U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

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

Station: WATER VALLEY 1 NNE, MS **COOP ID: 229400**

Climate Division: MS 2 **NWS Call Sign:** **Elevation: 376 Feet** **Lat: 34˚10N** **Lon: 89˚38W**

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	49.9	29.5	39.7	82	1972	25	46.5	1974	-10+	1966	30	28.1	1977	783	0	.0	.0	17.3	2.2	20.4	.3
Feb	55.6	32.7	44.2	83	1996	26	51.5	1990	-13	1951	2	33.5	1978	584	0	.0	.0	19.5	1.2	15.8	.0
Mar	64.8	40.9	52.9	87	1982	19	58.7	1974	9	1980	3	47.6	1978	386	8	.0	.0	27.9	.1	8.9	.0
Apr	73.2	48.2	60.7	94	1987	22	67.1	1981	24	1987	4	54.5	1983	166	38	.0	.2	29.7	.0	2.3	.0
May	80.2	57.8	69.0	97+	1951	30	74.3	1987	35	1976	4	63.2	1976	45	169	.0	1.5	31.0	.0	.0	.0
Jun	87.3	66.1	76.7	104+	1952	28	80.0	1998	42	1984	1	72.2	1974	1	350	.1	10.4	30.0	.0	.0	.0
Jul	90.7	69.9	80.3	108	1952	29	84.1	1980	51	1967	15	77.7	1994	0	474	.7	19.8	31.0	.0	.0	.0
Aug	90.7	67.9	79.3	107+	2000	30	83.3	2000	49	1986	29	75.0	1992	0	443	1.1	19.2	31.0	.0	.0	.0
Sep	85.4	61.2	73.3	104+	2000	1	78.7	1998	33+	1967	29	68.0	1974	16	265	.6	10.3	30.0	.0	.0	.0
Oct	75.4	48.4	61.9	97	1998	1	67.8	1971	24+	1952	29	56.8	1976	157	60	.0	.9	30.9	.0	1.5	.0
Nov	63.3	39.9	51.6	89	1984	1	57.5	1985	12+	1970	24	43.6	1976	408	5	.0	.0	27.0	@	9.4	.0
Dec	53.3	32.3	42.8	81	1982	3	52.7	1984	-4+	1989	23	33.1	1989	689	0	.0	.0	20.5	1.1	18.0	.2
Ann	72.5	49.6	61.0	108	Jul 1952	29	84.1	Jul 1980	-13	Feb 1951	2	28.1	Jan 1977	3235	1812	2.5	62.3	325.8	4.6	76.3	.5

\+ 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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

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

Issue Date: February 2004

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	5.25	5.04	4.71	1974	11	12.69	1974	.29	1986
Feb	4.56	4.03	5.65	1991	19	11.61	1990	1.13	1972
Mar	6.23	5.38	4.61	1973	15	17.89	1973	1.40	1982
Apr	5.57	4.53	4.30	1955	13	16.21	1991	1.55	1986
May	5.57	5.17	5.68	1984	7	11.85	1978	.64	1992
Jun	4.92	4.30	3.16	1996	14	12.57	1974	.63	1988
Jul	4.41	3.73	5.28	1955	24	8.49	1992	1.01	1986
Aug	3.34	3.10	4.44	1960	19	10.06	1982	.09	2000
Sep	3.27	3.27	4.80	1958	21	7.91	1988	.37	1998
Oct	3.56	3.38	3.94	1984	7	11.30	1984	.44	1978
Nov	5.60	5.25	5.80	1948	19	12.24	1973	1.07	1971
Dec	6.08	4.95	6.15	1982	26	18.82	1982	.44	1980
Ann	58.36	56.35	6.15	Dec 1982	26	18.82	Dec 1982	.09	Aug 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.7	7.6	3.7	1.5
Feb	8.3	6.6	3.2	1.6
Mar	9.8	7.7	3.9	2.4
Apr	7.7	6.3	3.7	2.2
May	8.9	7.4	3.6	1.9
Jun	8.1	6.9	3.4	1.5
Jul	8.1	6.9	3.0	1.4
Aug	6.3	5.0	2.5	1.1
Sep	6.9	5.1	2.2	.9
Oct	5.8	4.7	2.5	1.3
Nov	8.6	6.8	3.7	1.9
Dec	9.6	7.8	3.9	2.0
Ann	97.8	78.8	39.3	19.7

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.13	1.62	2.39	3.08	3.79	4.53	5.37	6.38	7.71	9.83	11.83
Feb	1.28	1.71	2.37	2.94	3.50	4.08	4.73	5.49	6.48	8.04	9.49
Mar	1.95	2.54	3.42	4.17	4.90	5.65	6.48	7.45	8.71	10.66	12.47
Apr	1.43	1.95	2.76	3.48	4.18	4.92	5.75	6.73	8.01	10.02	11.91
May	1.18	1.70	2.51	3.26	4.00	4.80	5.70	6.77	8.19	10.46	12.60
Jun	.96	1.40	2.12	2.79	3.46	4.19	5.01	5.99	7.30	9.41	11.40
Jul	1.22	1.63	2.27	2.83	3.37	3.94	4.57	5.32	6.29	7.81	9.23
Aug	.55	.84	1.32	1.78	2.26	2.77	3.36	4.07	5.03	6.58	8.06
Sep	.43	.69	1.16	1.61	2.09	2.62	3.23	3.99	5.01	6.69	8.31
Oct	.67	.99	1.51	1.99	2.48	3.01	3.61	4.34	5.30	6.84	8.31
Nov	1.45	1.98	2.79	3.51	4.22	4.96	5.79	6.77	8.05	10.06	11.95
Dec	1.30	1.86	2.75	3.56	4.37	5.24	6.22	7.39	8.93	11.40	13.73
Ann	39.41	43.00	47.65	51.21	54.38	57.47	60.67	64.22	68.55	74.87	80.36

+ 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: 1948-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	1.5	.6	#	#	5.0	1988	7	5.5+	2000	5+	2000	28	1	1988	.6	.6	.3	@	.0	.8	.2	.1	.0
Feb	1.0	.0	#	0	5.0	1971	8	8.0	1985	4	1985	2	1	1996	.6	.3	.2	@	.0	.9	.1	.0	.0
Mar	.1	.0	#	0	2.0	1984	10	2.0	1984	2	1984	10	#+	1999	.1	.1	.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	#	1993	30	#	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.1	.0	#	0	1.0	1975	23	1.5	1976	1+	1991	8	#+	1991	.2	.1	.0	.0	.0	.1	.0	.0	.0
Dec	.3	.0	#	0	2.0	1982	12	2.5	1983	2	1983	17	#+	2000	.3	.2	.0	.0	.0	.2	.0	.0	.0
Ann	3.0	.6	N/A	N/A	5.0+	Jan 1988	7	8.0	Feb 1985	5+	Jan 2000	28	1+	Feb 1996	1.8	1.3	.5	@	.0	2.0	.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

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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	4/25	4/22	4/19	4/16	4/14	4/12	4/10	4/07	4/03
32	4/18	4/14	4/11	4/09	4/06	4/04	4/02	3/30	3/26
28	4/08	4/02	3/28	3/24	3/21	3/17	3/14	3/09	3/03
24	3/23	3/16	3/10	3/06	3/01	2/25	2/20	2/15	2/07
20	3/14	3/06	3/01	2/24	2/19	2/14	2/10	2/04	1/27
16	3/04	2/22	2/15	2/09	2/04	1/29	1/22	1/12	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	10/05	10/10	10/13	10/16	10/18	10/21	10/24	10/27	11/01
32	10/14	10/20	10/24	10/27	10/30	11/03	11/06	11/10	11/16
28	10/25	10/31	11/04	11/08	11/11	11/14	11/18	11/22	11/28
24	11/03	11/10	11/15	11/20	11/24	11/28	12/02	12/07	12/14
20	11/17	11/26	12/02	12/08	12/13	12/18	12/24	12/30	1/08
16	12/01	12/10	12/17	12/23	12/28	1/03	1/10	1/19	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	198	194	191	189	186	184	182	179	175
32	224	218	214	210	206	203	199	195	188
28	259	250	244	239	234	230	225	219	210
24	295	285	278	272	267	261	255	248	238
20	321	311	304	299	294	289	283	277	268
16	>365	>365	351	336	326	318	309	299	287

***** 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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Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	783	584	386	166	45	1	0	0	16	157	408	689	3235
60	637	450	252	79	13	0	0	0	3	75	275	543	2327
57	549	372	186	43	5	0	0	0	1	43	206	457	1862
55	492	322	148	27	2	0	0	0	0	28	166	402	1587
50	360	211	73	6	0	0	0	0	0	7	87	280	1024
32	62	15	0	0	0	0	0	0	0	0	1	33	111

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	301	354	645	862	1147	1340	1497	1466	1239	926	588	367	10732
55	19	17	80	198	436	650	784	753	549	241	63	24	3814
57	14	11	56	155	377	590	722	691	490	194	43	17	3360
60	8	6	29	101	292	500	629	598	402	134	22	10	2731
65	0	0	8	38	169	350	474	443	265	60	5	0	1812
70	0	0	0	10	80	207	319	291	151	20	0	0	1078

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	140	209	413	614	889	1095	1246	1219	1010	691	378	187	140	349	762	1376	2265	3360	4606	5825	6835	7526	7904	8091
45	75	127	283	466	734	945	1091	1064	860	537	252	109	75	202	485	951	1685	2630	3721	4785	5645	6182	6434	6543
50	38	67	176	332	579	795	936	909	710	392	158	60	38	105	281	613	1192	1987	2923	3832	4542	4934	5092	5152
55	16	30	94	210	424	645	781	754	560	256	88	28	16	46	140	350	774	1419	2200	2954	3514	3770	3858	3886
60	0	7	42	116	280	495	626	599	415	149	42	5	0	7	49	165	445	940	1566	2165	2580	2729	2771	2776
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	94	150	272	400	587	754	859	830	676	462	248	125	94	244	516	916	1503	2257	3116	3946	4622	5084	5332	5457

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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