

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: PRINCETON 1 W, IN

1971-2000

COOP ID: 127125

Climate Division: IN 7

NWS Call Sign:

Elevation: 480 Feet Lat: 38° 21N Lon: 87° 35W

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	37.7	21.4	29.6	75	1943	24	41.2	1990	-19	1985	20	13.8	1977	1099	0	.0	.0	5.6	10.6	25.5	1.9
Feb	44.1	25.6	34.9	78	1932	10	42.7	1976	-16	1951	2	19.9	1978	843	0	.0	.0	9.2	5.8	19.1	.9
Mar	55.4	34.9	45.2	91	1929	24	52.6	1973	-7	1960	6	38.1	1996	616	0	.0	.0	20.2	.9	12.7	.1
Apr	66.4	44.5	55.5	92	2001	9	61.1	1981	21+	1972	8	49.4	1983	302	14	.0	.0	27.8	.0	3.4	.0
May	75.8	54.5	65.2	100	1911	28	72.5	1987	28+	1903	1	60.3	1971	117	123	.0	1.0	30.9	.0	@	.0
Jun	84.4	63.5	74.0	105	1931	30	77.5	1984	32	1918	23	69.1	1974	5	273	.1	8.3	30.0	.0	.0	.0
Jul	87.5	67.4	77.5	113	1936	13	81.0	1980	46	1962	27	73.9	1971	0	386	.4	13.3	31.0	.0	.0	.0
Aug	85.8	65.3	75.6	108+	1930	8	81.8	1995	43	1915	31	71.6	1992	3	329	.2	9.8	31.0	.0	.0	.0
Sep	79.3	57.6	68.5	105	1925	6	73.1	1998	29+	1928	24	62.9	1974	44	148	.0	3.7	30.0	.0	.0	.0
Oct	68.0	45.9	57.0	95+	1903	3	63.6	1971	19	1925	29	49.4	1988	280	29	.0	.0	30.1	.0	2.1	.0
Nov	53.6	36.2	44.9	83	1933	1	50.5	1999	-3	1929	30	36.5	1976	603	0	.0	.0	18.6	.4	10.9	.0
Dec	42.1	26.3	34.2	76	1931	11	42.2	1971	-15	1989	22	22.2	1989	955	0	.0	.0	8.1	6.2	21.5	.6
Ann	65.0	45.3	55.2	113	Jul 1936	13	81.8	Aug 1995	-19	Jan 1985	20	13.8	Jan 1977	4867	1302	.7	36.1	272.5	23.9	95.2	3.5

+ 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: 1901-2001

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

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Station: PRINCETON 1 W, IN

COOP ID: 127125

Climate Division: IN 7

NWS Call Sign:

Elevation: 480 Feet Lat: 38°21N

Lon: 87°35W

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	2.90	3.05	3.80	1937	14	6.61	1982	.44	1981	10.3	6.0	1.6	.4	.84	1.12	1.53	1.89	2.24	2.61	3.01	3.48	4.10	5.07	5.96
Feb	2.98	2.58	5.50	1908	14	8.08	2000	.73	1978	9.1	5.2	1.9	.8	.77	1.05	1.48	1.86	2.24	2.63	3.07	3.59	4.27	5.35	6.35
Mar	4.22	4.14	4.89	1964	9	8.54	1977	.91	1971	11.7	7.9	3.3	1.0	1.43	1.83	2.42	2.91	3.38	3.87	4.40	5.03	5.82	7.06	8.20
Apr	4.45	3.85	3.18	1970	28	9.80	1972	1.33	1976	11.7	8.0	2.6	1.2	1.53	1.95	2.56	3.08	3.58	4.09	4.64	5.29	6.12	7.40	8.58
May	5.11	4.61	4.70	1961	8	13.20	1981	1.45	1994	11.1	7.5	3.9	1.6	1.58	2.07	2.79	3.41	4.01	4.63	5.32	6.12	7.16	8.78	10.27
Jun	3.92	3.61	3.62	1961	15	8.96	2000	.52	1984	9.7	6.3	2.8	.9	.90	1.26	1.84	2.35	2.87	3.41	4.03	4.76	5.72	7.25	8.69
Jul	3.94	4.02	8.29	1979	26	14.62	1979	.55	1983	8.3	5.6	2.6	1.2	.77	1.13	1.71	2.24	2.78	3.35	4.01	4.80	5.84	7.51	9.10
Aug	4.10	3.78	10.50	1905	6	11.38	2000	.35	1976	8.1	5.6	2.8	1.4	.85	1.22	1.83	2.37	2.93	3.52	4.19	4.99	6.05	7.74	9.35
Sep	3.19	3.31	4.55	1959	27	8.16	1993	.70	1999	7.9	5.2	2.2	1.0	.98	1.28	1.73	2.12	2.50	2.89	3.31	3.82	4.47	5.48	6.42
Oct	3.23	2.77	3.50	1910	5	8.20	1984	.11	2000	7.9	5.0	2.4	.9	.64	.93	1.40	1.84	2.28	2.75	3.29	3.93	4.79	6.16	7.46
Nov	4.44	4.17	4.29	1993	14	11.03	1985	.22	1999	10.1	6.9	3.2	1.4	1.06	1.48	2.13	2.71	3.28	3.89	4.57	5.38	6.45	8.13	9.72
Dec	3.60	3.10	3.80	1932	30	8.99	1982	.64	1976	10.2	6.7	2.6	.8	1.05	1.39	1.91	2.35	2.79	3.24	3.74	4.32	5.08	6.27	7.38
Ann	46.08	46.91	10.50	Aug 1905	6	14.62	Jul 1979	.11	Oct 2000	116.1	75.9	31.9	12.6	34.63	36.89	39.77	41.93	43.84	45.68	47.57	49.65	52.15	55.76	58.87

+ 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: 1901-2001

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

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Station: PRINCETON 1 W, IN

COOP ID: 127125

Climate Division: IN 7

NWS Call Sign:

Elevation: 480 Feet

Lat: 38°21N

Lon: 87°35W

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	2.6	1.5	1	#	5.0	1984	23	11.0	1996	10	1979	7	5	1977	1.4	1.1	.4	.1	.0	1.2	.9	.1	.0
Feb	2.9	1.0	#	#	9.0	1993	25	17.0	1993	9	1993	26	3	1993	1.5	1.1	.4	.2	.0	.9	.8	.6	.0
Mar	1.1	.0	#	0	7.0	1996	20	12.0	1996	12	1996	20	1	1996	.3	.2	.2	.1	.0	.4	.3	.1	.1
Apr	.3	.0	#	0	6.0	1971	6	6.0	1971	3	1971	6	#+	1997	.1	.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	.1	.0	#	0	3.0	1993	30	3.0	1993	#	1993	30	#	1993	@	@	@	.0	.0	.0	.0	.0	.0
Nov	.3	.0	#	0	3.1	1977	27	3.1	1977	4	1975	26	#+	1997	.1	.1	.1	.0	.0	.1	.1	.0	.0
Dec	1.6	.9	#	0	6.7	1990	27	6.7	1990	7	1990	27	1	1995	1.3	1.0	.2	@	.0	1.3	.3	.2	.0
Ann	8.9	3.4	N/A	N/A	9.0	Feb 1993	25	17.0	Feb 1993	12	Mar 1996	20	5	Jan 1977	4.7	3.6	1.3	.4	.0	3.9	2.4	1.0	.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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No. 20 1971-2000

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COOP ID: 127125

Climate Division: IN 7

NWS Call Sign:

Elevation: 480 Feet

Lat: 38°21N

Lon: 87°35W

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	5/12	5/05	5/01	4/27	4/23	4/20	4/16	4/12	4/05
32	4/24	4/20	4/17	4/14	4/12	4/09	4/07	4/04	3/31
28	4/14	4/09	4/05	4/02	3/30	3/27	3/24	3/21	3/15
24	4/05	3/31	3/27	3/24	3/21	3/18	3/15	3/12	3/07
20	3/22	3/16	3/12	3/09	3/05	3/02	2/26	2/22	2/16
16	3/13	3/06	3/01	2/24	2/20	2/16	2/12	2/06	1/30
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	9/28	10/02	10/04	10/07	10/09	10/11	10/14	10/16	10/20
32	10/07	10/13	10/17	10/20	10/23	10/27	10/30	11/03	11/09
28	10/18	10/24	10/28	10/31	11/03	11/06	11/09	11/13	11/19
24	10/30	11/05	11/10	11/14	11/17	11/21	11/25	11/30	12/06
20	11/06	11/14	11/19	11/24	11/28	12/03	12/08	12/13	12/21
16	11/22	11/28	12/03	12/07	12/11	12/15	12/19	12/24	12/30
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	187	180	176	172	168	164	160	155	149
32	215	207	202	198	194	190	185	180	173
28	238	231	226	221	217	213	208	203	196
24	264	256	250	245	241	236	231	225	217
20	296	286	279	273	267	262	256	249	239
16	318	310	303	298	293	288	283	277	268

* 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: IN 7 NWS Call Sign: Elevation: 480 Feet Lat: 38°21N Lon: 87°35W

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	1099	843	616	302	117	5	0	3	44	280	603	955	4867
60	944	703	471	183	55	1	0	0	12	170	456	800	3795
57	852	626	386	126	31	0	0	0	5	118	373	714	3231
55	799	574	333	94	20	0	0	0	2	90	320	655	2887
50	653	446	220	38	6	0	0	0	0	39	202	512	2116
32	240	120	18	0	0	0	0	0	0	0	10	143	531

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	164	201	426	703	1029	1258	1409	1349	1094	772	397	212	9014
55	10	11	27	107	336	568	696	636	406	149	16	11	2973
57	1	7	18	79	285	508	634	574	349	116	10	7	2588
60	0	0	10	46	216	419	541	481	266	75	3	0	2057
65	0	0	0	14	123	273	386	329	148	29	0	0	1302
70	0	0	0	3	57	144	235	191	64	8	0	0	702

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	40	86	233	471	789	1035	1180	1125	879	549	227	71	40	126	359	830	1619	2654	3834	4959	5838	6387	6614	6685
45	17	43	141	335	634	885	1025	970	729	400	138	32	17	60	201	536	1170	2055	3080	4050	4779	5179	5317	5349
50	3	16	77	218	481	735	870	815	579	270	72	14	3	19	96	314	795	1530	2400	3215	3794	4064	4136	4150
55	0	5	40	128	335	585	715	660	433	159	34	5	0	5	45	173	508	1093	1808	2468	2901	3060	3094	3099
60	0	0	11	63	209	435	560	505	295	83	9	0	0	0	11	74	283	718	1278	1783	2078	2161	2170	2170
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	26	47	135	280	497	702	817	774	576	334	120	36	26	73	208	488	985	1687	2504	3278	3854	4188	4308	4344

(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