

Climatology of the United States

No. 20

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

Station: MURFREESBORO 5 SW, AR

1971-2000

COOP ID: 035079

Climate Division: AR 7

NWS Call Sign:

Elevation: 460 Feet

Lat: 34°02N

Lon: 93°46W

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	49.8	27.1	38.5	78	1997	5	44.9	1990	-1+	1982	11	27.4	1979	824	0	.0	.0	16.6	1.8	22.3	.1
Feb	56.1	30.7	43.4	86+	1986	21	50.0	1976	4+	1996	4	32.0	1978	605	0	.0	.0	20.0	1.3	15.9	.0
Mar	64.4	38.4	51.4	86+	1982	18	57.0	1974	13+	1996	9	45.7	1980	424	2	.0	.0	28.4	.1	7.9	.0
Apr	72.5	46.0	59.3	93+	1974	1	63.9	1981	22	1987	1	54.2	1983	190	18	.0	.2	29.8	.0	1.6	.0
May	79.2	56.4	67.8	94	1977	31	72.5	1977	37	1976	2	62.8	1976	52	140	.0	.7	31.0	.0	.0	.0
Jun	86.5	64.1	75.3	101	1971	25	78.7	1980	46	1985	13	70.3	1976	1	309	.1	8.8	30.0	.0	.0	.0
Jul	91.1	68.0	79.6	108	1980	18	85.5	1980	52	1972	6	75.3	1976	0	451	1.7	20.4	31.0	.0	.0	.0
Aug	91.1	66.7	78.9	108	1980	22	85.3	2000	51+	1986	29	73.7+	1992	4	434	2.2	19.8	31.0	.0	.0	.0
Sep	84.4	60.6	72.5	108	2000	4	78.8	1980	33+	1981	19	66.5	1974	21	245	.5	7.4	30.0	.0	.0	.0
Oct	74.3	48.8	61.6	91+	1979	1	65.8	1971	22	1993	31	54.3	1976	153	46	.0	.2	30.8	.0	.6	.0
Nov	61.7	38.1	49.9	86	1978	1	57.6	1999	9+	1976	29	43.1	1976	457	3	.0	.0	26.2	.1	9.1	.0
Dec	53.0	30.3	41.7	78	1984	30	51.0	1984	-2+	1983	25	29.9	1983	724	0	.0	.0	20.0	1.3	18.7	.2
Ann	72.0	47.9	60.0	108+	Sep 2000	4	85.5	Jul 1980	-2+	Dec 1983	25	27.4	Jan 1979	3455	1648	4.5	57.5	324.8	4.6	76.1	.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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1970-2001

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

058-A

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NWS Call Sign:

Elevation: 460 Feet Lat: 34°02N

Lon: 93°46W

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	3.75	3.26	3.51	1994	26	8.25	1994	.43	1986	9.0	6.5	2.3	.9	.76	1.10	1.65	2.15	2.66	3.21	3.82	4.56	5.54	7.10	8.59
Feb	3.94	3.84	2.92	1975	2	8.54	1989	1.06	1999	7.7	5.7	2.9	1.2	1.44	1.81	2.34	2.79	3.21	3.64	4.12	4.67	5.37	6.45	7.44
Mar	5.48	5.47	5.37	1990	8	12.01	1973	1.58	1982	9.1	7.2	3.7	1.8	2.00	2.52	3.26	3.88	4.47	5.07	5.73	6.49	7.47	8.97	10.35
Apr	5.10	4.27	5.45	1986	5	12.90	1986	.38	1987	9.3	6.6	3.1	1.6	1.08	1.54	2.29	2.97	3.66	4.39	5.21	6.20	7.51	9.59	11.57
May	5.35	4.98	8.40	1998	28	10.88	1990	1.22	1988	10.1	7.7	3.7	1.5	1.84	2.35	3.08	3.70	4.30	4.91	5.58	6.36	7.36	8.91	10.33
Jun	4.84	4.15	4.00	2000	15	11.20	1974	.66	1988	9.3	6.8	3.0	1.5	.99	1.43	2.14	2.79	3.44	4.14	4.93	5.89	7.15	9.17	11.08
Jul	4.72	3.93	8.74	1983	2	12.49	1989	.40	1993	7.3	5.4	2.9	1.6	.73	1.13	1.82	2.47	3.14	3.88	4.73	5.76	7.14	9.40	11.55
Aug	3.36	2.90	4.65	1979	3	9.03	1984	.00	1980	6.9	4.7	2.4	1.1	.28	.64	1.19	1.68	2.19	2.74	3.38	4.15	5.18	6.87	8.48
Sep	4.26	3.60	7.10	1980	28	11.91	1980	.34	1982	7.6	5.6	2.6	1.3	.59	.94	1.55	2.14	2.76	3.44	4.23	5.20	6.51	8.65	10.71
Oct	4.93	4.17	6.80	1991	29	13.64	1993	.22	1975	7.5	5.2	3.0	1.7	.67	1.07	1.78	2.46	3.18	3.98	4.90	6.03	7.55	10.04	12.45
Nov	6.00	5.38	5.43	1978	16	14.43	1978	1.24	1999	8.9	6.8	4.0	2.0	1.49	2.05	2.93	3.70	4.47	5.28	6.19	7.26	8.66	10.89	12.97
Dec	5.17	4.83	6.70	1982	3	13.63	1987	.43	1981	8.5	6.2	3.3	1.6	1.34	1.82	2.57	3.24	3.89	4.57	5.34	6.24	7.43	9.29	11.03
Ann	56.90	56.74	8.74	Jul 1983	2	14.43	Nov 1978	.00	Aug 1980	101.2	74.4	36.9	17.8	42.58	45.40	48.99	51.70	54.09	56.39	58.75	61.35	64.49	69.02	72.91

+ 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: 1970-2001

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

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Climate Division: AR 7

NWS Call Sign:

Elevation: 460 Feet

Lat: 34°02N

Lon: 93°46W

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	2.7	.0	#	0	11.0	2000	28	12.0	2000	12	2000	28	1+	2000	.5	.5	.2	.2	.1	.2	.1	.1	.1
Feb	1.3	.0	#	0	6.5	1985	1	9.0	1985	7	1985	2	1	1985	.5	.3	.1	.1	.0	.1	.0	.0	.0
Mar	.1	.0	#	0	1.5	1971	3	1.5	1971	2	1971	3	#+	1989	.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	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	.5	.0	#	0	8.0	1983	16	8.0	1983	#	1984	6	#	1984	.1	.1	.1	.1	.0	.0	.0	.0	.0
Ann	4.6	.0	N/A	N/A	11.0	Jan 2000	28	12.0	Jan 2000	12	Jan 2000	28	1+	Jan 2000	1.2	1.0	.4	.4	.1	.3	.1	.1	.1

+ 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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Climate Division: AR 7

NWS Call Sign:

Elevation: 460 Feet

Lat: 34°02N

Lon: 93°46W

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	4/19	4/16	4/14	4/12	4/10	4/08	4/06	4/03	3/31
32	4/16	4/10	4/06	4/03	3/31	3/28	3/25	3/21	3/16
28	4/07	4/01	3/27	3/24	3/20	3/17	3/13	3/09	3/03
24	3/20	3/13	3/09	3/05	3/01	2/25	2/21	2/17	2/10
20	3/14	3/05	2/26	2/21	2/15	2/10	2/05	1/29	1/20
16	2/27	2/17	2/09	2/02	1/27	1/19	1/09	0/00	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	10/04	10/10	10/14	10/18	10/21	10/24	10/28	11/01	11/07
32	10/25	10/29	11/01	11/04	11/06	11/09	11/11	11/14	11/19
28	10/30	11/05	11/09	11/13	11/16	11/20	11/24	11/28	12/04
24	11/09	11/16	11/21	11/26	11/30	12/04	12/08	12/13	12/20
20	11/10	11/23	12/02	12/10	12/17	12/25	1/02	1/11	1/24
16	12/03	12/11	12/16	12/21	12/26	1/01	1/08	0/00	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	215	208	202	198	194	189	185	179	172
32	238	232	227	223	220	216	212	207	201
28	266	257	251	246	240	235	230	224	215
24	298	290	283	278	273	268	263	256	248
20	>365	327	315	306	298	291	283	274	261
16	>365	>365	>365	>365	341	326	316	305	292

* 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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Climate Division: AR 7 NWS Call Sign: Elevation: 460 Feet Lat: 34°02N Lon: 93°46W

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	824	605	424	190	52	1	0	4	21	153	457	724	3455
60	669	470	283	87	14	0	0	0	4	69	320	573	2489
57	583	393	208	46	5	0	0	0	1	37	246	487	2006
55	524	343	166	27	2	0	0	0	0	23	203	430	1718
50	384	231	83	5	0	0	0	0	0	5	115	300	1123
32	60	20	1	0	0	0	0	0	0	0	3	34	118

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	258	340	602	817	1110	1298	1474	1453	1214	916	539	333	10354
55	10	18	54	155	400	608	761	740	524	226	49	17	3562
57	7	12	34	114	340	548	699	678	465	178	32	11	3118
60	0	6	16	65	256	458	606	585	378	116	16	4	2506
65	0	0	2	18	140	309	451	434	245	46	3	0	1648
70	0	0	0	2	59	171	300	293	139	12	0	0	976

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	115	203	394	605	877	1073	1236	1218	986	687	342	162	115	318	712	1317	2194	3267	4503	5721	6707	7394	7736	7898
45	56	119	262	456	722	923	1081	1063	836	533	220	83	56	175	437	893	1615	2538	3619	4682	5518	6051	6271	6354
50	24	55	156	316	567	773	926	908	686	381	124	41	24	79	235	551	1118	1891	2817	3725	4411	4792	4916	4957
55	4	20	76	191	412	623	771	753	536	245	62	17	4	24	100	291	703	1326	2097	2850	3386	3631	3693	3710
60	0	1	30	94	264	473	616	598	391	135	22	2	0	1	31	125	389	862	1478	2076	2467	2602	2624	2626
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	90	147	260	385	577	736	839	820	663	441	212	114	90	237	497	882	1459	2195	3034	3854	4517	4958	5170	5284

(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/normal/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