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: SPRINGERVILLE, AZ **COOP ID: 028162**

Climate Division: AZ 2 **NWS Call Sign:** **Elevation: 7,060 Feet** **Lat: 34˚08N** **Lon: 109˚17W**

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	48.5	16.2	32.4	71	1953	12	37.8	1986	-21+	1971	7	27.2	1977	1011	0	.0	.0	14.5	1.3	29.5	1.7
Feb	52.1	18.8	35.5	73+	1957	14	42.0	1995	-20	1948	12	29.3	1974	828	0	.0	.0	18.0	.8	26.4	.8
Mar	57.3	22.6	40.0	78	1913	19	44.3	1972	-13	1948	4	34.7	1987	776	0	.0	.0	25.0	.1	27.2	.1
Apr	64.4	27.6	46.0	87	1992	28	51.2	1989	5	1945	4	40.1	1983	570	0	.0	.0	28.0	.0	21.5	.0
May	71.9	35.1	53.5	91	1951	27	58.3	1984	12	1967	1	48.9	1975	357	2	.0	@	31.0	.0	11.2	.0
Jun	80.7	42.8	61.8	100	1953	30	66.2	1994	24+	1999	5	58.3	1982	126	28	.0	1.7	30.0	.0	2.3	.0
Jul	82.4	50.4	66.4	97	1993	7	68.6	1994	30	1997	1	64.1	1976	21	64	.0	2.8	31.0	.0	@	.0
Aug	79.9	49.3	64.6	93+	1995	3	68.9	1995	32+	1911	31	62.2	1974	55	43	.0	.6	31.0	.0	.0	.0
Sep	75.9	42.2	59.1	95	1950	2	63.0	1979	22+	2000	25	55.7	1985	188	9	.0	.1	30.0	.0	2.8	.0
Oct	67.3	30.4	48.9	88	1918	12	52.2	1988	3	1989	30	44.4	1984	501	0	.0	.0	29.9	@	19.5	.0
Nov	56.6	20.8	38.7	86	1918	1	42.2	1995	-17	1976	28	33.3	2000	789	0	.0	.0	23.0	.4	27.0	.3
Dec	49.2	15.4	32.3	76	1925	2	37.3	1977	-28	1926	27	26.7	1990	1014	0	.0	.0	16.1	1.4	29.6	1.7
Ann	65.5	31.0	48.3	100	Jun 1953	30	68.9	Aug 1995	-28	Dec 1926	27	26.7	Dec 1990	6236	146	.0	5.2	307.5	4.0	197.0	4.6

\+ 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: 1911-2001

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

Issue Date: February 2004

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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	.50	.40	1.30	1916	19	2.23	1980	.00+	2000
Feb	.50	.38	1.05	1933	27	1.95	1975	.00+	1999
Mar	.49	.38	1.33	1926	26	1.41	1978	.00+	1988
Apr	.27	.14	1.00+	1984	27	1.56	1984	.00+	2000
May	.45	.32	.65	1990	2	3.31	1992	.00+	2000
Jun	.53	.31	1.49	1927	13	2.25	1994	.00+	1998
Jul	2.52	2.32	2.23	1977	20	6.05	1999	.61	1993
Aug	3.11	2.96	2.27	1986	27	5.67	1992	.82	1973
Sep	1.49	1.29	2.75	1994	3	4.02	1984	.00	1973
Oct	1.08	.88	1.50	1916	13	3.82	2000	.00+	1999
Nov	.57	.40	1.05	1931	23	1.95	1973	.00+	1999
Dec	.48	.35	1.00+	1935	23	1.32	1992	.00+	1996
Ann	11.99	12.31	2.75	Sep 1994	3	6.05	Jul 1999	.00+	May 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	4.7	1.6	.1	.0
Feb	4.6	1.6	.1	.0
Mar	4.9	1.5	.1	.0
Apr	3.1	.7	.1	@
May	4.2	1.6	.2	.0
Jun	3.4	1.6	.3	@
Jul	12.3	6.3	1.3	.4
Aug	14.0	8.3	1.6	.5
Sep	7.2	3.5	.7	.1
Oct	5.2	2.9	.6	.1
Nov	4.1	1.8	.2	.0
Dec	3.6	1.6	.1	.0
Ann	71.3	33.0	5.4	1.1

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	.00	.02	.07	.14	.22	.32	.45	.60	.83	1.22	1.61
Feb	.00	.00	.14	.24	.33	.42	.53	.65	.81	1.06	1.30
Mar	.00	.07	.17	.24	.32	.40	.50	.61	.76	1.00	1.23
Apr	.00	.00	.01	.05	.09	.15	.23	.33	.47	.72	.98
May	.00	.00	.00	.03	.11	.21	.34	.52	.78	1.23	1.69
Jun	.00	.00	.02	.11	.21	.32	.47	.65	.91	1.36	1.82
Jul	.66	.90	1.27	1.59	1.90	2.23	2.60	3.03	3.60	4.50	5.33
Aug	1.01	1.30	1.74	2.11	2.47	2.84	3.24	3.72	4.33	5.28	6.16
Sep	.07	.20	.42	.64	.88	1.14	1.45	1.84	2.36	3.24	4.09
Oct	.00	.00	.18	.35	.54	.76	1.01	1.34	1.78	2.53	3.28
Nov	.00	.03	.12	.20	.30	.41	.54	.70	.93	1.31	1.69
Dec	.00	.00	.07	.15	.23	.33	.44	.59	.79	1.14	1.48
Ann	7.74	8.53	9.56	10.36	11.07	11.77	12.49	13.30	14.28	15.73	17.00

\+ 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: 1911-2001
(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	1.9	.0	#	0
Feb	1.1	.0	#	0
Mar	1.1	.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	1.7	.0	#	0
Nov	1.4	.0	#	0
Dec	1.7	.0	#	0
Ann	9.1	.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	7.0	1973	1	9.0	1973	6	1973	1	1	1975
Feb	4.0	1973	12	9.0	1971	2	1989	6	#+	1989
Mar	4.0	1973	13	11.6	1973	2	1989	3	#+	1989
Apr	2.0	1971	22	2.0	1971	#+	1993	6	#+	1993
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	6.0	1972	30	11.0	1996	3	1971	18	#+	1996
Nov	6.0	1972	12	7.5	1971	3	1972	12	#+	1983
Dec	7.0	1971	8	15.3	1971	5	1971	14	1	1992
Ann	7.0+	Jan 1973	1	15.3	Dec 1971	6	Jan 1973	1	1+	Dec 1992

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.6	.6	.2	.1	.0
Feb	.4	.4	.2	.0	.0
Mar	.8	.5	.1	.0	.0
Apr	.1	.1	.0	.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	.3	.3	.3	.2	.0
Nov	.5	.5	.2	.1	.0
Dec	.7	.5	.1	.1	.0
Ann	3.4	2.9	1.1	.5	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.4	.2	@	.0
Feb	.1	.0	.0	.0
Mar	.0	.0	.0	.0
Apr	.0	.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	@	.0	.0
Nov	@	@	.0	.0
Dec	.4	.2	.1	.0
Ann	1.0	.4	.1	.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	7/01	6/27	6/25	6/22	6/21	6/19	6/16	6/14	6/10
32	6/29	6/23	6/18	6/15	6/11	6/08	6/04	5/31	5/25
28	6/07	6/02	5/29	5/26	5/23	5/19	5/16	5/12	5/07
24	6/02	5/26	5/20	5/16	5/12	5/08	5/04	4/28	4/21
20	5/10	5/04	4/30	4/27	4/24	4/21	4/17	4/13	4/08
16	4/29	4/23	4/19	4/15	4/12	4/08	4/05	3/31	3/26

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	8/31	9/05	9/09	9/12	9/15	9/18	9/21	9/25	9/30
32	9/14	9/18	9/21	9/23	9/25	9/28	9/30	10/03	10/07
28	9/22	9/26	9/29	10/01	10/04	10/06	10/08	10/11	10/15
24	9/28	10/03	10/07	10/10	10/13	10/16	10/20	10/23	10/29
20	10/06	10/12	10/15	10/19	10/22	10/24	10/28	10/31	11/06
16	10/12	10/18	10/23	10/27	10/30	11/03	11/07	11/11	11/18

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	106	99	94	90	86	82	78	73	66
32	124	118	113	109	106	102	98	93	87
28	154	147	142	137	133	129	125	120	113
24	179	170	164	159	154	149	143	137	128
20	203	195	190	185	180	175	171	165	157
16	230	220	213	207	201	195	189	182	172

***** 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	1011	828	776	570	357	126	21	55	188	501	789	1014	6236
60	856	688	621	421	216	45	1	7	81	348	639	859	4782
57	763	604	528	335	145	19	0	1	40	262	549	766	4012
55	701	548	466	280	106	10	0	0	23	209	489	704	3536
50	546	408	313	161	38	1	0	0	3	101	340	549	2460
32	82	41	8	1	0	0	0	0	0	0	15	87	234

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	94	137	255	421	667	892	1066	1011	811	522	216	95	6187
55	0	0	0	11	60	212	353	298	144	18	0	0	1096
57	0	0	0	6	37	162	291	237	101	9	0	0	843
60	0	0	0	1	15	98	199	150	52	3	0	0	518
65	0	0	0	0	2	28	64	43	9	0	0	0	146
70	0	0	0	0	0	3	5	4	0	0	0	0	12

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	15	33	85	214	427	663	824	770	582	294	73	12	15	48	133	347	774	1437	2261	3031	3613	3907	3980	3992
45	0	5	28	107	276	513	669	615	432	164	17	0	0	5	33	140	416	929	1598	2213	2645	2809	2826	2826
50	0	0	0	41	145	363	514	460	285	66	0	0	0	0	0	41	186	549	1063	1523	1808	1874	1874	1874
55	0	0	0	6	48	218	359	305	145	11	0	0	0	0	0	6	54	272	631	936	1081	1092	1092	1092
60	0	0	0	0	8	98	204	152	45	0	0	0	0	0	0	0	8	106	310	462	507	507	507	507
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	46	79	137	229	348	470	532	494	400	277	128	50	46	125	262	491	839	1309	1841	2335	2735	3012	3140	3190

(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