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: CHILDS, AZ **COOP ID: 021614**

Climate Division: AZ 3 **NWS Call Sign:** **Elevation: 2,650 Feet** **Lat: 34˚21N** **Lon: 111˚42W**

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	59.5	31.9	45.7	83	1976	17	50.7	1981	2	1937	21	40.3	1979	598	0	.0	.0	28.1	.0	16.9	.0
Feb	65.1	34.7	49.9	89	1963	7	57.5	1991	12+	1971	21	45.0	1979	423	0	.0	.0	26.9	.2	9.5	.0
Mar	69.7	38.3	54.0	95	1916	11	61.7	1972	21	1966	3	44.5	1973	352	12	.0	.3	30.2	.0	3.7	.0
Apr	78.4	42.8	60.6	102	1949	24	67.7	1989	22	1977	10	52.9	1975	187	54	@	3.7	29.7	.0	1.3	.0
May	87.6	50.5	69.1	110	1951	27	74.5	1984	31+	1976	3	64.1	1980	44	170	2.0	14.5	31.0	.0	@	.0
Jun	98.6	58.7	78.7	116+	1990	28	84.4	1974	27	1976	17	73.6	1998	2	413	14.9	26.7	30.0	.0	.1	.0
Jul	101.6	67.4	84.5	118	1958	12	87.5	1980	42	1919	1	80.8	1992	0	604	21.6	30.2	31.0	.0	.0	.0
Aug	98.6	66.5	82.6	114+	1977	1	86.4	1994	43	1917	23	79.4	1971	0	543	17.6	29.4	31.0	.0	.0	.0
Sep	92.6	59.7	76.2	115	1950	2	81.1	1979	40+	1976	28	70.2	1986	4	338	6.7	23.6	30.0	.0	.0	.0
Oct	81.8	48.3	65.1	109	1934	6	70.6	1988	20	1971	30	58.5	1971	102	104	1.1	9.1	31.0	.0	.5	.0
Nov	68.6	37.0	52.8	96	1989	10	59.8	1989	20+	1976	29	46.7	1972	375	9	.0	.3	29.6	.0	6.5	.0
Dec	59.1	32.0	45.6	83	1989	6	52.1	1980	16+	1990	23	40.8	1971	603	0	.0	.0	28.4	.0	17.1	.0
Ann	80.1	47.3	63.7	118	Jul 1958	12	87.5	Jul 1980	2	Jan 1937	21	40.3	Jan 1979	2690	2247	63.9	137.8	356.9	.2	55.6	.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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1915-2001

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

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Climate Division: AZ 3 **NWS Call Sign:** **Elevation: 2,650 Feet** **Lat: 34°21N** **Lon: 111°42W**

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	2.13	1.54	2.63+	1993	8	9.77	1993	.00	1972
Feb	2.22	1.58	2.82	1994	8	9.14	1980	.00+	1974
Mar	2.32	1.71	2.60	1991	1	8.31	1991	.00+	1997
Apr	.87	.72	2.15	1917	17	2.79	1976	.00+	1993
May	.45	.27	1.30	1922	9	2.48	1992	.00+	2000
Jun	.24	.06	2.22	1955	14	1.77	1972	.00+	1998
Jul	1.85	1.63	2.38	1954	22	5.19	1998	.00	1993
Aug	2.67	2.29	2.62	1951	28	6.09	1992	.39	1999
Sep	1.88	1.53	5.12	1927	12	6.27	1983	.00	1973
Oct	1.57	1.08	3.00	1972	7	9.24	1972	.00+	1999
Nov	1.47	1.08	4.03	1919	27	6.28	1978	.00+	1999
Dec	1.86	1.25	3.90	1978	19	6.98	1978	.00	1999
Ann	19.53	18.39	5.12	Sep 1927	12	9.77	Jan 1993	.00+	May 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.1	4.3	1.3	.4
Feb	6.1	3.6	1.4	.7
Mar	7.1	4.5	1.4	.5
Apr	4.0	2.0	.5	.1
May	2.8	1.4	.2	.0
Jun	1.7	.7	.1	.0
Jul	7.8	4.4	1.3	.2
Aug	9.1	5.8	1.7	.4
Sep	6.2	3.9	1.2	.4
Oct	4.5	2.6	1.0	.5
Nov	4.3	2.5	.9	.4
Dec	5.4	3.6	1.1	.4
Ann	65.1	39.3	12.1	4.0

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	.12	.35	.63	.97	1.37	1.88	2.55	3.50	5.14	6.80
Feb	.00	.09	.38	.70	1.07	1.50	2.03	2.70	3.65	5.27	6.89
Mar	.00	.10	.41	.74	1.13	1.58	2.13	2.82	3.81	5.48	7.16
Apr	.00	.00	.09	.28	.45	.63	.85	1.11	1.46	2.03	2.62
May	.00	.00	.00	.06	.15	.25	.38	.54	.78	1.20	1.61
Jun	.00	.00	.00	.00	.02	.06	.13	.24	.41	.73	1.06
Jul	.09	.25	.53	.80	1.09	1.42	1.80	2.27	2.92	4.00	5.05
Aug	.72	.97	1.36	1.70	2.03	2.38	2.76	3.22	3.82	4.75	5.63
Sep	.03	.14	.37	.63	.93	1.28	1.72	2.28	3.07	4.42	5.77
Oct	.00	.00	.18	.41	.67	.99	1.38	1.90	2.62	3.87	5.13
Nov	.00	.00	.19	.40	.65	.95	1.32	1.80	2.46	3.61	4.76
Dec	.00	.04	.17	.37	.64	1.00	1.47	2.12	3.09	4.84	6.66
Ann	11.45	12.89	14.81	16.31	17.67	19.01	20.41	21.99	23.94	26.81	29.35

\+ 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: 1915-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	2.0	1990	18	2.0	1990	#	1979	25	#	1979	.2	.1	.0	.0	.0	.0	.0	.0	.0
Feb	.6	.0	0	0	10.0	1985	3	11.5	1985	0	0	0	0	0	.2	.2	@	@	@	.0	.0	.0	.0
Mar	.1	.0	0	0	1.5	1976	4	1.5	1976	0	0	0	0	0	@	@	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.2	.0	0	0	4.5	1991	30	4.5	1991	0	0	0	0	0	@	@	@	.0	.0	.0	.0	.0	.0
Dec	.2	.0	0	0	2.0	1982	30	2.0	1982	0	0	0	0	0	.2	.1	.0	.0	.0	.0	.0	.0	.0
Ann	1.3	.0	N/A	N/A	10.0	Feb 1985	3	11.5	Feb 1985	#	Jan 1979	25	#	Jan 1979	.6	.4	@	@	@	.0	.0	.0	.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

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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	5/25	5/13	5/05	4/28	4/22	4/15	4/08	3/31	3/20
32	5/08	4/25	4/15	4/07	3/30	3/22	3/14	3/04	2/18
28	4/09	3/26	3/17	3/08	2/28	2/20	2/12	2/02	1/19
24	3/05	2/18	2/07	1/28	1/18	1/08	12/25	12/01	0/00
20	2/01	1/16	1/01	12/13	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	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	10/19	10/24	10/27	10/30	11/02	11/05	11/08	11/11	11/16
32	10/28	11/03	11/07	11/11	11/15	11/18	11/22	11/27	12/03
28	11/10	11/16	11/21	11/25	11/28	12/02	12/06	12/10	12/17
24	11/16	11/26	12/03	12/10	12/16	12/23	1/01	1/17	0/00
20	12/04	12/24	1/10	2/07	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	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	234	220	210	202	194	186	177	167	154
32	270	256	246	237	229	221	213	203	189
28	319	303	292	282	273	264	254	242	227
24	>365	>365	>365	341	327	315	304	291	275
20	>365	>365	>365	>365	>365	>365	>365	>365	316
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

***** 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	598	423	352	187	44	2	0	0	4	102	375	603	2690
60	443	291	222	102	12	0	0	0	0	44	246	449	1809
57	352	217	160	64	5	0	0	0	0	23	181	359	1361
55	294	173	125	44	2	0	0	0	0	14	143	302	1097
50	161	88	55	15	0	0	0	0	0	3	70	173	565
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	425	502	683	858	1149	1400	1627	1566	1324	1025	624	420	11603
55	6	31	95	212	438	710	914	853	634	326	77	9	4305
57	2	19	68	171	378	650	852	791	574	273	55	4	3837
60	0	8	37	120	293	560	759	698	484	201	30	1	3191
65	0	0	12	54	170	413	604	543	338	104	9	0	2247
70	0	0	2	18	80	273	449	388	205	43	1	0	1459

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	220	318	459	633	916	1170	1399	1343	1113	813	423	224	220	538	997	1630	2546	3716	5115	6458	7571	8384	8807	9031
45	99	185	309	483	761	1020	1244	1188	963	661	280	102	99	284	593	1076	1837	2857	4101	5289	6252	6913	7193	7295
50	29	88	178	339	606	870	1089	1033	813	508	157	31	29	117	295	634	1240	2110	3199	4232	5045	5553	5710	5741
55	1	27	75	212	452	720	934	878	663	358	68	0	1	28	103	315	767	1487	2421	3299	3962	4320	4388	4388
60	0	1	27	106	306	570	779	723	513	225	20	0	0	1	28	134	440	1010	1789	2512	3025	3250	3270	3270
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	182	246	327	429	572	675	836	822	688	518	317	184	182	428	755	1184	1756	2431	3267	4089	4777	5295	5612	5796

(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

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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