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: LAVEEN 3 SSE, AZ **COOP ID: 024829**

Climate Division: AZ 6 **NWS Call Sign:** **Elevation: 1,135 Feet** **Lat: 33˚20N** **Lon: 112˚09W**

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	66.8	39.2	53.0	89	1971	19	58.4	1986	16+	1971	7	48.5	1979	373	1	.0	.0	30.7	.0	5.5	.0
Feb	72.3	42.5	57.4	91	1963	7	62.7	1991	23+	1985	2	53.5	1975	224	11	.0	.1	27.9	@	1.8	.0
Mar	77.5	46.2	61.9	98	2001	23	68.0	1972	25	1971	2	54.0	1973	163	66	.0	2.3	31.0	.0	.2	.0
Apr	86.8	52.1	69.5	106	1989	20	75.7	2000	34+	1983	5	61.9	1975	55	189	1.1	10.8	30.0	.0	.0	.0
May	96.1	61.0	78.6	115	2000	29	85.4+	2000	41+	1967	2	73.2	1971	4	423	8.4	23.5	31.0	.0	.0	.0
Jun	105.7	70.2	88.0	122	1990	26	92.0	2000	41	1967	1	83.1	1983	0	688	22.4	29.2	30.0	.0	.0	.0
Jul	107.2	77.2	92.2	125	1995	28	96.1	2000	59	1982	2	87.4	1993	0	844	27.2	30.9	31.0	.0	.0	.0
Aug	105.1	76.1	90.6	118+	2001	7	95.5	1998	57	1957	31	86.8	1983	0	794	25.2	30.6	31.0	.0	.0	.0
Sep	100.2	69.2	84.7	118	2000	15	90.2	2000	50+	1971	20	79.2	1985	0	590	15.4	27.9	30.0	.0	.0	.0
Oct	89.1	56.9	73.0	107	1997	1	78.1	1988	28+	1971	31	66.3	1971	22	270	2.9	14.8	31.0	.0	.1	.0
Nov	75.5	44.9	60.2	97	2001	4	67.3	1999	26	1956	20	54.9	2000	182	38	.0	.7	30.0	.0	1.2	.0
Dec	66.9	38.8	52.9	86	1950	10	58.9	1980	20+	1990	23	47.4	1972	378	3	.0	.0	30.6	.0	4.3	.0
Ann	87.4	56.2	71.8	125	Jul 1995	28	96.1	Jul 2000	16+	Jan 1971	7	47.4	Dec 1972	1401	3917	102.6	170.8	364.2	@	13.1	.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: 1948-2001

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

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Precipitation (inches)

Precipitation Totals

Means/Medians(1)

Month	Mean	Median
Jan	.79	.58
Feb	.89	.55
Mar	1.06	.88
Apr	.25	.11
May	.17	.00
Jun	.07	.00
Jul	1.20	.78
Aug	.93	.82
Sep	.78	.64
Oct	.95	.40
Nov	.71	.43
Dec	.90	.72
Ann	8.70	8.57

Extremes

Month	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	1.38	1951	30	4.51	1993	.00+	1999
Feb	1.19	1987	25	4.70	1998	.00+	2000
Mar	2.10	2000	6	2.66	1992	.00+	1997
Apr	1.02	1999	2	1.20	1999	.00+	2000
May	.68	1976	4	1.66	1992	.00+	2000
Jun	2.02	1965	23	.86	1972	.00+	1998
Jul	2.27	1984	28	5.66	1999	.00+	1995
Aug	2.52	1951	27	3.72	1971	.00+	1996
Sep	1.76	1983	29	3.40	1984	.00+	2000
Oct	2.77	2000	31	6.13	2000	.00+	1999
Nov	2.05	1993	14	3.25	1993	.00+	1999
Dec	1.82	1967	15	3.56	1992	.00+	2000
Ann	2.77	Oct 2000	31	6.13	Oct 2000	.00+	Dec 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	2.9	1.9	.4	.1
Feb	3.1	2.1	.7	@
Mar	3.3	2.6	.5	.1
Apr	1.2	.9	.1	@
May	.8	.5	.1	.0
Jun	.3	.2	.1	.0
Jul	3.4	2.4	.8	.3
Aug	3.5	2.4	.6	.2
Sep	2.4	1.9	.5	.1
Oct	2.4	2.0	.6	.2
Nov	2.1	1.6	.6	.1
Dec	2.7	1.8	.7	.2
Ann	28.1	20.3	5.7	1.3

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	.00	.13	.28	.46	.68	.96	1.36	2.04	2.72
Feb	.00	.00	.04	.17	.33	.53	.77	1.08	1.52	2.27	3.04
Mar	.00	.00	.19	.39	.59	.80	1.04	1.34	1.76	2.41	3.05
Apr	.00	.00	.00	.00	.05	.12	.20	.31	.45	.69	.93
May	.00	.00	.00	.00	.00	.00	.01	.09	.25	.57	.93
Jun	**	**	**	**	**	**	**	**	**	**	**
Jul	.00	.07	.26	.44	.64	.87	1.14	1.48	1.96	2.75	3.54
Aug	.00	.05	.19	.33	.49	.66	.88	1.15	1.53	2.16	2.79
Sep	.00	.00	.08	.25	.40	.57	.76	1.00	1.32	1.84	2.37
Oct	.00	.00	.07	.20	.36	.56	.81	1.14	1.62	2.43	3.26
Nov	.00	.00	.05	.18	.31	.47	.66	.89	1.22	1.75	2.31
Dec	.00	.00	.00	.18	.39	.61	.86	1.16	1.57	2.26	2.91
Ann	3.69	4.48	5.58	6.49	7.33	8.19	9.11	10.17	11.51	13.55	15.40

\+ 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: 1948-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Climate Division: AZ 6 **NWS Call Sign:** **Elevation: 1,135 Feet** **Lat: 33°20N** **Lon: 112°09W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	.0	.0	0	0
Feb	.0	.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	.0	.0	0	0
Nov	.0	.0	0	0
Dec	.0	.0	0	0
Ann	.0	.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	.0	0	0	.0	0	0	0	0	0	0
Feb	.0	0	0	.0	0	0	0	0	0	0
Mar	.0	0	0	.0	0	0	0	0	0	0
Apr	.0	0	0	.0	0	0	0	0	0	0
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	.0	0	0	.0	0	0	0	0	0	0
Nov	.0	0	0	.0	0	0	0	0	0	0
Dec	.0	0	0	.0	0	0	0	0	0	0
Ann	.0	0	0	.0	0	0	0	0	0	0

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.0	.0	.0	.0	.0
Feb	.0	.0	.0	.0	.0
Mar	.0	.0	.0	.0	.0
Apr	.0	.0	.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	.0	.0	.0	.0	.0
Nov	.0	.0	.0	.0	.0
Dec	.0	.0	.0	.0	.0
Ann	.0	.0	.0	.0	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.0	.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	.0	.0	.0	.0
Nov	.0	.0	.0	.0
Dec	.0	.0	.0	.0
Ann	.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	4/02	3/24	3/17	3/11	3/06	2/28	2/22	2/15	2/06
32	3/08	2/24	2/15	2/08	2/01	1/25	1/17	1/08	12/25
28	2/18	2/06	1/27	1/17	1/07	12/26	0/00	0/00	0/00
24	1/23	1/08	12/23	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	11/14	11/18	11/22	11/25	11/28	12/01	12/05	12/10
32	11/11	11/20	11/27	12/03	12/09	12/15	12/21	12/30	1/14
28	11/24	12/07	12/17	12/26	1/05	1/21	0/00	0/00	0/00
24	12/19	1/06	1/30	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	295	284	276	269	263	257	250	242	231
32	>365	343	325	314	304	295	286	275	261
28	>365	>365	>365	>365	>365	344	324	308	291
24	>365	>365	>365	>365	>365	>365	>365	>365	337
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)

Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	373	224	163	55	4	0	0	0	0	22	182	378	1401
60	230	117	81	20	0	0	0	0	0	5	90	238	781
57	155	71	46	9	0	0	0	0	0	2	53	166	502
55	115	46	29	5	0	0	0	0	0	1	34	126	356
50	41	11	9	0	0	0	0	0	0	0	9	51	121
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	651	712	926	1123	1442	1678	1867	1817	1580	1271	846	648	14561
55	53	114	242	439	729	988	1154	1104	890	558	191	61	6523
57	31	83	197	383	667	928	1092	1042	830	498	149	38	5938
60	12	45	139	303	574	838	999	949	740	408	97	17	5121
65	1	11	66	189	423	688	844	794	590	270	38	3	3917
70	0	1	23	103	281	538	689	639	441	156	10	0	2881

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	411	513	679	876	1177	1413	1601	1558	1332	1021	612	410	411	924	1603	2479	3656	5069	6670	8228	9560	10581	11193	11603
45	263	369	525	726	1022	1263	1446	1403	1182	866	462	260	263	632	1157	1883	2905	4168	5614	7017	8199	9065	9527	9787
50	133	231	371	576	867	1113	1291	1248	1032	712	318	132	133	364	735	1311	2178	3291	4582	5830	6862	7574	7892	8024
55	47	115	229	427	712	963	1136	1093	882	558	186	44	47	162	391	818	1530	2493	3629	4722	5604	6162	6348	6392
60	6	38	111	285	557	813	981	938	732	409	89	4	6	44	155	440	997	1810	2791	3729	4461	4870	4959	4963
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	273	330	433	549	727	849	986	969	837	647	393	271	273	603	1036	1585	2312	3161	4147	5116	5953	6600	6993	7264

(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