

Climatography of the United States

No. 20

1971-2000

Station: CELINA, TN

COOP ID: 401561

Climate Division: TN 3

NWS Call Sign:

Elevation: 540 Feet Lat: 36° 32N Lon: 85° 28W

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	45.7	24.4	35.1	76	1972	25	45.9	1974	-20	1985	21	19.2	1977	928	0	.0	.0	11.9	4.8	24.3	1.3
Feb	51.3	26.9	39.1	82+	1982	24	46.8	1990	-11+	1996	5	27.7	1978	725	0	.0	.0	15.2	2.6	20.7	.4
Mar	60.9	33.9	47.4	86	1982	20	53.9	1973	0	1980	3	41.6	1996	546	0	.0	.0	25.2	.4	14.4	@
Apr	70.0	40.9	55.5	91	1986	28	61.0	1981	22	1983	19	49.8	1983	294	7	.0	.1	28.8	.0	5.1	.0
May	77.9	50.6	64.3	93	1996	26	71.3	1987	30+	1971	4	59.3	1976	122	99	.0	1.0	31.0	.0	.1	.0
Jun	85.6	60.1	72.9	97+	1971	27	75.8	1987	40+	1972	1	68.5	1974	6	242	.0	7.3	30.0	.0	.0	.0
Jul	89.2	64.2	76.7	105	1980	17	80.3	1993	49	2001	16	73.3	1976	0	363	.5	15.4	31.0	.0	.0	.0
Aug	88.4	62.4	75.4	102+	1980	8	79.8	1995	42	1986	29	71.3	1992	1	322	.5	13.0	31.0	.0	.0	.0
Sep	82.4	55.3	68.9	100	1980	10	73.3	1998	32	1983	25	64.7	1974	37	154	@	5.1	30.0	.0	.1	.0
Oct	73.0	42.7	57.9	91+	1971	2	65.4	1984	22+	1976	28	51.1	1988	260	37	.0	.2	30.7	.0	3.6	.0
Nov	60.9	34.7	47.8	85	1984	1	56.6	1985	5	1976	30	37.6	1976	518	2	.0	.0	24.1	.1	13.1	.0
Dec	50.3	27.7	39.0	80	1982	4	47.1	1984	-6	1983	25	28.3	1989	806	0	.0	.0	16.3	2.6	21.8	.3
Ann	69.6	43.7	56.7	105	Jul 1980	17	80.3	Jul 1993	-20	Jan 1985	21	19.2	Jan 1977	4243	1226	1.0	42.1	305.2	10.5	103.2	2.0

+ 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: 1932-2001

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

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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: CELINA, TN

COOP ID: 401561

Climate Division: TN 3

NWS Call Sign:

Elevation: 540 Feet Lat: 36°32N

Lon: 85°28W

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	4.46	4.27	3.45	1946	7	9.09	1974	.42	1986	9.9	7.0	2.8	1.0	1.38	1.80	2.43	2.97	3.50	4.04	4.64	5.34	6.24	7.65	8.95
Feb	4.23	3.57	3.67	1984	11	8.63	1989	1.83	1980	8.7	6.3	2.6	1.1	1.73	2.12	2.67	3.12	3.54	3.97	4.43	4.97	5.64	6.68	7.62
Mar	5.33	4.59	3.00	1948	16	15.86	1975	1.51	1983	10.5	8.2	3.6	1.4	1.83	2.33	3.07	3.69	4.28	4.89	5.56	6.34	7.34	8.89	10.32
Apr	4.11	3.53	2.98	1984	22	9.15	1998	.92	1976	9.3	7.0	2.5	1.0	1.38	1.77	2.34	2.82	3.29	3.77	4.29	4.90	5.69	6.91	8.04
May	5.35	5.07	4.00	1984	7	9.91	1995	1.81	1977	7.8	6.3	2.6	1.2	2.52	2.99	3.63	4.14	4.62	5.10	5.61	6.20	6.93	8.04	9.04
Jun	4.23	3.80	5.35	1949	16	11.10	1998	.64	1988	10.3	7.7	2.9	1.2	1.18	1.58	2.19	2.72	3.24	3.78	4.38	5.09	6.01	7.46	8.81
Jul	4.52	4.43	4.23	1933	27	8.61	1998	.80	1999	9.4	6.9	2.9	.9	1.57	2.00	2.62	3.14	3.64	4.16	4.72	5.37	6.21	7.51	8.70
Aug	3.74	3.69	4.60	1999	25	8.39	1985	1.39	1983	9.1	6.7	2.3	.8	1.41	1.76	2.26	2.67	3.07	3.47	3.91	4.42	5.07	6.07	6.98
Sep	3.83	3.54	5.00	1972	24	9.54	1979	.00	1998	7.2	5.1	2.1	1.0	.47	.95	1.60	2.14	2.69	3.27	3.93	4.72	5.76	7.41	8.99
Oct	3.10	2.79	5.35	1975	17	7.67	1975	.47	1987	5.2	3.9	1.8	.8	.81	1.11	1.56	1.95	2.34	2.75	3.21	3.75	4.45	5.56	6.60
Nov	4.41	3.80	4.67	1973	27	9.76	1986	.87	1976	7.8	6.3	2.8	1.0	1.44	1.86	2.48	3.00	3.51	4.03	4.60	5.26	6.12	7.45	8.68
Dec	4.94	4.49	4.08	1978	4	13.26	1978	1.50	1980	7.4	5.7	2.6	1.3	1.69	2.15	2.84	3.41	3.97	4.53	5.16	5.88	6.81	8.25	9.58
Ann	52.25+	52.79+	5.35+	Oct 1975	17	15.86	Mar 1975	.00	Sep 1998	102.6	77.1	31.5	12.7	39.27	41.84	45.09	47.55	49.71	51.80	53.94	56.29	59.13	63.23	66.75

+ 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: 1932-2001

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

Complete documentation available from:
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Station: CELINA, TN

COOP ID: 401561

Climate Division: TN 3

NWS Call Sign:

Elevation: 540 Feet

Lat: 36°32N

Lon: 85°28W

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	6.3	4.8	1	#	6.0	1979	22	20.5	1977	9	1978	20	4	1978	2.5	2.5	.7	.4	.0	5.2	1.9	.6	.0
Feb	4.8	2.0	1	#	7.0	1985	1	22.0	1979	10	1979	9	3	1979	1.5	1.5	.6	.3	.0	2.7	1.1	.6	.1
Mar	.7	#	#	#	3.0	1980	2	4.0	1980	4	1980	3	#+	1984	.6	.6	.1	.0	.0	.4	.1	.0	.0
Apr	.1	#	#	0	1.0	1983	18	1.0	1983	1	1983	18	#+	1983	.1	.1	.0	.0	.0	.1	.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	.2	.0	#	0	2.0	1977	27	2.0+	1977	2	1977	27	#+	1979	.2	.2	.0	.0	.0	.2	.0	.0	.0
Dec	.8	#	#	#	3.0	1976	31	4.0+	1985	3+	1985	19	#+	1997	.6	.4	.1	.0	.0	.6	.1	.0	.0
Ann	12.9	6.8	N/A	N/A	7.0	Feb 1985	1	22.0	Feb 1979	10	Feb 1979	9	4	Jan 1978	5.5	5.3	1.5	.7	.0	9.2	3.2	1.2	.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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NWS Call Sign:

Elevation: 540 Feet

Lat: 36°32N

Lon: 85°28W

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	5/15	5/09	5/05	5/02	4/28	4/25	4/22	4/18	4/12
32	5/01	4/26	4/23	4/20	4/18	4/15	4/12	4/09	4/05
28	4/19	4/14	4/10	4/07	4/04	4/01	3/29	3/26	3/20
24	4/08	4/02	3/29	3/26	3/23	3/19	3/16	3/12	3/06
20	3/24	3/18	3/13	3/10	3/06	3/02	2/27	2/22	2/16
16	3/12	3/05	2/28	2/24	2/20	2/16	2/12	2/07	1/31
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	9/29	10/03	10/05	10/08	10/10	10/12	10/14	10/17	10/21
32	9/29	10/06	10/10	10/14	10/18	10/22	10/26	10/31	11/06
28	10/20	10/25	10/29	11/01	11/04	11/07	11/10	11/14	11/19
24	10/30	11/05	11/09	11/12	11/16	11/19	11/22	11/26	12/02
20	11/06	11/13	11/18	11/22	11/26	11/30	12/04	12/09	12/15
16	11/20	11/29	12/05	12/10	12/15	12/20	12/26	1/01	1/10
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	182	176	171	167	164	160	156	152	146
32	201	195	190	186	183	179	175	171	165
28	235	228	222	217	213	208	203	198	190
24	258	251	246	241	237	233	229	224	217
20	290	281	275	269	264	259	254	247	238
16	330	319	311	304	298	291	284	276	265

* 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: TN 3 NWS Call Sign: Elevation: 540 Feet Lat: 36°32N Lon: 85°28W

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	928	725	546	294	122	6	0	1	37	260	518	806	4243
60	781	585	398	169	56	1	0	0	10	157	378	652	3187
57	693	506	314	109	30	0	0	0	4	109	300	568	2633
55	635	454	262	77	19	0	0	0	2	83	252	510	2294
50	497	327	155	24	5	0	0	0	0	36	152	374	1570
32	146	46	4	0	0	0	0	0	0	0	4	66	266

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	240	245	482	703	1000	1226	1386	1344	1107	800	478	283	9294
55	17	8	26	91	305	536	673	631	418	170	36	14	2925
57	13	5	16	63	255	476	611	569	360	134	24	10	2536
60	8	0	7	32	187	386	518	476	276	89	12	1	1992
65	0	0	0	7	99	242	363	322	154	37	2	0	1226
70	0	0	0	1	40	117	211	180	65	12	0	0	626

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	74	120	275	480	764	989	1145	1114	873	554	274	118	74	194	469	949	1713	2702	3847	4961	5834	6388	6662	6780
45	36	61	166	341	609	839	990	959	723	404	175	61	36	97	263	604	1213	2052	3042	4001	4724	5128	5303	5364
50	13	23	86	219	454	689	835	804	573	262	100	28	13	36	122	341	795	1484	2319	3123	3696	3958	4058	4086
55	2	4	40	126	312	539	680	649	425	151	49	6	2	6	46	172	484	1023	1703	2352	2777	2928	2977	2983
60	0	0	12	59	181	389	525	494	285	70	12	0	0	0	12	71	252	641	1166	1660	1945	2015	2027	2027
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	54	91	194	324	494	665	776	752	574	371	187	81	54	145	339	663	1157	1822	2598	3350	3924	4295	4482	4563

(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