

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: SASABE, AZ

1971-2000

COOP ID: 027619

Climate Division: AZ 7

NWS Call Sign:

Elevation: 3,590 Feet Lat: 31° 29N

Lon: 111° 33W

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	62.7	35.4	49.1	85	1971	19	54.8	1986	14	1971	6	42.5	1979	494	0	.0	.0	29.4	.0	9.3	.0
Feb	65.7	37.1	51.4	86	1967	13	56.1	1996	14	1972	3	46.5	1998	381	0	.0	.0	27.5	@	6.0	.0
Mar	69.0	40.0	54.5	90	1988	26	60.8	1997	13	1971	1	47.6	1973	337	12	.0	.1	30.6	.0	3.4	.0
Apr	76.8	44.9	60.9	97+	1989	20	67.0	1989	25	1976	17	54.6	1983	170	45	.0	1.1	30.0	.0	.7	.0
May	84.4	51.0	67.7	104+	2000	30	74.6	2000	32	1965	8	63.8	1971	62	145	.5	8.2	31.0	.0	.0	.0
Jun	94.1	61.0	77.6	111	1990	26	82.1	1974	39	1965	1	72.7	1991	2	378	7.0	23.9	30.0	.0	.0	.0
Jul	94.0	66.5	80.3	109	1983	5	83.5	1994	51+	1987	1	76.3	1984	0	472	6.4	25.0	31.0	.0	.0	.0
Aug	91.6	65.3	78.5	106+	1964	7	82.0	1994	49	1977	10	75.4	1971	0	416	1.6	22.3	31.0	.0	.0	.0
Sep	89.2	60.6	74.9	105	1973	5	78.1	2000	40	1965	20	70.3	1985	1	298	.6	16.2	30.0	.0	.0	.0
Oct	81.1	51.3	66.2	100	1980	2	70.3	1979	27	1971	30	60.9	1971	69	105	@	5.1	31.0	.0	.2	.0
Nov	70.0	40.5	55.3	90	1980	4	61.6	1999	24+	1992	25	50.3	2000	300	8	.0	@	29.7	.0	3.8	.0
Dec	63.4	35.5	49.5	84	1999	2	55.4	1980	14	1960	8	44.0	1978	483	0	.0	.0	29.1	.0	8.5	.0
Ann	78.5	49.1	63.8	111	Jun 1990	26	83.5	Jul 1994	13	Mar 1971	1	42.5	Jan 1979	2299	1879	16.1	101.9	360.3	@	31.9	.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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1959-2001

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

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1971-2000**

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Station: SASABE, AZ

COOP ID: 027619

Climate Division: AZ 7

NWS Call Sign:

Elevation: 3,590 Feet Lat: 31°29N

Lon: 111°33W

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	1.32	1.10	2.00	1960	11	7.10	1993	.00+	2000	4.5	2.8	.9	.3	.00	.00	.09	.25	.46	.72	1.07	1.53	2.22	3.43	4.68
Feb	1.49	1.37	2.33	1978	11	5.44	1998	.00+	1999	4.2	2.6	1.0	.3	.00	.00	.15	.45	.74	1.07	1.44	1.90	2.53	3.54	4.58
Mar	1.28	1.05	1.46	1983	3	4.14	1992	.00+	1984	3.8	2.6	1.1	.2	.00	.00	.21	.41	.64	.89	1.20	1.59	2.12	3.03	3.93
Apr	.43	.17	1.90	2001	6	1.80	1988	.00+	2000	1.5	1.1	.3	.1	.00	.00	.00	.00	.00	.17	.33	.53	.81	1.25	1.70
May	.18	.04	1.44	1986	30	1.44	1986	.00+	2000	1.3	.6	.1	@	.00	.00	.00	.00	.00	.03	.09	.17	.31	.57	.84
Jun	.30	.00	1.60	1959	29	2.15	1984	.00+	1999	1.4	.8	.2	.0	.00	.00	.00	.00	.00	.00	.07	.23	.50	.99	1.51
Jul	3.56	3.34	2.75	1969	16	8.24	1984	.09	1997	9.2	6.5	2.1	.8	.64	.95	1.47	1.96	2.46	2.99	3.61	4.35	5.33	6.92	8.44
Aug	3.51	2.73	4.10	1993	28	9.18	1993	1.06	1976	10.1	7.0	2.3	.7	.94	1.28	1.78	2.23	2.67	3.13	3.63	4.24	5.03	6.26	7.41
Sep	1.78	1.30	4.36	1970	4	5.70	1983	.00+	2000	4.9	3.5	1.3	.4	.00	.00	.33	.62	.93	1.28	1.70	2.22	2.92	4.12	5.29
Oct	1.63	.68	3.41	1983	1	8.73	2000	.00+	1999	3.4	2.4	1.2	.5	.00	.00	.00	.11	.37	.73	1.21	1.86	2.83	4.55	6.31
Nov	.88	.67	2.70	1978	24	4.16	1978	.00+	1999	2.8	1.7	.4	.2	.00	.00	.18	.33	.48	.65	.85	1.11	1.44	2.01	2.56
Dec	1.66	.81	3.20	1994	6	5.55	1994	.00+	2000	4.3	3.0	1.2	.5	.00	.00	.00	.24	.55	.93	1.39	2.01	2.88	4.40	5.91
Ann	18.02	16.12	4.36	Sep 1970	4	9.18	Aug 1993	.00+	Dec 2000	51.4	34.6	12.1	4.0	10.12	11.51	13.37	14.84	16.17	17.49	18.87	20.44	22.37	25.24	27.79

+ 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: 1959-2001

(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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Station: SASABE, AZ

COOP ID: 027619

Climate Division: AZ 7

NWS Call Sign:

Elevation: 3,590 Feet

Lat: 31°29N

Lon: 111°33W

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	.1	.0	0	0	3.0	1983	20	3.0	1983	0	0	0	0	0	@	@	@	.0	.0	.0	.0	.0	.0
Feb	.4	.0	0	0	4.0	1985	5	8.0	1985	0	0	0	0	0	.2	.2	.1	.0	.0	.0	.0	.0	.0
Mar	.4	.0	#	0	9.0	2000	7	9.0	2000	2	1997	1	#	1997	@	@	@	@	.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	.1	.0	#	0	2.0	1975	29	2.0	1975	2	1975	29	#	1975	@	@	.0	.0	.0	@	.0	.0	.0
Dec	.6	.0	0	0	6.0	1971	4	9.2	1971	0	0	0	0	0	.3	.2	.1	@	.0	.0	.0	.0	.0
Ann	1.6	.0	N/A	N/A	9.0	Mar 2000	7	9.2	Dec 1971	2+	Mar 1997	1	#+	Mar 1997	.5	.4	.2	@	.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

Complete documentation available from:

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

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No. 20
1971-2000**

Station: SASABE, AZ

COOP ID: 027619

Climate Division: AZ 7

NWS Call Sign:

Elevation: 3,590 Feet

Lat: 31° 29N

Lon: 111° 33W

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	5/10	5/02	4/27	4/22	4/18	4/14	4/09	4/04	3/27
32	4/21	4/11	4/04	3/29	3/24	3/18	3/12	3/05	2/24
28	3/26	3/14	3/06	2/26	2/19	2/12	2/05	1/27	1/15
24	2/19	2/04	1/24	1/15	1/05	12/25	12/11	0/00	0/00
20	1/30	1/11	12/21	0/00	0/00	0/00	0/00	0/00	0/00
16	1/02	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	10/24	10/30	11/03	11/06	11/10	11/13	11/16	11/20	11/26
32	11/04	11/10	11/14	11/17	11/20	11/23	11/27	12/01	12/06
28	11/09	11/17	11/23	11/27	12/02	12/07	12/11	12/17	12/25
24	11/25	12/08	12/18	12/27	1/05	1/16	1/31	0/00	0/00
20	12/26	1/13	2/07	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	231	222	216	210	205	200	194	187	178
32	272	261	253	247	241	234	228	220	209
28	327	313	302	293	285	277	268	257	243
24	>365	>365	>365	>365	357	341	329	317	302
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

Complete documentation available from:

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

**Climatology
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Station: SASABE, AZ

COOP ID: 027619

Climate Division: AZ 7 NWS Call Sign: Elevation: 3,590 Feet Lat: 31°29N Lon: 111°33W

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	494	381	337	170	62	2	0	0	1	69	300	483	2299
60	339	247	209	86	20	0	0	0	0	22	176	333	1432
57	252	174	148	49	8	0	0	0	0	9	117	249	1006
55	197	131	114	31	4	0	0	0	0	5	85	198	765
50	89	53	47	9	0	0	0	0	0	0	30	99	327
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	529	543	698	864	1106	1366	1495	1439	1287	1059	698	540	11624
55	13	30	99	206	397	676	782	726	597	350	93	25	3994
57	6	16	70	163	339	616	720	664	537	293	64	14	3502
60	0	6	38	110	258	526	627	571	447	213	33	6	2835
65	0	0	12	45	145	378	472	416	298	105	8	0	1879
70	0	0	2	13	66	239	317	263	159	37	1	0	1097

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	313	360	483	645	880	1145	1262	1208	1059	828	477	318	313	673	1156	1801	2681	3826	5088	6296	7355	8183	8660	8978
45	178	228	333	496	725	995	1107	1053	909	673	335	186	178	406	739	1235	1960	2955	4062	5115	6024	6697	7032	7218
50	76	117	198	350	570	845	952	898	759	522	203	81	76	193	391	741	1311	2156	3108	4006	4765	5287	5490	5571
55	22	42	100	217	415	695	797	743	609	367	103	18	22	64	164	381	796	1491	2288	3031	3640	4007	4110	4128
60	1	8	38	111	271	545	642	588	459	231	34	0	1	9	47	158	429	974	1616	2204	2663	2894	2928	2928
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	221	248	320	427	569	716	822	805	693	528	321	226	221	469	789	1216	1785	2501	3323	4128	4821	5349	5670	5896

(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/normals/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.

- 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/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