

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: COUDERAY 7 W, WI

1971-2000

COOP ID: 471847

Climate Division: WI 1

NWS Call Sign:

Elevation: 1,300 Feet Lat: 45°48N

Lon: 91°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	18.7	-1.9	8.4	54+	1981	25	26.4	1990	-50+	1996	31	-6.8	1982	1755	0	.0	.0	.2	26.1	30.9	16.9
Feb	25.6	3.8	14.7	59	2000	29	28.0	1998	-55+	1996	4	.4	1979	1409	0	.0	.0	.5	18.5	27.6	11.5
Mar	37.8	18.5	28.2	72+	2000	7	37.7	1973	-48	1962	1	19.3	1984	1143	0	.0	.0	4.6	8.6	27.1	4.5
Apr	51.9	29.9	40.9	89	1952	28	49.3	1987	-5	1995	5	32.3	1996	725	2	.0	.0	16.7	.8	19.5	.1
May	67.8	40.8	54.3	92+	1988	31	64.0	1977	12	1966	9	46.7	1997	373	42	.0	.3	29.6	@	7.2	.0
Jun	74.5	51.0	62.8	98+	1995	22	74.0	1988	22	1993	1	51.9	1982	184	117	.0	1.2	30.0	.0	1.3	.0
Jul	79.0	57.7	68.4	102+	1995	14	77.0	1983	30	1990	13	57.8	1992	84	188	.3	3.4	31.0	.0	.1	.0
Aug	76.0	55.5	65.8	100	1988	1	74.2	1983	25	1976	29	59.3	1977	106	129	@	1.9	31.0	.0	.3	.0
Sep	66.4	44.2	55.3	95	1976	7	61.3	1990	16	1976	24	49.8	1993	301	11	.0	.2	29.7	.0	4.0	.0
Oct	54.8	33.5	44.2	87	1953	2	51.3	1973	3+	1993	31	37.4	1980	647	0	.0	.0	23.7	.1	15.2	.0
Nov	36.8	21.4	29.1	73	1978	3	38.6	1999	-32+	1976	30	20.0	1985	1078	0	.0	.0	5.3	8.6	25.8	1.7
Dec	24.1	6.7	15.4	61	1962	3	24.6	1994	-52	1983	19	-.3	1989	1538	0	.0	.0	.3	22.1	30.6	10.5
Ann	51.1	30.1	40.6	102+	Jul 1995	14	77.0	Jul 1983	-55+	Feb 1996	4	-6.8	Jan 1982	9343	489	.3	7.0	202.6	84.8	189.6	45.2

+ 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: 1948-2001

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

021-A

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COOP ID: 471847

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NWS Call Sign:

Elevation: 1,300 Feet Lat: 45°48N

Lon: 91°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	1.07	.97	1.30	1996	18	2.38	1982	.00	1981	6.2	3.6	.4	.1	.18	.32	.50	.65	.79	.95	1.11	1.31	1.57	1.98	2.36	
Feb	.96	.93	1.20+	1998	28	2.06	1998	.00	1995	5.2	2.9	.5	.1	.06	.16	.31	.45	.60	.77	.95	1.18	1.50	2.01	2.50	
Mar	1.87	1.74	1.50	1986	18	4.08	1985	.09	1978	6.6	4.5	.9	.3	.39	.56	.83	1.08	1.33	1.60	1.90	2.27	2.75	3.52	4.25	
Apr	2.63	2.72	2.80	1954	26	5.02	1977	.28+	1988	7.9	6.7	1.7	.5	.57	.81	1.20	1.55	1.90	2.27	2.69	3.20	3.86	4.92	5.92	
May	3.27	2.62	3.20+	1959	26	6.02	1999	.65	1976	8.6	7.1	2.4	.6	1.07	1.38	1.84	2.23	2.60	2.99	3.41	3.90	4.54	5.52	6.44	
Jun	4.48	4.33	4.70	1956	14	8.93	1981	1.89	1988	10.4	8.8	3.4	.9	1.79	2.20	2.78	3.27	3.72	4.19	4.69	5.27	6.00	7.13	8.15	
Jul	4.76	4.83	4.22	1958	1	9.78	2000	1.05	1998	8.9	7.8	3.2	1.5	1.44	1.90	2.57	3.15	3.72	4.30	4.94	5.70	6.68	8.20	9.62	
Aug	4.72	4.60	3.65	1985	9	8.39	1980	.85	1976	9.5	8.1	3.4	1.5	1.71	2.16	2.80	3.33	3.84	4.37	4.94	5.60	6.44	7.74	8.94	
Sep	4.37	3.86	3.80	1968	23	11.51	1985	1.18	1976	9.2	8.0	2.7	1.1	1.15	1.57	2.20	2.76	3.30	3.88	4.52	5.27	6.26	7.81	9.27	
Oct	3.29	2.78	5.00	1973	9	7.75	1982	1.00	1976	7.4	6.5	2.0	1.0	.96	1.27	1.74	2.15	2.54	2.96	3.41	3.95	4.65	5.74	6.75	
Nov	2.08	1.82	2.45	2000	2	7.54	2000	.25	1981	6.2	4.9	1.3	.5	.26	.43	.72	1.01	1.32	1.66	2.05	2.54	3.20	4.28	5.33	
Dec	1.02	.87	1.07	1959	28	2.46	1972	.00	1989	5.7	3.6	.4	@	.09	.21	.37	.52	.67	.84	1.03	1.25	1.56	2.05	2.52	
Ann	34.52	33.45	5.00	Oct 1973	9	11.51	Sep 1985	.00+	Feb 1995	91.8	72.5	22.3	8.1	23.45	25.55	28.27	30.34	32.19	33.99	35.85	37.92	40.44	44.11	47.30	

+ 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: 1948-2001

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

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Station: COUDERAY 7 W, WI

COOP ID: 471847

Climate Division: WI 1

NWS Call Sign:

Elevation: 1,300 Feet

Lat: 45°48N

Lon: 91°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	3.6	-99.9	11	9	4.5	2000	10	7.1	2000	44	1997	24	40	1997	1.2	.8	.2	.0	.0	-9.9	-9.9	-9.9	-9.9
Feb	3.5	-99.9	12	11	6.9	2000	15	10.4	1999	39	1997	1	31	1997	1.1	.9	.3	.2	.0	-9.9	-9.9	-9.9	-9.9
Mar	1.4	-99.9	8	5	4.0	1971	15	4.3	2000	38	1996	4	27	1996	.3	.2	.2	.0	.0	-9.9	-9.9	-9.9	-9.9
Apr	5.1	5.3	2	0	10.0	1974	1	18.0	1974	35	1996	5	15	1971	1.3	1.2	.5	.2	.1	.0	.0	.0	.0
May	.1	.0	0	0	2.0	1989	6	2.0	1989	7	1984	1	1	1984	.1	.1	.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	#	1974	21	#	1974	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	1.1	.0	#	0	4.0	1986	14	6.0	1992	5	1982	20	#+	2000	.4	.4	.2	.0	.0	.3	.1	.0	.0
Nov	3.0	-99.9	2	1	12.0	1994	29	12.0	1994	27	1991	30	7	1991	.8	.8	.3	.2	.1	-9.9	-9.9	-9.9	-9.9
Dec	4.2	-99.9	6	4	5.0	2000	16	16.9	2000	36	1996	31	22	1991	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9
Ann	22.0	-9.9	N/A	N/A	12.0	Nov 1994	29	18.0	Apr 1974	44	Jan 1997	24	40	Jan 1997	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9	-9.9

+ 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

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Climate Division: WI 1

NWS Call Sign:

Elevation: 1,300 Feet

Lat: 45° 48N

Lon: 91° 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	7/08	6/29	6/23	6/18	6/13	6/08	6/03	5/28	5/19
32	6/23	6/16	6/11	6/07	6/03	5/30	5/26	5/21	5/14
28	6/11	6/04	5/30	5/26	5/22	5/19	5/15	5/10	5/03
24	5/26	5/20	5/15	5/11	5/07	5/03	4/29	4/24	4/17
20	5/16	5/08	5/03	4/28	4/23	4/19	4/14	4/08	4/01
16	4/30	4/23	4/19	4/15	4/11	4/07	4/03	3/29	3/23
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	8/17	8/23	8/28	9/01	9/05	9/08	9/12	9/17	9/23
32	8/26	9/01	9/05	9/09	9/13	9/16	9/20	9/25	10/01
28	9/03	9/10	9/15	9/19	9/23	9/27	10/01	10/06	10/13
24	9/14	9/20	9/25	9/28	10/02	10/05	10/09	10/13	10/19
20	9/27	10/04	10/08	10/12	10/16	10/20	10/24	10/29	11/04
16	10/14	10/19	10/23	10/27	10/30	11/02	11/05	11/09	11/15
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	114	103	96	89	83	77	70	62	51
32	131	121	113	107	101	95	89	82	72
28	152	142	134	128	123	117	111	104	94
24	177	167	159	153	147	141	135	128	118
20	208	197	188	182	175	169	162	154	142
16	227	218	212	206	201	196	191	184	175

* 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

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COOP ID: 471847

Climate Division: WI 1 NWS Call Sign: Elevation: 1,300 Feet Lat: 45° 48N Lon: 91° 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	1755	1409	1143	725	373	184	84	106	301	647	1078	1538	9343
60	1600	1269	988	580	262	110	36	45	179	495	928	1383	7875
57	1507	1185	895	497	206	75	20	24	121	408	838	1290	7066
55	1445	1129	833	444	172	56	14	15	88	353	778	1228	6555
50	1290	989	687	321	101	25	3	3	33	231	633	1073	5389
32	771	536	241	49	4	0	0	0	0	17	208	562	2388

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	38	51	122	317	696	923	1127	1046	700	393	121	47	5581
55	0	0	0	22	151	288	427	348	98	17	0	0	1351
57	0	0	0	15	123	247	372	294	70	10	0	0	1131
60	0	0	0	8	86	193	294	223	39	4	0	0	847
65	0	0	0	2	42	117	188	129	11	0	0	0	489
70	0	0	0	0	19	59	108	62	2	0	0	0	250

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	0	2	24	147	467	706	920	839	508	214	29	1	0	2	26	173	640	1346	2266	3105	3613	3827	3856	3857
45	0	1	11	80	325	556	765	684	365	117	10	0	0	1	12	92	417	973	1738	2422	2787	2904	2914	2914
50	0	0	2	39	210	410	610	529	236	53	3	0	0	0	2	41	251	661	1271	1800	2036	2089	2092	2092
55	0	0	0	17	120	276	457	375	132	21	0	0	0	0	0	17	137	413	870	1245	1377	1398	1398	1398
60	0	0	0	3	58	162	308	236	68	2	0	0	0	0	0	3	61	223	531	767	835	837	837	837
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	1	12	104	312	456	611	545	315	143	16	0	0	1	13	117	429	885	1496	2041	2356	2499	2515	2515

(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