	.18	.44	.76	1.16	1.67	2.34	3.30	4.98	6.69
Ann	20.95	22.18	4.50	Jun 1911	11	9.88	Aug 1993	.00+	May 2000	74.4	44.0	14.0	3.7	12.16	13.73	15.81	17.44	18.92	20.38	21.91	23.63	25.75	28.89	31.67

+ 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: 1909-2001

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

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

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No. 20 1971-2000

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Station: CHIRICAHUA NATL MONUMENT, AZ

COOP ID: 021664

Climate Division: AZ 7

NWS Call Sign:

Elevation: 5,300 Feet

Lat: 32°00N

Lon: 109°21W

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	2.0	.0	#	0	7.5	1987	17	14.0	1987	6	1991	17	#+	1995	.6	.5	.3	.1	.0	.3	.2	@	.0
Feb	2.0	.0	#	0	8.8	1990	15	12.8	1990	8	1971	21	1	1971	.6	.6	.3	.1	.0	.3	.2	.1	.0
Mar	2.2	.0	#	0	12.0	1973	13	31.5	1973	1	1999	17	#	1999	.6	.5	.3	.1	.1	@	.0	.0	.0
Apr	.3	.0	#	0	6.0	1971	18	6.0	1971	6	1971	18	#	1971	@	@	@	@	.0	.1	.1	@	.0
May	#	.0	#	0	#	1990	2	#+	1990	#	1990	2	#	1990	.0	.0	.0	.0	.0	.0	.0	.0	.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	.0
Oct	.1	.0	0	0	1.0	1971	26	1.0+	1996	0	0	0	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Nov	.8	.0	#	0	5.0	1976	13	10.0	1976	5	1976	27	#+	1990	.4	.2	.1	.1	.0	.2	.1	.1	.0
Dec	2.7	.0	#	0	12.0	1982	31	28.0	1982	12	1982	31	1	1982	.5	.5	.3	.2	.1	.6	.3	.2	.1
Ann	10.1	.0	N/A	N/A	12.0+	Dec 1982	31	31.5	Mar 1973	12	Dec 1982	31	1+	Dec 1982	2.8	2.4	1.3	.6	.2	1.5	.9	.4	.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

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: CHIRICAHUA NATL MONUMENT, AZ

COOP ID: 021664

Climate Division: AZ 7

NWS Call Sign:

Elevation: 5,300 Feet

Lat: 32° 00N

Lon: 109° 21W

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	5/29	5/22	5/17	5/13	5/10	5/06	5/02	4/27	4/21
32	5/19	5/12	5/07	5/03	4/29	4/25	4/20	4/15	4/08
28	5/04	4/25	4/18	4/12	4/07	4/02	3/27	3/21	3/11
24	4/23	4/10	3/31	3/24	3/16	3/09	3/01	2/19	2/07
20	3/20	3/08	2/27	2/19	2/12	2/05	1/27	1/17	12/28
16	3/01	2/14	2/03	1/24	1/13	12/31	12/08	0/00	0/00
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	10/09	10/14	10/18	10/21	10/24	10/27	10/30	11/03	11/09
32	10/19	10/24	10/27	10/30	11/02	11/05	11/08	11/11	11/16
28	10/29	11/03	11/06	11/09	11/12	11/15	11/18	11/22	11/27
24	11/07	11/14	11/19	11/22	11/26	11/30	12/04	12/09	12/15
20	11/18	11/25	11/30	12/05	12/09	12/14	12/19	12/26	0/00
16	12/04	12/16	12/26	1/04	1/13	1/25	0/00	0/00	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	187	180	175	171	167	162	158	153	146
32	209	202	196	191	187	182	178	172	164
28	242	234	228	223	219	214	209	203	195
24	293	280	270	262	254	247	238	229	216
20	>365	>365	314	302	294	286	279	270	259
16	>365	>365	>365	>365	>365	340	326	315	302

* 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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**Climatography
of the United States
No. 20
1971-2000**

Station: CHIRICAHUA NATL MONUMENT, AZ

COOP ID: 021664

Climate Division: AZ 7 NWS Call Sign: Elevation: 5,300 Feet Lat: 32°00N Lon: 109°21W

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	653	523	447	266	90	3	0	2	18	166	435	642	3245
60	498	383	301	151	30	0	0	0	2	78	294	487	2224
57	405	301	221	99	12	0	0	0	0	44	218	395	1695
55	343	248	174	71	6	0	0	0	0	28	173	335	1378
50	200	130	84	23	1	0	0	0	0	7	84	198	727
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	370	401	577	738	1001	1240	1327	1268	1131	899	556	382	9890
55	0	5	38	119	295	550	614	555	441	214	39	4	2874
57	0	2	23	87	239	490	552	493	381	168	24	1	2460
60	0	0	10	49	164	400	459	400	293	109	10	0	1894
65	0	0	1	14	68	253	304	247	159	42	1	0	1089
70	0	0	0	2	18	126	159	114	62	10	0	0	491

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	165	210	336	500	748	998	1082	1026	898	655	328	172	165	375	711	1211	1959	2957	4039	5065	5963	6618	6946	7118
45	67	102	196	356	593	848	927	871	748	501	200	69	67	169	365	721	1314	2162	3089	3960	4708	5209	5409	5478
50	15	37	96	226	438	698	772	716	598	352	102	14	15	52	148	374	812	1510	2282	2998	3596	3948	4050	4064
55	0	3	33	114	289	548	617	561	449	216	31	0	0	3	36	150	439	987	1604	2165	2614	2830	2861	2861
60	0	0	0	38	156	399	462	406	301	104	2	0	0	0	0	38	194	593	1055	1461	1762	1866	1868	1868
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	133	168	251	354	495	638	710	687	587	417	231	143	133	301	552	906	1401	2039	2749	3436	4023	4440	4671	4814

(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/normal/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/normal/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 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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