

Climatology of the United States

No. 20

1971-2000

Station: LAWRENCEBURG FILTER PLT, TN

COOP ID: 405089

Climate Division: TN 3

NWS Call Sign:

Elevation: 870 Feet Lat: 35°16N Lon: 87°21W

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	46.7	26.9	36.8	76	1972	24	44.6	1974	-14+	1966	30	25.0	1977	875	0	.0	.0	14.3	3.1	21.1	.4
Feb	51.7	29.4	40.6	81+	1962	13	48.6	1990	-12	1958	17	28.7	1978	685	0	.0	.0	18.4	1.5	16.3	.1
Mar	61.0	37.9	49.5	85+	1967	12	55.7	1973	4	1980	3	43.8	1996	485	2	.0	.0	27.4	.1	10.3	.0
Apr	69.8	45.6	57.7	89	1987	30	62.9	1981	22	1973	11	53.3	1997	231	12	.0	.0	29.5	.0	3.2	.0
May	76.5	54.1	65.3	94+	1962	28	70.7	1987	30+	1963	2	60.9	1976	88	98	.0	.5	31.0	.0	.1	.0
Jun	83.7	61.9	72.8	99	1988	26	77.0	1998	36	1966	1	68.7	1974	5	239	.0	5.6	30.0	.0	.0	.0
Jul	87.3	66.0	76.7	103	1980	17	79.8	1993	47+	1961	10	74.3	1994	0	362	.2	13.1	31.0	.0	.0	.0
Aug	86.6	64.5	75.6	101	1990	28	78.6	1995	45	1964	13	71.9	1992	1	328	@	10.7	31.0	.0	.0	.0
Sep	80.8	57.7	69.3	99+	1965	17	75.4	1998	31	1967	30	64.6	1974	37	164	.0	3.9	30.0	.0	.0	.0
Oct	70.8	45.5	58.2	92	1954	5	65.8	1984	19	1961	27	52.2	1987	245	31	.0	.0	30.8	.0	2.9	.0
Nov	59.7	37.5	48.6	83+	1984	1	56.0	1985	8	1976	30	40.1	1976	493	1	.0	.0	25.4	@	10.7	.0
Dec	50.0	30.5	40.3	75+	1964	24	49.4	1984	-10	1989	22	29.6	1989	767	0	.0	.0	18.4	1.6	17.8	.1
Ann	68.7	46.5	57.6	103	Jul 1980	17	79.8	Jul 1993	-14+	Jan 1966	30	25.0	Jan 1977	3912	1237	.2	33.8	317.2	6.3	82.4	.6

+ 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: 1954-2001

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

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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: LAWRENCEBURG FILTER PLT, TN

COOP ID: 405089

Climate Division: TN 3

NWS Call Sign:

Elevation: 870 Feet

Lat: 35°16N

Lon: 87°21W

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	5.57	5.11	4.43	1999	23	14.53	1999	.46	1986	10.1	7.8	3.9	1.9	1.47	2.00	2.80	3.51	4.21	4.95	5.76	6.73	7.99	9.97	11.83
Feb	4.69	4.15	4.05	1991	18	10.52	1991	.87	1978	8.7	6.5	3.4	1.6	1.57	2.01	2.66	3.21	3.74	4.29	4.89	5.59	6.48	7.87	9.15
Mar	6.59	5.72	7.65	1955	21	17.09	1973	2.31	1987	10.9	8.4	4.1	2.1	2.31	2.93	3.83	4.59	5.32	6.07	6.89	7.84	9.05	10.93	12.66
Apr	4.86	4.71	3.32	1983	5	9.81	1983	.60	1986	9.2	7.5	3.1	1.6	1.48	1.95	2.63	3.23	3.80	4.40	5.05	5.83	6.82	8.38	9.82
May	5.81	5.30	4.68	1991	26	13.85	1983	1.57	1977	9.6	7.5	3.7	1.9	2.10	2.64	3.43	4.09	4.72	5.37	6.07	6.89	7.93	9.54	11.01
Jun	4.21	3.20	5.38	1997	9	11.94	1997	.64	1988	9.4	6.9	2.8	1.3	1.15	1.55	2.16	2.69	3.21	3.75	4.36	5.07	5.99	7.45	8.81
Jul	5.16	5.05	8.76	1998	14	18.28	1998	1.35	1977	9.5	7.6	3.2	1.4	1.36	1.85	2.60	3.25	3.90	4.58	5.34	6.23	7.40	9.24	10.95
Aug	3.67	3.35	3.46	1981	18	11.17	1981	.64	1999	7.6	6.0	2.5	1.1	.94	1.28	1.82	2.29	2.75	3.24	3.79	4.44	5.28	6.62	7.87
Sep	4.63	4.44	4.68	1970	18	11.40	1977	.40	1984	7.1	5.9	3.1	1.4	.79	1.19	1.87	2.50	3.15	3.86	4.66	5.64	6.95	9.07	11.09
Oct	3.55	3.51	3.50	1975	17	11.18	1984	.00	2000	6.4	5.0	2.6	1.1	.58	1.05	1.66	2.15	2.63	3.14	3.70	4.36	5.22	6.59	7.86
Nov	5.65	5.45	3.74	1986	8	12.92	1986	1.52	1971	8.6	7.1	3.8	2.0	1.93	2.47	3.25	3.91	4.54	5.19	5.90	6.73	7.79	9.44	10.95
Dec	6.08	5.47	4.61	1998	13	14.45	1990	1.32	1980	9.6	8.0	4.1	1.9	1.61	2.18	3.06	3.84	4.60	5.40	6.29	7.34	8.71	10.87	12.89
Ann	60.47	61.40	8.76	Jul 1998	14	18.28	Jul 1998	.00	Oct 2000	106.7	84.2	40.3	19.3	44.95	48.01	51.90	54.83	57.42	59.91	62.48	65.30	68.72	73.64	77.88

+ 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: 1954-2001

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

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COOP ID: 405089

Climate Division: TN 3

NWS Call Sign:

Elevation: 870 Feet

Lat: 35°16N

Lon: 87°21W

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	1.7	.0	#	0	10.0	1988	7	12.5	1985	10	1988	8	2	1988	.9	.7	.2	@	@	1.2	.7	.3	.1
Feb	2.0	.0	#	0	7.0	1979	18	11.5	1985	7	1985	2	2	1980	.8	.7	.3	.1	.0	.8	.3	.1	.0
Mar	.5	.0	#	0	4.0	1993	13	4.0	1993	3	1971	25	#+	1999	.3	.2	.1	.0	.0	@	@	.0	.0
Apr	.0	.0	#	0	.5	1987	2	.5	1987	1	1987	2	#	1987	@	.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	19	#	1989	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	#	.0	#	0	#	1995	27	#+	1995	#+	1995	15	#+	1995	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.3	.0	#	0	4.3	1997	29	4.3	1997	3	1997	29	#+	1999	.4	.2	.1	.0	.0	.2	@	.0	.0
Ann	4.5	.0	N/A	N/A	10.0	Jan 1988	7	12.5	Jan 1985	10	Jan 1988	8	2+	Jan 1988	2.4	1.8	.7	.1	@	2.2	1.0	.4	.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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COOP ID: 405089

Climate Division: TN 3

NWS Call Sign:

Elevation: 870 Feet

Lat: 35° 16N

Lon: 87° 21W

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	5/16	5/09	5/04	4/30	4/26	4/23	4/19	4/14	4/07
32	4/30	4/25	4/21	4/18	4/15	4/12	4/09	4/05	3/31
28	4/15	4/10	4/07	4/04	4/01	3/30	3/27	3/24	3/19
24	4/03	3/27	3/22	3/18	3/15	3/11	3/07	3/02	2/24
20	3/16	3/09	3/04	2/28	2/24	2/20	2/16	2/11	2/05
16	3/08	2/28	2/22	2/17	2/12	2/07	2/02	1/26	1/16
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	9/30	10/03	10/06	10/08	10/10	10/12	10/15	10/17	10/21
32	10/05	10/11	10/15	10/19	10/22	10/25	10/29	11/02	11/08
28	10/20	10/26	10/29	11/01	11/04	11/07	11/11	11/14	11/19
24	11/01	11/07	11/11	11/14	11/18	11/21	11/24	11/28	12/04
20	11/10	11/17	11/22	11/26	11/30	12/05	12/09	12/14	12/21
16	11/19	12/01	12/09	12/16	12/23	12/30	1/06	1/15	1/29
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	190	182	176	171	166	162	157	151	143
32	209	202	197	193	189	185	181	176	168
28	238	230	225	221	216	212	207	202	195
24	271	263	257	252	247	242	237	231	223
20	305	296	289	284	278	273	268	261	252
16	>365	341	324	314	307	300	293	285	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:

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Climate Division: TN 3 NWS Call Sign: Elevation: 870 Feet Lat: 35°16N Lon: 87°21W

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	875	685	485	231	88	5	0	1	37	245	493	767	3912
60	724	546	342	118	31	0	0	0	10	140	353	619	2883
57	638	467	264	70	14	0	0	0	4	92	274	531	2354
55	580	414	218	45	7	0	0	0	2	67	227	474	2034
50	442	291	124	11	0	0	0	0	0	24	130	343	1365
32	103	32	3	0	0	0	0	0	0	0	3	55	196

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	251	271	543	772	1033	1225	1385	1350	1117	810	501	311	9569
55	15	9	45	127	328	535	672	637	429	164	34	18	3013
57	11	6	29	91	272	475	610	575	370	127	22	12	2600
60	4	0	14	50	197	385	517	482	286	82	11	7	2035
65	0	0	2	12	98	239	362	328	164	31	1	0	1237
70	0	0	0	1	36	114	210	182	73	9	0	0	625

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	110	174	363	564	817	1014	1163	1130	916	607	322	158	110	284	647	1211	2028	3042	4205	5335	6251	6858	7180	7338
45	56	95	239	419	662	864	1008	975	766	453	201	87	56	151	390	809	1471	2335	3343	4318	5084	5537	5738	5825
50	26	49	139	284	507	714	853	820	616	309	118	41	26	75	214	498	1005	1719	2572	3392	4008	4317	4435	4476
55	5	15	71	171	357	564	698	665	466	189	55	16	5	20	91	262	619	1183	1881	2546	3012	3201	3256	3272
60	0	2	32	85	219	414	543	510	323	95	17	1	0	2	34	119	338	752	1295	1805	2128	2223	2240	2241
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	73	120	233	371	538	694	800	770	608	396	200	95	73	193	426	797	1335	2029	2829	3599	4207	4603	4803	4898

(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