

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: SAMBURG WILDLIFE REF, TN

1971-2000

COOP ID: 408065

Climate Division: TN 4

NWS Call Sign:

Elevation: 310 Feet

Lat: 36° 27N

Lon: 89° 18W

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	43.2	23.5	33.4	78+	1943	25	42.0	1990	-15	1985	20	19.5	1977	981	0	.0	.0	9.4	6.1	23.1	.7
Feb	49.3	27.4	38.4	79	1962	14	46.2	1976	-17	1951	2	24.3	1978	747	0	.0	.0	14.8	3.6	18.1	.2
Mar	59.1	37.1	48.1	86	1963	31	54.0	1976	7	1960	5	41.9	1996	526	1	.0	.0	24.4	.5	9.7	.0
Apr	69.3	45.8	57.6	91+	1963	22	64.6	1981	23	1992	3	51.0	1983	247	23	.0	.1	29.1	.0	2.3	.0
May	77.7	55.6	66.7	98+	1942	30	72.5	1987	33	1944	7	62.2	1976	78	129	.0	1.0	31.0	.0	.0	.0
Jun	86.0	64.4	75.2	106	1952	30	78.1	1971	43+	1988	5	71.2	1974	1	308	@	10.4	30.0	.0	.0	.0
Jul	89.8	68.4	79.1	107	1952	1	83.2	1980	45	1947	23	76.2	1996	0	437	.6	18.7	31.0	.0	.0	.0
Aug	88.2	65.6	76.9	106	1964	5	81.9	1983	46+	1946	31	72.3	1992	1	370	.1	13.9	31.0	.0	.0	.0
Sep	82.0	57.9	70.0	104+	1954	5	74.7	1986	34+	1942	29	65.1	1975	34	182	.0	4.8	30.0	.0	.0	.0
Oct	72.2	45.4	58.8	99+	1953	1	66.5	1971	23+	1952	22	53.6	1976	224	32	.0	.2	30.8	.0	2.4	.0
Nov	59.1	37.6	48.4	85	1950	1	54.0+	1999	5	1950	25	39.1	1976	502	2	.0	.0	23.6	.1	9.5	.0
Dec	48.2	28.7	38.5	79+	1982	3	45.9	1971	-12	1963	24	29.1	1989	823	0	.0	.0	14.5	2.9	19.8	.2
Ann	68.7	46.5	57.6	107	Jul 1952	1	83.2	Jul 1980	-17	Feb 1951	2	19.5	Jan 1977	4164	1484	.7	49.1	299.6	13.2	84.9	1.1

+ 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: 1942-2001

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

065-A

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Precipitation (inches)

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	3.51	3.14	6.23	1966	2	8.81	1999	1.16	1986	9.5	6.2	2.6	1.0	1.11	1.45	1.94	2.36	2.77	3.19	3.65	4.19	4.89	5.98	6.98
Feb	4.07	3.38	4.42	1990	15	12.81	1989	1.24	1978	8.0	5.5	2.5	1.1	1.14	1.52	2.11	2.62	3.12	3.64	4.22	4.90	5.78	7.17	8.47
Mar	4.78	4.34	4.68	1975	28	13.97	1975	1.52	1982	10.5	7.8	3.3	1.3	1.82	2.26	2.90	3.43	3.94	4.45	5.01	5.65	6.47	7.73	8.89
Apr	5.01	4.90	3.64	1974	22	10.89	1973	.69	1992	9.2	7.0	3.4	1.6	1.56	2.04	2.74	3.35	3.94	4.54	5.21	5.99	7.00	8.58	10.04
May	5.39	4.92	5.10	1967	13	16.09	1983	1.21	1994	9.7	7.1	3.2	1.5	1.47	1.98	2.76	3.44	4.11	4.80	5.58	6.49	7.68	9.55	11.30
Jun	4.39	3.74	3.97	1945	9	10.37	1976	.39	1988	8.5	6.3	3.0	1.4	1.11	1.52	2.16	2.72	3.28	3.87	4.52	5.30	6.32	7.92	9.42
Jul	3.94	3.34	5.12	1972	17	14.48	1972	.09	1983	7.4	5.3	2.4	1.0	.40	.69	1.23	1.78	2.38	3.04	3.83	4.81	6.15	8.38	10.55
Aug	3.23	2.63	5.80	1971	22	9.45	1971	.54	1999	5.9	4.3	2.1	1.1	.64	.94	1.41	1.84	2.28	2.76	3.29	3.93	4.78	6.15	7.44
Sep	3.35	3.27	3.70	2001	8	7.83	1992	.14	1998	6.6	4.5	2.2	.8	.60	.90	1.39	1.85	2.31	2.82	3.39	4.09	5.02	6.51	7.93
Oct	3.64	2.74	4.25	1984	6	10.30	1984	.65	2000	6.4	4.8	2.3	.8	.91	1.26	1.79	2.26	2.72	3.21	3.76	4.40	5.25	6.59	7.85
Nov	4.78	4.26	7.33	1988	21	12.84	1973	1.57	1971	8.1	6.1	3.1	1.4	1.38	1.83	2.51	3.11	3.69	4.29	4.96	5.75	6.77	8.36	9.85
Dec	5.10	4.67	5.52	1987	28	11.66	1978	.73	1976	8.6	6.1	3.1	1.5	1.18	1.65	2.40	3.07	3.74	4.45	5.24	6.19	7.43	9.41	11.28
Ann	51.19	49.32	7.33	Nov 1988	21	16.09	May 1983	.09	Jul 1983	98.4	71.0	33.2	14.5	38.98	41.41	44.48	46.79	48.83	50.79	52.80	55.00	57.66	61.49	64.78

+ 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: 1942-2001

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

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COOP ID: 408065

Climate Division: TN 4

NWS Call Sign:

Elevation: 310 Feet

Lat: 36°27N

Lon: 89°18W

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	2.0	.8	#	0	7.0	1977	10	13.0	1977	12	1978	20	4	1978	1.1	1.0	.3	.1	.0	2.3	1.5	.9	.2
Feb	3.4	.5	#	0	10.0	1979	7	17.0	1979	11	1979	9	2	1980	.9	.8	.3	.2	@	.7	.5	.3	.0
Mar	.7	.0	#	0	5.5	1975	10	8.5	1975	3	1975	14	#+	1999	.2	.2	.1	@	.0	.2	.1	.0	.0
Apr	#	.0	0	0	#	1973	10	#+	1973	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	.4	.0	#	0	4.5	1976	12	6.5	1976	3	1976	12	#+	1997	.2	.2	@	.0	.0	.1	.1	.0	.0
Dec	.2	.0	#	0	2.0	1988	28	2.0	1988	1	1973	21	#+	1997	.2	.1	.0	.0	.0	.1	.0	.0	.0
Ann	6.7	1.3	N/A	N/A	10.0	Feb 1979	7	17.0	Feb 1979	12	Jan 1978	20	4	Jan 1978	2.6	2.3	.7	.3	@	3.4	2.2	1.2	.2

+ 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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COOP ID: 408065

Climate Division: TN 4

NWS Call Sign:

Elevation: 310 Feet

Lat: 36°27N

Lon: 89°18W

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	5/01	4/25	4/22	4/18	4/15	4/12	4/09	4/05	3/31
32	4/21	4/16	4/12	4/10	4/07	4/04	4/01	3/29	3/24
28	4/14	4/08	4/03	3/30	3/26	3/22	3/18	3/14	3/07
24	3/27	3/21	3/16	3/12	3/08	3/04	2/28	2/23	2/17
20	3/09	3/03	2/26	2/22	2/19	2/15	2/11	2/07	1/31
16	3/03	2/24	2/19	2/14	2/10	2/06	2/02	1/28	1/20
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	10/01	10/05	10/07	10/10	10/12	10/14	10/17	10/19	10/23
32	10/06	10/12	10/17	10/21	10/24	10/28	11/01	11/05	11/11
28	10/23	10/29	11/02	11/06	11/09	11/13	11/16	11/21	11/26
24	11/02	11/08	11/13	11/17	11/21	11/25	11/29	12/03	12/10
20	11/15	11/22	11/27	12/01	12/05	12/09	12/13	12/18	12/25
16	11/17	11/28	12/07	12/14	12/20	12/27	1/03	1/11	1/23
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	196	190	186	182	179	175	172	167	161
32	218	212	207	203	200	196	192	188	181
28	253	244	238	232	227	222	217	210	202
24	287	277	269	263	257	251	245	238	228
20	317	307	300	294	289	283	277	270	261
16	355	336	325	317	309	302	294	286	274

* 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

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No. 20
1971-2000**

Station: SAMBURG WILDLIFE REF, TN

COOP ID: 408065

Climate Division: TN 4 NWS Call Sign: Elevation: 310 Feet Lat: 36° 27N Lon: 89° 18W

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	981	747	526	247	78	1	0	1	34	224	502	823	4164
60	826	612	383	140	29	0	0	0	8	122	363	668	3151
57	737	534	302	91	14	0	0	0	3	78	285	581	2625
55	681	482	254	65	8	0	0	0	1	55	239	524	2309
50	537	360	154	22	1	0	0	0	0	18	142	385	1619
32	156	75	7	0	0	0	0	0	0	0	5	66	309

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	198	252	505	766	1075	1296	1460	1392	1139	831	495	267	9676
55	10	15	39	141	370	606	747	679	450	172	39	11	3279
57	4	11	25	107	313	546	685	617	392	133	25	6	2864
60	0	5	13	66	236	456	592	524	307	85	13	1	2298
65	0	0	1	23	129	308	437	370	182	32	2	0	1484
70	0	0	0	5	56	168	282	224	89	8	0	0	832

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	69	132	321	555	846	1072	1223	1161	918	606	302	116	69	201	522	1077	1923	2995	4218	5379	6297	6903	7205	7321
45	32	70	207	413	691	922	1068	1006	768	454	190	59	32	102	309	722	1413	2335	3403	4409	5177	5631	5821	5880
50	12	35	124	282	537	772	913	851	618	313	110	27	12	47	171	453	990	1762	2675	3526	4144	4457	4567	4594
55	0	11	62	172	386	622	758	696	469	195	58	8	0	11	73	245	631	1253	2011	2707	3176	3371	3429	3437
60	0	1	28	90	247	472	603	541	326	103	22	0	0	1	29	119	366	838	1441	1982	2308	2411	2433	2433
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	43	87	193	343	549	736	839	794	609	392	173	67	43	130	323	666	1215	1951	2790	3584	4193	4585	4758	4825

(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