

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: OOLITIC PURDUE EXP FRM, IN

1971-2000

COOP ID: 126580

Climate Division: IN 8

NWS Call Sign:

Elevation: 650 Feet Lat: 38° 53N Lon: 86° 33W

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	37.1	18.2	27.7	75	1943	24	38.6	1990	-29	1994	19	10.7	1977	1159	0	.0	.0	4.9	11.2	27.6	3.7
Feb	42.8	21.5	32.2	75	2000	26	39.8	1998	-18	1951	2	18.1	1978	921	0	.0	.0	8.6	6.9	23.4	2.4
Mar	53.3	30.7	42.0	87	1929	24	49.1	1973	-6+	1960	5	34.9	1978	713	0	.0	.0	18.1	1.5	19.1	.2
Apr	64.1	40.3	52.2	92	1925	24	58.3	1981	13	1969	1	47.5	1982	386	3	.0	.0	26.6	.0	7.5	.0
May	73.7	50.6	62.2	103	1918	28	69.1	1991	27	1976	4	57.1	1994	167	78	.0	.2	30.8	.0	.6	.0
Jun	82.1	60.0	71.1	108	1936	29	74.3	1984	37	1918	23	67.0	1974	14	195	.1	3.0	30.0	.0	.0	.0
Jul	86.0	64.1	75.1	111	1930	28	78.3	1983	45	1937	1	71.9	1996	0	311	.3	7.5	31.0	.0	.0	.0
Aug	84.8	61.9	73.4	109	1936	19	78.6	1983	41	1986	29	69.3	1992	8	266	.2	5.8	31.0	.0	.0	.0
Sep	78.5	53.3	65.9	105	1953	2	70.4	1998	27	1928	26	60.8	1974	73	99	.0	2.1	30.0	.0	.1	.0
Oct	66.9	40.6	53.8	92+	1939	8	61.0	1971	16+	1981	24	47.1	1987	362	14	.0	.0	29.6	.0	7.1	.0
Nov	53.8	32.6	43.2	83	1950	1	49.4	1999	-3	1958	30	34.5	1976	654	0	.0	.0	18.2	.7	16.4	.0
Dec	41.9	22.9	32.4	75	1982	3	42.3	1982	-23+	1989	22	19.5	1989	1011	0	.0	.0	8.6	6.8	24.6	1.7
Ann	63.8	41.4	52.6	111	Jul 1930	28	78.6	Aug 1983	-29	Jan 1994	19	10.7	Jan 1977	5468	966	.6	18.6	267.4	27.1	126.4	8.0

+ 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: 1902-2001

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

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: OOLITIC PURDUE EXP FRM, IN

COOP ID: 126580

Climate Division: IN 8

NWS Call Sign:

Elevation: 650 Feet Lat: 38°53N

Lon: 86°33W

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	2.75	2.54	4.15	1949	24	7.64	1982	.36	1981	9.6	5.8	1.8	.6	.70	.96	1.36	1.71	2.06	2.43	2.83	3.32	3.95	4.94	5.88
Feb	2.70	2.24	3.21	1945	26	6.01	1988	.18	1978	8.0	5.2	1.9	.5	.61	.86	1.25	1.61	1.96	2.34	2.77	3.27	3.94	5.01	6.01
Mar	3.77	3.15	4.20	1964	9	9.52	1989	.98	1994	10.6	7.1	2.8	.8	1.25	1.61	2.13	2.58	3.01	3.45	3.94	4.50	5.23	6.36	7.40
Apr	4.47	3.79	4.80	1998	16	12.96	1998	1.10	1971	11.6	8.3	2.9	1.1	1.26	1.68	2.32	2.88	3.43	4.00	4.63	5.38	6.35	7.87	9.29
May	5.04	4.59	3.02	1918	12	9.77	1990	2.06	1992	11.5	8.2	3.8	1.4	2.20	2.65	3.28	3.80	4.28	4.76	5.28	5.88	6.63	7.77	8.81
Jun	4.11	3.85	4.05	2000	17	10.15	2000	.37	1988	10.1	7.1	2.9	1.1	1.10	1.48	2.08	2.60	3.11	3.65	4.25	4.95	5.88	7.32	8.67
Jul	4.53	3.76	3.78	1984	4	10.62	1979	.88	1974	9.0	6.4	3.1	1.5	1.28	1.71	2.36	2.93	3.48	4.06	4.70	5.45	6.43	7.97	9.40
Aug	4.20	4.19	4.61	1992	8	8.44	1979	.31	1987	8.3	6.2	2.6	1.1	.81	1.19	1.81	2.37	2.95	3.57	4.27	5.12	6.24	8.04	9.75
Sep	3.10	2.77	3.98	1932	3	7.51	1974	.35	1998	7.4	5.2	2.1	1.0	.58	.86	1.31	1.73	2.16	2.62	3.14	3.77	4.61	5.96	7.25
Oct	3.24	2.50	5.03	1978	13	10.57	1983	1.12	1994	7.8	5.5	2.0	.8	.93	1.24	1.70	2.10	2.49	2.90	3.36	3.89	4.58	5.67	6.67
Nov	3.94	3.57	2.85	1936	3	8.63	1985	1.11	1976	9.8	7.1	2.5	1.0	1.32	1.70	2.24	2.70	3.15	3.61	4.11	4.69	5.44	6.61	7.68
Dec	3.30	3.30	2.48	2001	17	6.88	1990	.54	1976	9.5	6.2	2.8	.6	1.11	1.42	1.88	2.27	2.64	3.02	3.44	3.93	4.56	5.54	6.44
Ann	45.15	47.49	5.03	Oct 1978	13	12.96	Apr 1998	.18	Feb 1978	113.2	78.3	31.2	11.5	32.54	34.99	38.12	40.50	42.60	44.64	46.73	49.05	51.85	55.91	59.42

+ 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: 1902-2001

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

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: OOLITIC PURDUE EXP FRM, IN

COOP ID: 126580

Climate Division: IN 8

NWS Call Sign:

Elevation: 650 Feet

Lat: 38°53N

Lon: 86°33W

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	5.2	2.2	1	#	10.0	1978	17	22.4	1979	13	1978	18	8	1977	4.3	1.9	.4	.2	@	8.0	2.9	1.9	1.1
Feb	3.6	2.3	1	#	7.0	1993	26	15.3	1993	12	1977	1	7	1978	2.9	1.2	.5	.1	.0	5.9	3.7	1.7	.1
Mar	2.5	1.6	#	#	10.0	1996	20	13.8	1978	10+	1996	20	4	1978	1.6	1.0	.2	.1	@	2.0	.8	.6	.1
Apr	.1	.0	#	0	1.0	1996	8	1.0	1996	1+	1996	8	#+	1996	.1	@	.0	.0	.0	.1	.0	.0	.0
May	#	.0	#	0	#	1997	13	#	1997	#	1997	13	#	1997	.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	1.4	1993	30	1.4	1993	1+	1993	30	#+	1993	.1	.1	.0	.0	.0	.1	.0	.0	.0
Nov	.4	.0	#	0	3.0	1975	27	3.7	1971	3	1975	28	#+	1992	.6	.1	@	.0	.0	.4	.1	.0	.0
Dec	2.8	2.3	#	#	7.0	1973	20	9.3	1973	7	1990	28	2+	2000	2.6	1.0	.3	.1	.0	3.5	1.4	.4	.0
Ann	14.7	8.4	N/A	N/A	10.0+	Mar 1996	20	22.4	Jan 1979	13	Jan 1978	18	8	Jan 1977	12.2	5.3	1.4	.5	@	20.0	8.9	4.6	1.3

+ 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:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: OOLITIC PURDUE EXP FRM, IN

COOP ID: 126580

Climate Division: IN 8

NWS Call Sign:

Elevation: 650 Feet

Lat: 38° 53N

Lon: 86° 33W

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	5/19	5/14	5/10	5/07	5/04	5/01	4/28	4/24	4/19
32	5/11	5/05	5/02	4/28	4/25	4/22	4/19	4/15	4/09
28	4/23	4/19	4/16	4/13	4/10	4/08	4/05	4/02	3/28
24	4/13	4/09	4/05	4/02	3/30	3/28	3/25	3/21	3/16
20	4/07	4/01	3/27	3/24	3/20	3/17	3/13	3/09	3/03
16	3/24	3/18	3/14	3/10	3/06	3/03	2/27	2/22	2/16
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	9/23	9/27	9/29	10/01	10/03	10/05	10/07	10/09	10/12
32	9/30	10/04	10/07	10/09	10/11	10/13	10/15	10/18	10/21
28	10/09	10/15	10/19	10/23	10/26	10/29	11/01	11/05	11/11
24	10/21	10/26	10/29	11/01	11/04	11/07	11/10	11/13	11/18
20	11/03	11/08	11/12	11/16	11/19	11/23	11/26	11/30	12/06
16	11/08	11/15	11/21	11/25	11/29	12/04	12/08	12/14	12/21
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	169	163	158	154	151	148	144	140	134
32	186	180	175	172	168	164	161	156	150
28	217	210	206	201	198	194	190	185	179
24	238	231	226	222	218	214	210	205	198
20	269	260	254	248	243	238	233	226	218
16	292	284	278	272	268	263	257	251	243

* 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

**Climatography
of the United States
No. 20
1971-2000**

Station: OOLITIC PURDUE EXP FRM, IN

COOP ID: 126580

Climate Division: IN 8 NWS Call Sign: Elevation: 650 Feet Lat: 38°53N Lon: 86°33W

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	1159	921	713	386	167	14	0	8	73	362	654	1011	5468
60	1004	781	559	249	87	3	0	0	25	236	505	856	4305
57	911	697	474	177	53	1	0	0	11	173	419	769	3685
55	850	645	417	135	36	0	0	0	6	137	364	711	3301
50	709	516	286	58	12	0	0	0	1	67	238	567	2454
32	271	156	33	0	0	0	0	0	0	0	15	180	655

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	135	159	343	606	934	1171	1334	1281	1016	674	351	192	8196
55	1	5	14	52	258	481	621	568	332	98	11	10	2451
57	0	0	9	33	213	422	559	506	277	72	5	6	2102
60	0	0	2	15	154	334	466	413	202	42	1	0	1629
65	0	0	0	3	78	195	311	266	99	14	0	0	966
70	0	0	0	0	31	84	166	140	35	3	0	0	459

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	32	58	170	378	690	931	1085	1035	782	441	186	59	32	90	260	638	1328	2259	3344	4379	5161	5602	5788	5847
45	9	23	98	252	535	781	930	880	632	305	106	25	9	32	130	382	917	1698	2628	3508	4140	4445	4551	4576
50	3	9	54	150	385	631	775	725	483	185	60	11	3	12	66	216	601	1232	2007	2732	3215	3400	3460	3471
55	0	1	24	78	250	482	620	570	340	101	22	2	0	1	25	103	353	835	1455	2025	2365	2466	2488	2490
60	0	0	6	34	138	335	465	415	214	47	6	0	0	0	6	40	178	513	978	1393	1607	1654	1660	1660
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	20	44	117	238	431	623	745	699	507	288	116	37	20	64	181	419	850	1473	2218	2917	3424	3712	3828	3865

(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