

# Climatology of the United States

No. 20

1971-2000

Station: TONOPAH AP, NV

COOP ID: 268170

Climate Division: NV 3

NWS Call Sign: TPH

Elevation: 5,430 Feet Lat: 38°04N

Lon: 117°05W

## 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	44.5	19.5	32.0	67	1971	18	39.5	1986	-15+	1962	23	25.0	1987	1023	0	.0	.0	9.1	3.0	30.1	.9
Feb	50.3	24.1	37.2	75	1986	25	44.0	1995	-9	1989	7	32.0	1989	778	0	.0	.0	13.9	1.1	25.5	.2
Mar	56.4	28.7	42.6	78	1966	31	49.7	1972	4	1971	2	35.8	1977	697	0	.0	.0	22.5	.2	22.5	.0
Apr	64.3	34.0	49.2	88	1981	30	55.7	1989	9	1958	2	40.8	1975	481	5	.0	.0	26.9	.0	12.7	.0
May	73.6	42.3	58.0	95	2000	28	63.8	1992	19	1964	3	50.4	1977	258	40	.0	.9	30.2	.0	2.7	.0
Jun	84.7	50.7	67.7	102+	1954	22	71.7+	1994	27	1971	1	61.6	1998	55	136	.2	9.5	30.0	.0	.1	.0
Jul	91.8	56.5	74.2	104	1960	18	78.4	1996	40+	1987	22	69.7	1983	3	286	1.4	20.7	31.0	.0	.0	.0
Aug	89.7	54.7	72.2	103	1971	12	77.2	1971	37+	1957	30	68.6	1976	7	228	.7	15.2	31.0	.0	.0	.0
Sep	81.0	47.5	64.3	96	1959	2	68.5	1974	25	1986	26	58.2	1986	95	72	.0	2.7	30.0	.0	.4	.0
Oct	68.6	37.1	52.9	90	1980	1	59.4	1988	13+	1971	30	47.2	1984	384	6	.0	@	29.5	@	7.7	.0
Nov	53.6	25.8	39.7	91	2001	8	46.8	1995	4	1985	15	31.9	1994	759	0	.0	.0	19.0	.6	25.1	.0
Dec	45.4	19.5	32.5	70	1959	1	37.8	1977	-13	1967	21	25.1	1990	1009	0	.0	.0	11.1	2.9	30.0	.7
Ann	67.0	36.7	51.9	104	Jul 1960	18	78.4	Jul 1996	-15+	Jan 1962	23	25.0	Jan 1987	5549	773	2.3	49.0	284.2	7.8	156.8	1.8

+ 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: 1954-2001

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

055-A

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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: TONOPAH AP, NV**

**COOP ID: 268170**

**Climate Division: NV 3**

**NWS Call Sign: TPH**

**Elevation: 5,430 Feet Lat: 38°04N**

**Lon: 117°05W**

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	.48	.42	.67	1995	25	2.25	1995	.00+	1994	4.3	1.7	.1	.0	.00	.00	.10	.18	.26	.36	.47	.60	.78	1.08	1.37
Feb	.51	.24	1.52	1968	10	2.25	1998	.00+	1995	4.0	1.9	.1	.0	.00	.00	.04	.11	.19	.29	.42	.60	.85	1.30	1.76
Mar	.69	.48	.91	1983	3	2.38	1978	.00+	1997	4.9	2.1	.2	.0	.00	.00	.09	.19	.31	.45	.62	.84	1.14	1.67	2.20
Apr	.42	.20	.98	1975	10	2.13	1988	.00+	1997	3.1	1.2	.2	.0	.00	.00	.00	.05	.12	.21	.33	.49	.72	1.13	1.55
May	.62	.32	.93	1990	28	2.03	1981	.00+	1992	3.8	1.9	.2	.0	.00	.00	.01	.09	.19	.32	.49	.73	1.07	1.67	2.30
Jun	.34	.10	.96	1999	2	1.67	1998	.00+	1994	2.2	.9	.2	.0	.00	.00	.00	.00	.04	.12	.23	.37	.60	.99	1.40
Jul	.51	.23	1.30	1985	18	2.49	1985	.00+	2000	2.9	1.1	.3	.2	.00	.00	.00	.05	.14	.25	.39	.59	.89	1.41	1.94
Aug	.61	.29	1.62	1977	17	2.74	2000	.00+	1985	3.4	1.4	.3	.1	.00	.01	.05	.11	.20	.32	.47	.69	1.01	1.59	2.20
Sep	.49	.32	1.03	1978	14	2.05	1978	.00+	1996	3.1	1.5	.3	@	.00	.00	.02	.08	.16	.26	.40	.57	.83	1.29	1.76
Oct	.47	.28	.74+	1957	20	2.16	1974	.00+	1999	2.4	1.4	.3	.0	.00	.00	.06	.14	.22	.32	.44	.59	.79	1.13	1.47
Nov	.42	.28	1.17	1981	27	2.68	1981	.00+	1999	2.6	1.2	.1	.1	.00	.00	.01	.05	.11	.19	.31	.47	.71	1.15	1.61
Dec	.28	.27	.65	1966	6	.80	1986	.00+	2000	2.8	1.2	.0	.0	.00	.00	.00	.06	.12	.18	.26	.35	.47	.69	.89
Ann	5.84	5.63	1.62	Aug 1977	17	2.74	Aug 2000	.00+	Dec 2000	39.5	17.5	2.3	.4	2.85	3.35	4.03	4.57	5.08	5.58	6.12	6.72	7.49	8.63	9.66

+ 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: 1954-2001

(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: TONOPAH AP, NV**

**COOP ID: 268170**

**Climate Division: NV 3**

**NWS Call Sign: TPH**

**Elevation: 5,430 Feet**

**Lat: 38°04N**

**Lon: 117°05W**

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	3.8	3.2	#	0	6.6	1999	24	16.5	1995	10	1997	21	2	1988	2.8	1.4	.3	.1	.0	4.2	1.1	.3	@
Feb	3.3	1.7	#	0	9.7	1976	6	15.0	1998	10	1976	7	1+	1998	2.3	1.1	.3	.1	.0	2.2	.6	.1	@
Mar	3.0	1.0	#	0	9.0	1983	3	16.4	1983	7	1991	21	1	1991	1.9	1.0	.3	.1	.0	.8	.2	.1	.0
Apr	1.4	.1	#	0	7.2	1988	23	7.5	1988	3	1975	11	#	2000	1.0	.5	.1	.1	.0	.3	@	.0	.0
May	.4	.0	#	0	5.0	1995	13	5.0	1995	1+	1991	19	#	2000	.4	.1	@	@	.0	.1	.0	.0	.0
Jun	#	.0	#	0	#	1999	3	#+	1999	0	0	0	#	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	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.0	.0	0	0	.4	1982	29	.4	1982	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.1	.0	#	0	2.1	1996	31	2.1	1996	6	1996	31	#	1996	.2	.0	.0	.0	.0	@	@	@	.0
Nov	1.7	.1	#	0	8.0	1993	12	9.6	1981	2	1993	13	#	1998	1.2	.7	.2	@	.0	.4	.0	.0	.0
Dec	2.6	.9	#	0	7.6	1984	8	17.0	1984	5+	1978	19	1	1987	1.8	1.0	.2	.1	.0	2.0	.4	.1	.0
Ann	16.3	7.0	N/A	N/A	9.7	Feb 1976	6	17.0	Dec 1984	10+	Jan 1997	21	2	Jan 1988	11.6	5.8	1.4	.5	.0	10.0	2.3	.6	.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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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	6/17	6/10	6/05	6/01	5/28	5/25	5/21	5/16	5/09
32	6/02	5/26	5/21	5/17	5/13	5/09	5/05	4/30	4/23
28	5/21	5/14	5/08	5/04	4/30	4/25	4/21	4/15	4/08
24	5/02	4/25	4/19	4/15	4/11	4/06	4/02	3/28	3/20
20	4/15	4/06	3/31	3/26	3/21	3/15	3/10	3/04	2/23
16	3/25	3/16	3/10	3/04	2/27	2/22	2/17	2/10	2/02
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	9/15	9/21	9/25	9/29	10/02	10/05	10/09	10/13	10/19
32	9/25	10/01	10/05	10/08	10/11	10/15	10/18	10/22	10/28
28	10/02	10/08	10/13	10/16	10/20	10/23	10/27	11/01	11/07
24	10/16	10/21	10/25	10/28	10/31	11/03	11/06	11/10	11/15
20	10/26	11/01	11/05	11/08	11/11	11/14	11/18	11/22	11/27
16	11/01	11/08	11/13	11/17	11/21	11/25	11/29	12/04	12/10
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	153	144	137	131	126	121	115	108	99
32	176	167	161	156	151	146	140	134	126
28	206	194	186	179	173	166	159	151	140
24	228	219	213	208	203	198	192	186	178
20	265	255	247	241	235	229	222	215	204
16	300	288	280	272	266	259	252	243	232

\* 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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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	1023	778	697	481	258	55	3	7	95	384	759	1009	5549
60	868	638	544	344	157	17	0	0	35	248	609	854	4314
57	775	554	454	269	110	7	0	0	16	179	520	761	3645
55	713	498	397	225	83	4	0	0	8	139	461	699	3227
50	558	361	262	133	36	0	0	0	1	65	321	544	2281
32	121	30	14	3	0	0	0	0	0	0	25	113	306

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	121	176	340	517	804	1071	1306	1245	968	645	256	127	7576
55	0	0	9	49	174	385	593	532	286	72	2	0	2102
57	0	0	5	33	139	328	531	470	233	50	1	0	1790
60	0	0	1	18	94	248	438	377	163	25	0	0	1364
65	0	0	0	5	40	136	286	228	72	6	0	0	773
70	0	0	0	0	14	57	151	106	22	0	0	0	350

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	52	134	293	563	835	1057	993	726	401	93	6	11	63	197	490	1053	1888	2945	3938	4664	5065	5158	5164
45	0	15	51	176	411	685	902	838	576	265	29	0	0	15	66	242	653	1338	2240	3078	3654	3919	3948	3948
50	0	0	12	80	277	537	747	683	428	148	6	0	0	0	12	92	369	906	1653	2336	2764	2912	2918	2918
55	0	0	0	29	158	394	592	528	284	58	0	0	0	0	0	29	187	581	1173	1701	1985	2043	2043	2043
60	0	0	0	4	71	257	437	375	155	19	0	0	0	0	0	4	75	332	769	1144	1299	1318	1318	1318
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	25	59	122	223	376	530	662	632	469	292	95	27	25	84	206	429	805	1335	1997	2629	3098	3390	3485	3512

(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)