

# Climatology of the United States

## No. 20

### 1971-2000

**Station: BUCKEYE, AZ**

**COOP ID: 021026**

**Climate Division: AZ 6**

**NWS Call Sign:**

**Elevation: 890 Feet**

**Lat: 33° 23N**

**Lon: 112° 35W**

### 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	68.3	36.7	52.5	100	1897	24	57.5	1986	11+	1913	8	47.9	1979	388	0	.0	.0	30.9	.0	7.5	.0
Feb	73.2	40.4	56.8	92+	1986	26	62.6	1995	18+	1933	8	53.2	1975	237	7	.0	.2	28.0	.1	2.7	.0
Mar	78.7	44.6	61.7	101	1934	30	67.5	1972	20	1966	3	54.8	1973	160	56	.0	3.1	31.0	.0	.3	.0
Apr	87.3	49.6	68.5	106	1989	20	76.5	1989	29+	1929	8	61.2	1975	68	170	1.5	13.6	30.0	.0	.1	.0
May	95.9	57.5	76.7	115	1984	28	83.4	1997	32	1899	3	70.7	1971	11	374	10.6	25.9	31.0	.0	.0	.0
Jun	105.8	65.3	85.6	122	1990	26	89.0	1974	42+	1976	11	80.8	1998	0	618	25.7	29.6	30.0	.0	.0	.0
Jul	108.4	74.2	91.3	125	1995	28	95.6	1996	49	1944	25	88.7	1987	0	815	30.2	30.9	31.0	.0	.0	.0
Aug	106.3	73.6	90.0	120	1936	14	94.1	1994	48	1930	8	85.9	1979	0	774	29.5	30.8	31.0	.0	.0	.0
Sep	101.0	66.1	83.6	119	1950	2	88.1	1997	41+	1906	11	77.8	1985	0	557	19.3	29.0	30.0	.0	.0	.0
Oct	90.0	53.1	71.6	108+	1980	3	77.1	1988	26	1971	31	66.3	1976	32	235	4.2	17.9	31.0	.0	.1	.0
Nov	76.8	41.3	59.1	96	1934	6	65.3	1995	20	1931	23	54.8	2000	201	22	.0	.6	30.0	.0	1.7	.0
Dec	68.2	35.8	52.0	87	1949	3	57.1	1980	12	1993	23	47.9	1971	403	0	.0	.0	30.9	.0	7.8	.0
Ann	88.3	53.2	70.8	125	Jul 1995	28	95.6	Jul 1996	11+	Jan 1913	8	47.9+	Jan 1979	1500	3628	121.0	181.6	364.8	.1	20.2	.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](http://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: 1893-2001

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

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### 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	Median	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	.80	.72	2.04	1905	10	4.30	1993	.00+	1999	3.4	2.0	.4	@	.00	.00	.00	.16	.32	.50	.72	1.00	1.38	2.04	2.68	
Feb	.80	.57	1.80	1931	13	2.79	1978	.00+	1989	3.1	2.0	.6	@	.00	.00	.09	.22	.37	.53	.73	.99	1.35	1.95	2.55	
Mar	.99	.98	1.59	1974	20	3.32	1978	.00+	1984	4.0	2.5	.6	.1	.00	.00	.16	.32	.49	.69	.92	1.22	1.63	2.32	3.01	
Apr	.26	.05	1.80	1905	11	1.49	1999	.00+	1996	1.5	.7	.1	@	.00	.00	.00	.00	.01	.06	.14	.26	.44	.79	1.15	
May	.15	.00	.80	1992	5	1.34	1992	.00+	2000	.8	.4	.1	.0	.00	.00	.00	.00	.00	.00	.04	.13	.26	.49	.72	
Jun	.07	.00	1.06	2000	17	1.45	2000	.00+	1999	.4	.1	@	@	.00	.00	.00	.00	.00	.00	.00	.00	.00	.16	.38	
Jul	.67	.32	2.86	1907	24	2.41	1999	.00+	1995	2.0	1.4	.4	.2	.00	.00	.00	.08	.22	.38	.57	.83	1.18	1.78	2.38	
Aug	1.22	.95	2.60	1951	28	4.27	1982	.02	1975	4.1	2.6	.8	.3	.07	.13	.28	.44	.63	.85	1.12	1.47	1.95	2.78	3.61	
Sep	.75	.30	4.90	1894	2	3.23	1984	.00+	2000	2.4	1.1	.4	.2	.00	.00	.00	.05	.17	.34	.56	.86	1.31	2.10	2.92	
Oct	.64	.34	1.65	1974	29	3.10	1972	.00+	1999	2.3	1.4	.4	.1	.00	.00	.00	.04	.18	.33	.53	.78	1.12	1.73	2.32	
Nov	.64	.34	1.93	1923	10	2.74	1982	.00+	1999	1.9	1.2	.3	.1	.00	.00	.00	.00	.19	.36	.57	.82	1.16	1.72	2.27	
Dec	.92	.38	2.12	1967	19	4.52	1992	.00+	2000	3.1	1.7	.7	.2	.00	.00	.00	.07	.21	.40	.66	1.03	1.57	2.56	3.58	
Ann	7.91	7.18	4.90	Sep 1894	2	4.52	Dec 1992	.00+	Dec 2000	29.0	17.1	4.8	1.2	3.11	3.84	4.88	5.73	6.55	7.37	8.26	9.30	10.61	12.62	14.45	

+ 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: 1893-2001

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

Complete documentation available from:  
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Lon: 112° 35W

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	.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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<b>Freeze Data</b>									
<b>Spring Freeze Dates (Month/Day)</b>									
<b>Temp (F)</b>	<b>Probability of later date in spring (thru Jul 31) than indicated(*)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	4/07	3/29	3/22	3/16	3/10	3/05	2/27	2/20	2/10
<b>32</b>	3/15	3/05	2/26	2/20	2/14	2/09	2/03	1/27	1/17
<b>28</b>	2/16	2/04	1/26	1/19	1/11	1/03	12/24	12/10	0/00
<b>24</b>	1/20	1/07	12/27	12/14	0/00	0/00	0/00	0/00	0/00
<b>20</b>	12/27	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>16</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>Fall Freeze Dates (Month/Day)</b>									
<b>Temp (F)</b>	<b>Probability of earlier date in fall (beginning Aug 1) than indicated(*)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	11/02	11/07	11/11	11/14	11/16	11/19	11/22	11/26	12/01
<b>32</b>	11/10	11/17	11/22	11/26	11/30	12/04	12/08	12/14	12/21
<b>28</b>	11/21	11/30	12/07	12/13	12/19	12/25	1/01	1/12	0/00
<b>24</b>	11/30	12/11	12/20	12/30	0/00	0/00	0/00	0/00	0/00
<b>20</b>	12/28	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>16</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>Freeze Free Period</b>									
<b>Temp (F)</b>	<b>Probability of longer than indicated freeze free period (Days)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	283	272	264	257	250	244	237	229	218
<b>32</b>	318	308	301	294	288	282	276	268	258
<b>28</b>	>365	>365	>365	361	342	329	318	306	290
<b>24</b>	>365	>365	>365	>365	>365	>365	>365	349	324
<b>20</b>	>365	>365	>365	>365	>365	>365	>365	>365	>365
<b>16</b>	>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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<b>Degree Days to Selected Base Temperatures (°F)</b>													
<b>Base</b>	<b>Heating Degree Days (1)</b>												
<b>Below</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Ann</b>
<b>65</b>	388	237	160	68	11	0	0	0	0	32	201	403	1500
<b>60</b>	240	124	76	25	2	0	0	0	0	8	98	258	831
<b>57</b>	161	74	41	13	0	0	0	0	0	3	55	180	527
<b>55</b>	118	48	25	8	0	0	0	0	0	1	35	136	371
<b>50</b>	41	10	7	0	0	0	0	0	0	0	7	56	121
<b>32</b>	0	0	0	0	0	0	0	0	0	0	0	0	0

<b>Base</b>	<b>Cooling Degree Days (1)</b>												
<b>Above</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Ann</b>
<b>32</b>	635	693	919	1092	1386	1608	1838	1797	1547	1226	811	620	14172
<b>55</b>	40	97	232	410	673	918	1125	1084	857	514	155	43	6148
<b>57</b>	22	67	185	355	611	858	1063	1022	797	454	116	25	5575
<b>60</b>	8	33	128	278	521	768	970	929	707	367	68	10	4787
<b>65</b>	0	7	56	170	374	618	815	774	557	235	22	0	3628
<b>70</b>	0	0	18	91	243	468	660	619	408	130	4	0	2641

<b>Growing Degree Units (2)</b>																								
<b>Base</b>	<b>Growing Degree Units (Monthly)</b>												<b>Growing Degree Units (Accumulated Monthly)</b>											
	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Apr</b>	<b>May</b>	<b>Jun</b>	<b>Jul</b>	<b>Aug</b>	<b>Sep</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
<b>40</b>	419	514	706	884	1178	1408	1623	1580	1337	1016	601	407	419	933	1639	2523	3701	5109	6732	8312	9649	10665	11266	11673
<b>45</b>	268	370	551	734	1023	1258	1468	1425	1187	861	452	259	268	638	1189	1923	2946	4204	5672	7097	8284	9145	9597	9856
<b>50</b>	132	231	396	585	868	1108	1313	1270	1037	706	306	128	132	363	759	1344	2212	3320	4633	5903	6940	7646	7952	8080
<b>55</b>	42	113	245	436	713	958	1158	1115	887	551	172	41	42	155	400	836	1549	2507	3665	4780	5667	6218	6390	6431
<b>60</b>	4	37	124	296	558	808	1003	960	737	400	80	3	4	41	165	461	1019	1827	2830	3790	4527	4927	5007	5010
<b>Base</b>	<b>Growing Degree Units for Corn (Monthly)</b>												<b>Growing Degree Units for Corn (Accumulated Monthly)</b>											
<b>50/86</b>	300	354	461	552	708	805	962	951	805	633	417	296	300	654	1115	1667	2375	3180	4142	5093	5898	6531	6948	7244

(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.  
Complete documentation for the 1971-2000 Normals is available on the internet from:  
[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://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 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/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)