

# Climatology of the United States

No. 20

1971-2000

Station: WINSLOW AP, AZ

COOP ID: 029439

Climate Division: AZ 2

NWS Call Sign: INW

Elevation: 4,886 Feet Lat: 35°02N

Lon: 110°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	47.1	21.3	34.2	75	1971	20	40.6	2000	-18+	1937	23	26.3	1975	961	0	.0	.0	13.7	3.0	28.3	.7
Feb	54.4	25.5	40.0	83	1912	18	45.2	1995	-9	1922	2	35.9	1984	713	0	.0	.0	19.8	.5	23.0	@
Mar	61.5	31.1	46.3	87	1910	5	51.7	1972	6+	1948	4	41.4	1991	580	0	.0	.0	27.9	.0	18.0	.0
Apr	69.8	36.9	53.4	94	1910	27	60.6	1989	14	1928	9	47.5	1975	357	3	.0	.1	29.0	.0	8.0	.0
May	79.0	45.3	62.2	103	1914	29	68.9	1984	23+	1964	8	58.1+	1995	133	39	@	2.6	31.0	.0	1.1	.0
Jun	90.0	54.2	72.1	106+	1970	26	76.4	1974	29	1919	1	66.6	1991	12	221	2.3	16.8	30.0	.0	.0	.0
Jul	93.0	62.0	77.5	109	1971	13	82.5	1971	42	1928	1	74.1	1992	0	384	4.0	23.3	31.0	.0	.0	.0
Aug	90.1	61.1	75.6	104	1928	21	78.4	1995	41	1968	24	72.0	1990	1	327	.9	18.1	31.0	.0	.0	.0
Sep	83.5	52.9	68.2	99+	1950	1	71.4	1997	29	1924	27	64.2	1985	31	124	.0	5.3	30.0	.0	.1	.0
Oct	71.7	40.1	55.9	93	1972	1	61.4	1988	13	1970	28	52.3	1982	290	6	.0	.1	30.5	.0	5.5	.0
Nov	57.7	28.7	43.2	82	1898	11	47.6	1995	-15	1898	10	36.9	2000	649	0	.0	.0	23.2	.2	20.9	@
Dec	47.1	21.0	34.1	74	1958	4	41.6	1977	-19	1898	14	26.4	1990	965	0	.0	.0	13.3	2.7	28.2	.6
Ann	70.4	40.0	55.2	109	Jul 1971	13	82.5	Jul 1971	-19	Dec 1898	14	26.3	Jan 1975	4692	1104	7.2	66.3	310.4	6.4	133.1	1.3

+ 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: 1898-2001

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

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## No. 20 1971-2000

National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, North Carolina 28801  
www.ncdc.noaa.gov

**Station: WINSLOW AP, AZ**

**COOP ID: 029439**

**Climate Division: AZ 2**

**NWS Call Sign: INW**

**Elevation: 4,886 Feet Lat: 35°02N**

**Lon: 110°43W**

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	.46	.36	1.10	1918	10	1.54	1993	.00+	1984	4.8	1.5	.1	.0	.00	.02	.08	.14	.22	.31	.42	.56	.77	1.11	1.46
Feb	.53	.44	.74	1909	21	2.05	1973	.00	1972	4.5	1.7	.1	.0	.02	.06	.13	.21	.29	.39	.50	.64	.84	1.17	1.49
Mar	.61	.44	.89	1984	26	2.07	1973	.00+	1997	5.2	2.2	@	.0	.00	.00	.13	.25	.37	.49	.62	.78	1.00	1.34	1.68
Apr	.27	.16	1.22	1934	16	1.28	1988	.00+	1996	3.0	.8	.1	.0	.00	.00	.01	.05	.10	.16	.23	.33	.46	.68	.91
May	.36	.10	.90	1969	7	2.11	1992	.00+	1998	3.2	1.2	.1	.0	.00	.00	.01	.05	.11	.18	.28	.41	.61	.96	1.33
Jun	.30	.07	1.96	1927	28	3.22	1972	.00+	1998	2.1	.8	.1	@	.00	.00	.00	.00	.03	.08	.16	.29	.49	.89	1.31
Jul	1.18	1.15	1.61	1982	26	3.53	1992	.04	1993	6.6	2.8	.7	.2	.09	.16	.32	.48	.66	.87	1.12	1.44	1.88	2.61	3.34
Aug	1.31	1.34	2.43	1928	1	2.69	1982	.12	1996	8.5	3.4	.6	.1	.30	.42	.61	.79	.96	1.14	1.34	1.58	1.90	2.41	2.89
Sep	1.02	.78	1.93	1933	20	3.45	1996	.00	1993	5.8	2.4	.6	.1	.01	.06	.18	.32	.48	.67	.91	1.23	1.67	2.44	3.22
Oct	.90	.51	2.22	1974	8	5.61	1972	.00+	1999	3.9	2.1	.4	.1	.00	.00	.07	.24	.41	.61	.84	1.13	1.53	2.19	2.87
Nov	.55	.49	1.33	1987	1	1.54	1982	.00+	1999	3.4	1.6	.2	@	.00	.00	.14	.24	.33	.43	.55	.70	.89	1.20	1.51
Dec	.54	.40	1.72	1908	16	1.80	1992	.00+	1999	4.1	1.7	.1	@	.00	.00	.08	.16	.25	.36	.49	.66	.89	1.29	1.69
Ann	8.03	7.65	2.43	Aug 1928	1	5.61	Oct 1972	.00+	Dec 1999	55.1	22.2	3.1	.5	5.09	5.63	6.34	6.89	7.38	7.86	8.36	8.92	9.61	10.62	11.50

+ 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: 1898-2001

(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: WINSLOW AP, AZ**

**COOP ID: 029439**

**Climate Division: AZ 2**

**NWS Call Sign: INW**

**Elevation: 4,886 Feet**

**Lat: 35°02N**

**Lon: 110°43W**

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	2.6	1.6	#	0	5.5	1980	18	11.3	1987	6	1987	20	1+	1987	2.4	.8	.1	.1	.0	2.6	.3	@	.0
Feb	2.1	.6	#	0	7.8	1977	24	10.7	1973	5	1987	26	#	1990	1.6	.6	.2	@	.0	1.1	@	@	.0
Mar	1.9	.5	#	0	4.8	1991	27	11.0	1973	7	1991	28	#	1992	1.4	.9	.2	.0	.0	.6	.2	@	.0
Apr	.4	.0	#	0	2.6	1977	2	4.8	1977	2	1977	3	#	1977	.6	.2	.0	.0	.0	.1	.0	.0	.0
May	.0	.0	#	0	.6	1978	5	.6	1978	0	0	0	#	1995	.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	.3	.0	#	0	5.0	1972	30	6.0	1972	3	1972	31	#	1972	.1	.1	@	@	.0	@	@	.0	.0
Nov	.7	.0	#	0	2.9	1973	19	3.1	1994	3	1994	19	#	1994	.7	.3	.0	.0	.0	.3	@	.0	.0
Dec	2.8	1.5	#	0	6.4	1978	6	11.2	1987	5+	1987	14	1+	1992	2.0	1.0	.3	@	.0	3.2	.8	.1	.0
Ann	10.8	4.2	N/A	N/A	7.8	Feb 1977	24	11.3	Jan 1987	7	Mar 1991	28	1+	Dec 1992	8.8	3.9	.8	.1	.0	7.9	1.3	.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

Complete documentation available from:

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**Lat: 35°02N**

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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	5/30	5/25	5/21	5/17	5/14	5/10	5/07	5/03	4/27
32	5/22	5/16	5/11	5/08	5/04	5/01	4/27	4/23	4/17
28	5/10	5/03	4/28	4/23	4/19	4/15	4/11	4/06	3/30
24	4/22	4/14	4/08	4/03	3/30	3/25	3/21	3/15	3/07
20	4/07	3/28	3/21	3/15	3/09	3/03	2/25	2/18	2/08
16	3/18	3/09	3/02	2/24	2/19	2/13	2/08	2/01	1/23
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	9/24	9/29	10/03	10/07	10/10	10/13	10/17	10/21	10/26
32	10/01	10/07	10/11	10/14	10/18	10/21	10/25	10/29	11/04
28	10/12	10/17	10/21	10/25	10/28	10/31	11/03	11/07	11/13
24	10/17	10/23	10/27	10/30	11/03	11/06	11/10	11/14	11/20
20	10/28	11/02	11/06	11/10	11/13	11/16	11/20	11/24	11/29
16	11/13	11/20	11/25	11/29	12/03	12/07	12/11	12/16	12/23
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	171	163	158	153	149	144	139	134	126
32	189	181	175	170	166	161	156	151	143
28	217	208	201	196	191	186	180	173	164
24	249	238	230	223	217	211	204	196	185
20	285	273	263	256	248	241	233	224	212
16	321	307	298	291	285	278	271	263	252

\* 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](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

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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	961	713	580	357	133	12	0	1	31	290	649	965	4692
60	799	562	428	225	66	3	0	0	6	164	504	805	3562
57	706	478	340	160	36	1	0	0	1	105	416	712	2955
55	644	422	284	124	22	0	0	0	0	74	358	650	2578
50	496	284	163	55	5	0	0	0	0	25	226	503	1757
32	94	8	0	0	0	0	0	0	0	0	9	103	214

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	138	237	444	641	934	1203	1409	1351	1085	740	344	136	8662
55	0	0	9	66	239	513	696	638	396	107	4	0	2668
57	0	0	4	43	187	453	634	576	338	73	1	0	2309
60	0	0	1	19	120	365	541	483	253	36	0	0	1818
65	0	0	0	3	39	221	384	327	124	6	0	0	1104
70	0	0	0	0	9	108	233	178	40	1	0	0	569

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	29	83	223	411	694	972	1170	1112	852	502	155	34	29	112	335	746	1440	2412	3582	4694	5546	6048	6203	6237
45	4	28	111	276	539	822	1015	957	702	356	71	4	4	32	143	419	958	1780	2795	3752	4454	4810	4881	4885
50	0	2	42	157	387	672	860	802	552	220	20	0	0	2	44	201	588	1260	2120	2922	3474	3694	3714	3714
55	0	0	8	70	244	522	705	647	402	112	1	0	0	0	8	78	322	844	1549	2196	2598	2710	2711	2711
60	0	0	0	21	128	372	550	492	262	36	0	0	0	0	0	21	149	521	1071	1563	1825	1861	1861	1861
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	44	100	196	310	462	606	747	725	555	350	141	45	44	144	340	650	1112	1718	2465	3190	3745	4095	4236	4281

(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](http://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](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 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.

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
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## 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)