

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: MC NARY 2 N, AZ

1971-2000

COOP ID: 025412

Climate Division: AZ 2

NWS Call Sign:

Elevation: 7,340 Feet Lat: 34°07N

Lon: 109°51W

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	42.5	19.4	31.0	68	1986	30	38.2	1986	-23	1949	4	24.5	1979	1056	0	.0	.0	10.5	3.0	30.1	.8
Feb	45.2	21.7	33.5	72	1981	20	39.2	1996	-18	1939	10	28.4	1975	884	0	.0	.0	12.6	2.1	27.7	.4
Mar	49.5	25.2	37.4	74+	1986	28	43.6	1972	-13+	1951	4	30.2	1973	857	0	.0	.0	18.3	.8	28.4	.1
Apr	57.5	30.0	43.8	80+	2000	28	51.2	1989	0	1949	2	37.4	1975	638	0	.0	.0	25.2	.3	20.6	.0
May	66.4	37.4	51.9	89	1952	20	59.1	2000	8	1950	5	47.8	1971	409	3	.0	.0	30.3	.0	8.4	.0
Jun	76.5	45.3	60.9	98	1974	14	66.4	1990	20	1950	8	57.6	1983	151	29	.0	2.0	29.9	.0	1.0	.0
Jul	77.8	51.6	64.7	98	1985	7	67.5	2000	30	1935	4	62.6	1986	51	42	.0	1.8	31.0	.0	.0	.0
Aug	74.9	50.7	62.8	91+	1962	16	66.1	1995	32	1956	30	59.2	1974	94	24	.0	.1	31.0	.0	.0	.0
Sep	70.8	45.1	58.0	89	1948	2	62.3	1998	21	1945	28	54.5	1986	219	7	.0	.0	30.0	.0	.8	.0
Oct	62.0	35.4	48.7	88	1979	13	52.8	1988	6	1971	30	42.3	1971	506	0	.0	.0	28.9	.1	11.5	.0
Nov	50.3	26.1	38.2	79	1980	10	46.2	1999	-5	1976	28	31.7	1972	804	0	.0	.0	19.5	1.1	25.7	.1
Dec	43.5	20.2	31.9	73	1980	28	37.9	1980	-18	1945	14	27.0	1971	1029	0	.0	.0	12.3	3.0	30.2	.9
Ann	59.7	34.0	46.9	98+	Jul 1985	7	67.5	Jul 2000	-23	Jan 1949	4	24.5	Jan 1979	6698	105	.0	3.9	279.5	10.4	184.4	2.3

+ 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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1933-2001

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

054-A

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Station: MC NARY 2 N, AZ

COOP ID: 025412

Climate Division: AZ 2

NWS Call Sign:

Elevation: 7,340 Feet Lat: 34°07N

Lon: 109°51W

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	2.79	2.22	2.95	1952	18	9.46	1980	.09	1972	7.9	5.4	1.9	.6	.19	.36	.71	1.10	1.52	2.02	2.62	3.38	4.44	6.22	8.00
Feb	2.47	2.34	2.14	1978	11	8.08	1980	.00	1984	7.4	5.1	1.5	.7	.17	.42	.81	1.18	1.56	1.97	2.45	3.04	3.84	5.14	6.40
Mar	3.07	2.94	4.41	1954	23	9.33	1973	.00+	1988	8.7	6.4	2.0	.6	.00	.40	.98	1.47	1.97	2.50	3.11	3.83	4.82	6.41	7.95
Apr	1.32	1.15	1.73	1999	2	4.72	1988	.05+	1991	5.5	3.6	.6	.2	.09	.17	.33	.51	.71	.95	1.23	1.60	2.10	2.96	3.81
May	.87	.54	1.51	1992	28	4.37	1979	.00+	1996	4.6	2.4	.5	.1	.00	.00	.06	.16	.30	.47	.70	1.01	1.46	2.27	3.10
Jun	.84	.56	1.41	1955	14	5.26	1972	.00+	1998	3.7	2.1	.5	.2	.00	.00	.00	.07	.22	.41	.66	.99	1.46	2.31	3.16
Jul	3.22	3.01	1.80	1984	19	8.31	1999	.39	1993	13.7	8.1	1.9	.4	.83	1.13	1.60	2.02	2.42	2.85	3.33	3.89	4.63	5.80	6.89
Aug	4.04	3.73	2.40	1951	28	7.61	1988	1.42	1985	16.3	9.8	2.3	.5	1.81	2.17	2.67	3.07	3.45	3.83	4.24	4.71	5.30	6.19	6.99
Sep	2.49	2.13	3.00	1994	3	7.27	1985	.24	2000	9.4	5.2	1.7	.4	.42	.64	1.00	1.34	1.69	2.07	2.51	3.04	3.74	4.89	5.98
Oct	2.63	1.93	3.07	1998	26	8.28	1974	.00+	1999	6.5	4.4	1.6	.8	.00	.17	.57	.97	1.41	1.91	2.50	3.24	4.26	5.98	7.67
Nov	2.32	2.14	3.07	1978	25	8.31	1978	.00	1999	5.8	4.2	1.7	.6	.19	.44	.82	1.16	1.51	1.89	2.33	2.86	3.58	4.74	5.86
Dec	2.40	1.63	4.43	1967	20	9.24	1978	.04	1996	6.6	4.6	1.4	.6	.08	.19	.44	.75	1.11	1.56	2.12	2.85	3.91	5.73	7.58
Ann	28.46	27.69	4.43	Dec 1967	20	9.46	Jan 1980	.00+	Nov 1999	96.1	61.3	17.6	5.7	18.88	20.68	23.02	24.81	26.41	27.97	29.59	31.40	33.60	36.81	39.61

+ 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: 1933-2001

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

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Station: MC NARY 2 N, AZ

COOP ID: 025412

Climate Division: AZ 2

NWS Call Sign:

Elevation: 7,340 Feet

Lat: 34°07N

Lon: 109°51W

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	20.3	18.3	5	3	22.0	1977	1	49.0	1974	37	1988	19	17	1988	5.9	4.7	2.5	1.4	.3	18.7	14.4	10.7	3.8
Feb	17.1	13.0	4	3	19.0	1987	25	45.0	1975	41	1987	28	16	1979	5.5	4.3	2.0	1.0	.3	16.2	11.2	7.6	3.0
Mar	18.4	11.0	3	2	20.0	1973	14	86.0	1973	41	1987	1	9	1973	5.6	4.7	2.6	1.3	.3	10.8	7.2	4.7	1.8
Apr	8.4	5.0	1	#	13.0	1976	16	33.0	1976	22	1999	3	5	1999	2.6	2.2	1.0	.3	.2	3.3	2.1	1.1	.6
May	.6	.0	#	0	7.0	1979	9	7.0	1979	7	1979	9	#+	1999	.4	.1	.1	@	.0	.2	.1	@	.0
Jun	#	.0	#	0	#	1991	1	#	1991	#	1991	1	#	1991	.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	#	1992	20	#	1992	.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	3.4	.0	#	0	15.0	1971	18	27.0	1971	15+	1991	31	2	1971	1.0	1.0	.4	.2	.1	1.3	.8	.4	.2
Nov	8.7	8.3	1	1	10.0	1996	30	23.5	1973	14	1983	22	3+	2000	3.0	2.6	1.1	.6	@	6.4	3.7	2.1	.3
Dec	12.5	8.3	3	2	17.0	1971	8	36.0	1971	23	1990	22	8	1984	4.2	3.2	1.4	.7	.1	12.5	8.4	5.6	1.7
Ann	89.4	63.9	N/A	N/A	22.0	Jan 1977	1	86.0	Mar 1973	41+	Mar 1987	1	17	Jan 1988	28.2	22.8	11.1	5.5	1.3	69.4	47.9	32.2	11.4

+ 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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No. 20 1971-2000

Station: MC NARY 2 N, AZ

COOP ID: 025412

Climate Division: AZ 2

NWS Call Sign:

Elevation: 7,340 Feet

Lat: 34° 07N

Lon: 109° 51W

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	6/27	6/22	6/19	6/16	6/13	6/10	6/07	6/04	5/30
32	6/17	6/11	6/07	6/03	5/31	5/27	5/23	5/19	5/13
28	6/08	6/01	5/27	5/22	5/18	5/14	5/10	5/05	4/28
24	5/20	5/13	5/07	5/03	4/29	4/25	4/20	4/15	4/08
20	5/07	4/28	4/22	4/17	4/12	4/07	4/02	3/27	3/19
16	4/22	4/13	4/07	4/02	3/27	3/22	3/17	3/10	3/01
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	9/02	9/08	9/13	9/16	9/20	9/23	9/27	10/01	10/07
32	9/18	9/24	9/28	10/01	10/04	10/07	10/11	10/15	10/20
28	10/02	10/07	10/11	10/14	10/17	10/20	10/23	10/27	11/01
24	10/12	10/18	10/22	10/25	10/28	11/01	11/04	11/08	11/14
20	10/20	10/25	10/29	11/01	11/04	11/07	11/10	11/14	11/20
16	10/27	11/02	11/07	11/11	11/15	11/19	11/23	11/27	12/04
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	120	112	107	102	98	93	89	83	76
32	152	143	137	131	126	121	115	109	100
28	176	168	161	156	151	146	141	134	126
24	209	200	193	187	182	177	171	164	155
20	234	224	217	211	205	200	194	187	177
16	266	254	246	239	232	225	218	210	198

* 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:

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Station: MC NARY 2 N, AZ

COOP ID: 025412

Climate Division: AZ 2 NWS Call Sign: Elevation: 7,340 Feet Lat: 34°07N Lon: 109°51W

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	1056	884	857	638	409	151	51	94	219	506	804	1029	6698
60	901	744	702	488	268	65	5	21	104	355	654	874	5181
57	808	660	609	403	194	33	0	5	57	271	564	781	4385
55	746	604	547	348	152	19	0	2	34	220	504	719	3895
50	591	464	399	221	72	4	0	0	7	116	361	564	2799
32	120	72	42	9	0	0	0	0	0	1	31	99	374

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	87	112	208	361	617	868	1014	954	778	518	217	92	5826
55	0	0	0	10	56	197	301	242	122	25	1	0	954
57	0	0	0	5	36	151	240	184	84	14	0	0	714
60	0	0	0	1	17	93	151	107	42	5	0	0	416
65	0	0	0	0	3	29	42	24	7	0	0	0	105
70	0	0	0	0	0	5	3	1	0	0	0	0	9

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	11	23	70	193	402	656	800	741	575	322	90	10	11	34	104	297	699	1355	2155	2896	3471	3793	3883	3893
45	0	0	22	98	253	506	645	586	425	191	26	0	0	0	22	120	373	879	1524	2110	2535	2726	2752	2752
50	0	0	1	34	132	357	490	431	278	87	0	0	0	0	1	35	167	524	1014	1445	1723	1810	1810	1810
55	0	0	0	2	48	216	335	276	143	21	0	0	0	0	0	2	50	266	601	877	1020	1041	1041	1041
60	0	0	0	0	7	99	185	124	45	0	0	0	0	0	0	0	7	106	291	415	460	460	460	460
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	31	46	90	181	307	447	507	461	372	251	99	40	31	77	167	348	655	1102	1609	2070	2442	2693	2792	2832

(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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. 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