

Climatography of the United States

No. 20

1971-2000

Station: FRANKLIN SEWAGE PLANT, TN

COOP ID: 403280

Climate Division: TN 3

NWS Call Sign:

Elevation: 655 Feet

Lat: 35° 57N

Lon: 86° 52W

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	45.0	25.2	35.1	78+	1949	10	43.3+	1990	-21	1985	21	20.7	1977	926	0	.0	.0	13.2	3.9	21.8	.7
Feb	50.6	27.7	39.2	82	1962	13	47.3	1990	-12+	1951	2	26.1	1978	724	0	.0	.0	16.9	1.6	18.0	.2
Mar	60.1	35.7	47.9	87+	1967	13	54.5	1973	0	1980	3	42.5	1996	531	1	.0	.0	26.3	.2	11.9	@
Apr	69.3	43.3	56.3	94	1965	23	62.1	1981	21	1942	1	50.6	1983	275	13	.0	@	29.2	.0	4.1	.0
May	77.1	52.8	65.0	96+	1937	31	71.1	1987	30	1986	4	60.6	1976	104	102	.0	.9	31.0	.0	.1	.0
Jun	84.8	61.5	73.2	106	1952	28	76.9	1998	39+	1966	1	69.0	1974	5	249	.2	8.8	30.0	.0	.0	.0
Jul	88.9	65.9	77.4	108	1930	12	81.2	1999	43	1972	7	73.3	1984	0	385	.7	17.7	31.0	.0	.0	.0
Aug	87.8	64.0	75.9	106	1943	27	80.0	1995	41	1953	23	71.7	1992	1	340	.2	14.1	31.0	.0	.0	.0
Sep	81.7	56.9	69.3	105	1954	5	75.6	1998	30	1942	29	64.8	1984	37	166	.0	5.6	30.0	.0	@	.0
Oct	71.3	44.2	57.8	94+	1939	8	64.0	1984	21+	1976	29	50.6	1987	262	37	.0	.1	30.8	.0	3.9	.0
Nov	59.1	35.9	47.5	84	1946	1	54.6	1985	-3	1950	25	38.0	1976	527	1	.0	.0	24.6	@	11.4	.0
Dec	49.2	28.8	39.0	79	1964	24	47.3	1984	-11+	1989	22	28.0	1989	807	0	.0	.0	17.5	1.9	19.3	.1
Ann	68.7	45.2	57.0	108	Jul 1930	12	81.2	Jul 1999	-21	Jan 1985	21	20.7	Jan 1977	4199	1294	1.1	47.2	311.5	7.6	90.5	1.0

+ 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: 1928-2001

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

025-A

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: FRANKLIN SEWAGE PLANT, TN

COOP ID: 403280

Climate Division: TN 3

NWS Call Sign:

Elevation: 655 Feet Lat: 35°57N

Lon: 86°52W

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	4.45	4.14	4.00	1974	11	10.18	1974	.47	1986	10.9	7.7	3.1	1.2	1.25	1.67	2.31	2.87	3.42	3.98	4.61	5.36	6.32	7.84	9.25
Feb	4.18	3.82	4.48	1962	27	8.57	1989	.89	1978	10.5	7.1	2.9	1.2	1.64	2.03	2.58	3.03	3.46	3.90	4.38	4.92	5.62	6.68	7.66
Mar	5.78	4.88	5.42	1975	13	15.25	1975	2.66	1988	12.5	8.8	3.9	1.6	2.22	2.76	3.53	4.16	4.77	5.39	6.06	6.83	7.81	9.33	10.71
Apr	4.37	4.26	3.50	1984	22	8.55	1984	1.06	1986	10.7	7.2	3.0	1.1	1.33	1.74	2.36	2.90	3.42	3.95	4.55	5.24	6.15	7.55	8.86
May	5.68	4.93	7.25	1979	4	13.05	1983	1.17	1987	11.2	7.7	3.3	1.7	1.73	2.27	3.08	3.77	4.44	5.14	5.90	6.81	7.97	9.79	11.47
Jun	4.12	3.52	6.43	1960	17	11.30	1989	.00	1988	10.1	6.5	2.7	1.2	.45	.94	1.63	2.23	2.83	3.47	4.20	5.08	6.24	8.12	9.90
Jul	4.64	4.28	6.83	1972	28	12.71	1972	.68	1983	10.2	7.3	3.1	1.2	1.28	1.72	2.39	2.97	3.54	4.14	4.80	5.59	6.61	8.20	9.70
Aug	3.57	3.36	3.65	1952	30	6.75	1978	1.27	1990	8.4	5.7	2.7	1.2	1.40	1.73	2.20	2.59	2.96	3.33	3.74	4.21	4.80	5.72	6.55
Sep	3.90	3.58	5.81	1979	14	10.39	1979	.64	1984	8.7	6.0	3.0	1.2	.91	1.27	1.84	2.36	2.86	3.41	4.01	4.73	5.68	7.19	8.61
Oct	3.27	2.94	3.40	1932	16	8.27	1984	.25	2000	7.5	5.1	2.3	1.1	.73	1.03	1.51	1.94	2.37	2.83	3.35	3.97	4.78	6.08	7.30
Nov	4.95	4.91	4.57	1988	20	10.33	1986	1.26	1971	10.2	7.1	3.4	1.6	1.49	1.96	2.66	3.27	3.85	4.47	5.14	5.93	6.96	8.56	10.04
Dec	5.42	4.41	5.23	1978	4	13.82	1990	1.33	1985	11.1	7.5	3.3	1.8	1.42	1.93	2.72	3.41	4.09	4.81	5.60	6.54	7.77	9.70	11.51
Ann	54.33	55.58	7.25	May 1979	4	15.25	Mar 1975	.00	Jun 1988	122.0	83.7	36.7	16.1	40.62	43.32	46.76	49.35	51.64	53.85	56.11	58.60	61.61	65.95	69.68

+ 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: 1928-2001

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

Complete documentation available from:
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Station: FRANKLIN SEWAGE PLANT, TN

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Climate Division: TN 3

NWS Call Sign:

Elevation: 655 Feet

Lat: 35°57N

Lon: 86°52W

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	1.9	.0	#	0	5.0	1978	20	7.0	1977	6	1982	13	5	1979	.9	.6	.3	.1	.0	.0	.0	.0	.0
Feb	1.3	.0	#	0	4.0	1978	22	7.0	1971	5+	1985	2	3	1979	.8	.6	.1	.0	.0	.6	.3	.0	.0
Mar	.3	.0	#	0	4.0	1993	13	4.0+	1993	2+	1999	15	#+	1999	.3	.2	@	.0	.0	.2	.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	#	1989	20	#	1989	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.2	.0	#	0	2.0	1976	12	3.0	1976	2	1976	12	#+	1996	.2	.1	.0	.0	.0	.1	.0	.0	.0
Dec	.2	.0	#	0	2.0	1976	31	2.0	1976	2	1976	31	#+	1999	.2	.1	.0	.0	.0	.1	.0	.0	.0
Ann	3.9	.0	N/A	N/A	5.0	Jan 1978	20	7.0+	Jan 1977	6	Jan 1982	13	5	Jan 1979	2.4	1.6	.4	.1	.0	1.0	.3	.0	.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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Climate Division: TN 3

NWS Call Sign:

Elevation: 655 Feet

Lat: 35° 57N

Lon: 86° 52W

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	5/08	5/04	4/30	4/26	4/22	4/18	4/14	4/07
32	4/30	4/25	4/21	4/18	4/15	4/11	4/08	4/04	3/30
28	4/16	4/12	4/09	4/06	4/03	4/01	3/29	3/26	3/21
24	4/10	4/03	3/29	3/25	3/21	3/17	3/13	3/07	2/28
20	3/19	3/12	3/07	3/02	2/26	2/22	2/17	2/12	2/05
16	3/10	3/02	2/24	2/19	2/15	2/10	2/05	1/30	1/22
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	9/27	10/01	10/04	10/06	10/08	10/10	10/13	10/16	10/19
32	10/03	10/08	10/12	10/15	10/18	10/21	10/24	10/28	11/02
28	10/16	10/22	10/26	10/29	11/01	11/04	11/08	11/12	11/17
24	10/28	11/03	11/08	11/12	11/15	11/19	11/23	11/28	12/04
20	11/07	11/13	11/18	11/22	11/26	11/30	12/04	12/09	12/16
16	11/22	12/02	12/10	12/16	12/22	12/28	1/04	1/11	1/22
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	186	179	173	169	164	160	155	150	142
32	209	201	195	190	186	181	176	171	163
28	228	222	218	215	211	208	204	200	194
24	267	257	250	244	239	233	227	220	211
20	301	291	284	278	272	267	261	254	244
16	345	328	319	312	306	300	293	286	275

* 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: 655 Feet Lat: 35° 57N Lon: 86° 52W

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	926	724	531	275	104	5	0	1	37	262	527	807	4199
60	778	584	386	157	44	0	0	0	10	158	386	652	3155
57	690	507	304	103	22	0	0	0	4	109	306	568	2613
55	632	454	254	74	13	0	0	0	2	83	257	510	2279
50	494	330	152	25	3	0	0	0	0	35	155	373	1567
32	142	51	5	0	0	0	0	0	0	0	4	64	266

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	239	251	497	728	1021	1234	1408	1361	1119	798	469	280	9405
55	17	10	34	112	321	544	695	648	431	168	32	13	3025
57	13	7	22	81	268	484	633	586	373	132	21	9	2629
60	8	0	11	45	196	395	540	493	289	88	10	0	2075
65	0	0	1	13	102	249	385	340	166	37	1	0	1294
70	0	0	0	2	40	123	234	198	75	12	0	0	684

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	97	155	330	537	815	1028	1189	1145	910	593	303	143	97	252	582	1119	1934	2962	4151	5296	6206	6799	7102	7245
45	48	85	211	398	660	878	1034	990	760	441	191	78	48	133	344	742	1402	2280	3314	4304	5064	5505	5696	5774
50	22	40	122	266	505	728	879	835	610	304	109	37	22	62	184	450	955	1683	2562	3397	4007	4311	4420	4457
55	4	13	64	156	355	578	724	680	463	179	52	12	4	17	81	237	592	1170	1894	2574	3037	3216	3268	3280
60	0	0	30	81	217	428	569	525	320	92	17	1	0	0	30	111	328	756	1325	1850	2170	2262	2279	2280
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	59	110	222	354	531	696	810	775	606	396	197	87	59	169	391	745	1276	1972	2782	3557	4163	4559	4756	4843

(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