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: GILA BEND, AZ **COOP ID: 023393**

Climate Division: AZ 6 **NWS Call Sign:** **Elevation: 735 Feet** **Lat: 32˚57N** **Lon: 112˚43W**

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	69.4	40.6	55.0	90	1956	10	60.8	1986	10	1963	13	49.9	1979	312	3	.0	.0	30.8	.0	4.1	.0
Feb	74.3	44.1	59.2	95+	1963	9	64.2	1995	23+	1953	21	55.4	1998	179	16	.0	.4	28.0	@	1.0	.0
Mar	79.7	48.3	64.0	101	1896	25	70.6	1972	25	1971	2	56.6	1973	118	86	@	3.8	31.0	.0	.1	.0
Apr	88.1	53.8	71.0	110	1980	19	77.1	1989	28	1896	17	62.5	1975	37	216	2.2	14.6	30.0	.0	.0	.0
May	96.7	62.1	79.4	116+	1984	28	85.8	1997	39	1915	1	73.6	1977	3	448	11.6	25.8	31.0	.0	.0	.0
Jun	106.3	70.9	88.6	122	1990	26	92.6	1981	42	1934	8	84.1	1998	0	709	25.5	29.3	30.0	.0	.0	.0
Jul	109.0	79.2	94.1	122	1995	28	97.7	1972	47	1941	1	90.9	1993	0	903	30.1	31.0	31.0	.0	.0	.0
Aug	107.1	78.8	93.0	120+	1975	4	96.5	1994	54	1968	23	88.7	1971	0	867	29.1	30.9	31.0	.0	.0	.0
Sep	102.6	72.2	87.4	120	1950	2	91.5	1979	37	1941	22	83.1	1986	0	671	22.4	29.2	30.0	.0	.0	.0
Oct	91.3	59.2	75.3	114	1980	2	80.3	1988	31	1969	20	68.9	1971	13	332	5.4	19.7	31.0	.0	@	.0
Nov	78.1	46.8	62.5	99	1924	5	67.6	1995	22+	1916	24	55.6	2000	133	57	.0	2.3	30.0	.0	.6	.0
Dec	69.4	40.6	55.0	90+	1940	3	60.1	1980	15	1911	26	50.2	1974	315	5	.0	.0	30.8	.0	3.3	.0
Ann	89.3	58.1	73.7	122+	Jul 1995	28	97.7	Jul 1972	10	Jan 1963	13	49.9	Jan 1979	1110	4313	126.3	187.0	364.6	@	9.1	.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: 1892-2001

(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	.62	.35	1.35	1962	22	2.61+	1993	.00+	1996
Feb	.87	.67	1.62	1998	4	4.74	1998	.00+	1989
Mar	.72	.63	1.35	2000	6	2.30	1998	.00+	1997
Apr	.20	.05	1.38	1941	12	1.15	1999	.00+	2000
May	.15	.00	1.85	1984	30	1.85	1984	.00+	2000
Jun	.04	.00	.70+	1918	18	.59	1972	.00+	1998
Jul	.76	.39	1.61	1984	22	4.72	1984	.00	1983
Aug	1.20	.88	2.61	1951	28	8.37	1983	.05+	1991
Sep	.53	.28	2.52	1946	18	2.45	1976	.00+	2000
Oct	.52	.26	1.32	1914	3	2.22	2000	.00+	1999
Nov	.56	.36	2.01	1988	25	2.33	1984	.00+	1999
Dec	.84	.77	2.03	1915	30	2.59	1992	.00+	2000
Ann	7.01	6.22	2.61	Aug 1951	28	8.37	Aug 1983	.00+	Dec 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.2	1.9	.2	@
Feb	3.3	2.3	.6	.1
Mar	3.4	1.9	.3	.1
Apr	1.2	.6	.1	@
May	.6	.3	.1	@
Jun	.3	.2	.0	.0
Jul	3.3	1.8	.4	.2
Aug	4.2	2.5	.7	.3
Sep	1.8	1.2	.4	.1
Oct	2.3	1.4	.3	.1
Nov	2.0	1.4	.4	.1
Dec	3.1	1.9	.6	.1
Ann	28.7	17.4	4.1	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	.00	.04	.12	.21	.34	.50	.72	1.04	1.62	2.21
Feb	.00	.00	.05	.19	.35	.54	.77	1.07	1.48	2.17	2.89
Mar	.00	.00	.07	.18	.31	.46	.65	.88	1.22	1.79	2.36
Apr	.00	.00	.00	.00	.01	.06	.13	.22	.35	.58	.82
May	.00	.00	.00	.00	.00	.00	.01	.07	.22	.51	.84
Jun	.00	.00	.00	.00	.00	.00	.00	.00	.01	.11	.25
Jul	.00	.02	.09	.18	.29	.44	.63	.89	1.26	1.93	2.62
Aug	.07	.14	.28	.44	.63	.84	1.11	1.45	1.92	2.74	3.54
Sep	.00	.00	.00	.02	.10	.22	.38	.60	.93	1.51	2.11
Oct	.00	.00	.00	.06	.15	.27	.42	.61	.90	1.40	1.91
Nov	.00	.00	.00	.05	.14	.27	.43	.64	.96	1.54	2.13
Dec	.00	.00	.00	.04	.20	.40	.66	1.00	1.48	2.32	3.16
Ann	2.78	3.43	4.34	5.10	5.82	6.55	7.33	8.24	9.40	11.16	12.77

\+ 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: 1892-2001
(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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.0	0	0	.0	0	0	0	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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.0	.0	N/A	N/A	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.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	3/24	3/14	3/06	2/28	2/22	2/16	2/10	2/02	1/23
32	2/22	2/13	2/07	2/01	1/27	1/21	1/15	1/08	12/24
28	2/15	2/02	1/22	1/12	12/31	12/11	0/00	0/00	0/00
24	1/15	12/28	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	0/00	0/00	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	11/09	11/16	11/21	11/25	11/29	12/03	12/07	12/12	12/19
32	11/14	11/24	12/02	12/08	12/14	12/20	12/27	1/05	1/21
28	12/07	12/15	12/22	12/28	1/04	1/17	0/00	0/00	0/00
24	12/23	1/11	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	0/00	0/00	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	313	301	293	286	279	273	266	257	246
32	>365	>365	340	328	319	311	303	294	282
28	>365	>365	>365	>365	>365	>365	345	327	312
24	>365	>365	>365	>365	>365	>365	>365	>365	>365
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
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	312	179	118	37	3	0	0	0	0	13	133	315	1110
60	176	84	49	11	0	0	0	0	0	3	57	181	561
57	112	45	24	5	0	0	0	0	0	1	29	118	334
55	78	26	14	2	0	0	0	0	0	0	16	84	220
50	21	5	2	0	0	0	0	0	0	0	3	25	56
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	714	760	991	1169	1468	1699	1926	1890	1661	1341	914	713	15246
55	79	142	292	480	755	1009	1213	1177	971	628	241	84	7071
57	50	105	240	423	693	949	1151	1115	911	567	193	55	6452
60	21	61	172	340	600	859	1058	1022	821	476	131	25	5586
65	3	16	86	216	448	709	903	867	671	332	57	5	4313
70	0	2	32	121	304	559	748	712	521	207	18	0	3224

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	472	564	752	935	1228	1462	1686	1652	1429	1104	684	470	472	1036	1788	2723	3951	5413	7099	8751	10180	11284	11968	12438
45	320	421	597	785	1073	1312	1531	1497	1279	949	534	319	320	741	1338	2123	3196	4508	6039	7536	8815	9764	10298	10617
50	185	280	443	635	918	1162	1376	1342	1129	794	385	177	185	465	908	1543	2461	3623	4999	6341	7470	8264	8649	8826
55	75	154	291	485	763	1012	1221	1187	979	640	246	71	75	229	520	1005	1768	2780	4001	5188	6167	6807	7053	7124
60	18	60	164	339	608	862	1066	1032	829	486	133	14	18	78	242	581	1189	2051	3117	4149	4978	5464	5597	5611
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	312	369	475	579	747	861	1016	1007	877	691	443	311	312	681	1156	1735	2482	3343	4359	5366	6243	6934	7377	7688

(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