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

COOP ID: 474894

Station: LUCK, WI

Climate Division: WI 1

NWS Call Sign:

Elevation: 1,220 Feet Lat: 45°35N Lon: 92°29W

									r	Гетр	eratui	re (°F)											
	Mea	n (1)						Extr	emes						Days (1) emp 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	19.6	1.7	10.7	52	1981	24	23.8	1990	-43	1977	9	-1.2	1977	1684	0	.0	.0	.1	25.7	30.9	15.0		
Feb	26.7	8.6	17.7	59	2000	29	30.8	1998	-38	1996	2	6.7	1989	1325	0	.0	.0	.4	17.3	27.6	9.6		
Mar	38.5	21.0	29.8	80+	1986	31	38.7	1973	-22	1982	9	20.7	1975	1093	0	.0	.0	5.9	8.0	26.8	3.3		
Apr	55.1	33.8	44.5	89	1980	21	51.5	1987	0	1975	4	37.5	1975	617	1	.0	.0	21.4	.5	15.2	@		
May	68.7	46.0	57.4	89+	2001	16	64.6	1977	20	1973	15	51.7	1979	272	34	.0	.0	30.3	.0	3.0	.0		
Jun	76.1	54.4	65.3	96	1987	14	70.4	1988	32+	1992	21	59.7	1982	84	91	.0	1.1	30.0	.0	.1	.0		
Jul	80.5	59.2	69.9	101	1988	15	74.3	1987	39	1972	4	63.6	1992	24	174	.1	2.5	31.0	.0	.0	.0		
Aug	78.0	57.6	67.8	100	1988	1	72.3	1988	33	1986	28	63.5	1977	47	134	@	1.1	31.0	.0	.0	.0		
Sep	69.1	48.8	59.0	96	1976	7	64.7	1998	22	1974	22	53.2	1993	204	23	.0	.1	29.7	.0	1.8	.0		
Oct	57.1	37.5	47.3	84	1997	3	52.4	1971	9	1976	27	41.1	1976	548	0	.0	.0	24.0	.2	10.7	.0		
Nov	38.0	23.4	30.7	71	1978	3	39.9	1999	-21	1976	30	23.0	1991	1030	0	.0	.0	5.6	9.1	25.3	1.3		
Dec	23.8	8.3	16.1	61	1998	2	25.0	1997	-44	1983	19	3.1	1983	1517	0	.0	.0	.3	23.1	30.8	10.2		
Ann	52.6	33.4	43.0	101	Jul 1988	15	74.3	Jul 1987	-44	Dec 1983	19	-1.2	Jan 1977	8445	457	.1	4.8	209.7	83.9	172.2	39.4		

⁺ Also occurred on an earlier date(s)

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

Issue Date: February 2004 057-A

- (1) From the 1971-2000 Monthly Normals
- (2) Derived from station's available digital record: 1971-2001
- (3) Derived from 1971-2000 serially complete daily data

[@] Denotes mean number of days greater than 0 but less than .05

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COOP ID: 474894

Station: LUCK, WI

Climate Division: WI 1 NWS Call Sign: Elevation: 1,220 Feet Lat: 45°35N Lon: 92°29W

										Pı	ecipi	tation	(incl	nes)										
	Mea Medi		P	recipi	tatio	n Total					of D	Number (3))	Proba		nat the m	nonthly/ onthly/An	annual j indic	ated am	ntion wi nount vs Probal	ll be equ	els		in the
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	.96	.86	1.38	1996	18	2.50	1975	.01	1981	8.1	2.9	.3	.1	.13	.21	.34	.48	.62	.77	.95	1.17	1.47	1.96	2.44
Feb	.79	.56	.86+	1981	27	3.44	1981	.08	1988	6.3	2.6	.2	.0	.09	.15	.26	.37	.49	.62	.77	.97	1.23	1.66	2.08
Mar	1.67	1.38	1.41	1977	12	4.61	1977	.27	1987	7.5	4.2	1.0	.2	.35	.51	.75	.97	1.20	1.44	1.71	2.03	2.46	3.14	3.79
Apr	2.38	2.51	2.76	2001	23	5.45	1986	.11	1987	9.1	5.8	1.5	.5	.40	.61	.96	1.28	1.62	1.98	2.40	2.91	3.58	4.68	5.73
May	3.53	3.23	3.01	1978	28	8.19	1991	.99	1976	10.6	6.9	2.3	.7	1.30	1.63	2.11	2.50	2.88	3.27	3.69	4.18	4.81	5.77	6.65
Jun	4.28	3.94	3.66	1981	14	8.51	1981	1.06	1987	11.7	7.9	3.1	.9	1.65	2.05	2.62	3.09	3.53	3.98	4.48	5.04	5.77	6.88	7.89
Jul	4.09	3.81	3.12	1972	23	11.27	1972	1.19	1981	11.3	7.2	2.8	.8	1.40	1.79	2.35	2.83	3.28	3.75	4.26	4.86	5.63	6.81	7.90
Aug	4.38	3.98	3.99	1998	20	8.49	1995	1.40	2000	11.1	7.2	3.0	1.2	1.81	2.21	2.77	3.24	3.67	4.12	4.59	5.14	5.84	6.90	7.86
Sep	3.87	3.49	3.18+	1991	8	9.39	1991	.95	2000	10.5	6.8	2.7	1.0	.98	1.34	1.90	2.40	2.89	3.41	3.99	4.67	5.57	6.99	8.32
Oct	2.65	2.36	2.48	1973	9	6.20	1971	.53	1976	9.7	5.9	1.8	.4	.70	.95	1.33	1.67	2.00	2.35	2.74	3.19	3.79	4.73	5.61
Nov	2.06	1.70	2.07	1991	1	5.50+	1991	.25	1981	8.2	4.5	1.3	.5	.26	.43	.72	1.01	1.31	1.65	2.04	2.52	3.17	4.24	5.28
Dec	.92	.80	1.19	1982	28	2.90	1982	.16	1980	8.2	2.7	.4	.1	.15	.23	.36	.49	.62	.77	.93	1.13	1.39	1.83	2.24
Ann	31.58	32.62	3.99	Aug 1998	20	11.27	Jul 1972	.01	Jan 1981	112.3	64.6	20.4	6.4	22.32	24.11	26.40	28.15	29.69	31.19	32.74	34.45	36.53	39.54	42.15

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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: 1971-2001

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

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Station: LUCK, WI **Climate Division: WI 1**

NWS Call Sign:

Elevation: 1,220 Feet

Lat: 45°35N

Lon: 92°29W

COOP ID: 474894

										Snov	w (inc	hes)											
						Sn	ow To	tals									Mea	n Nu	mber	of Da	ys (1)		
	Mean	s/Medi	ans (1)	ı					Extre	mes (2)							ow Fa			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	13.6	12.0	12	12	8.0	1979	23	30.4	1975	39	1982	26	27	1997	5.6	4.8	1.8	.5	.0	27.5	26.2	22.7	16.4
Feb	8.8	8.3	11	10	8.5	1991	23	22.0	1979	43	1982	13	30	1982	4.3	3.5	1.1	.3	.0	23.0	21.9	20.2	10.8
Mar	11.1	8.8	5	2	12.0	1985	31	35.0	1985	30	1972	4	17	1989	3.2	2.9	1.6	.6	.1	11.3	8.0	5.8	2.3
Apr	3.6	2.0	#	#	9.0	1983	14	17.0	1983	12	1975	2	2	1975	1.1	1.0	.4	.2	.0	1.5	.7	.2	.0
May	.0	.0	#	0	.5	1976	2	.5	1976	3	1984	1	#	1984	@	.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	.7	.0	#	0	4.0	1982	20	4.0+	1992	3	1991	31	#+	1991	.3	.3	.1	.0	.0	.2	@	.0	.0
Nov	10.2	5.5	2	1	18.0	1991	1	54.0	1991	31	1991	8	15	1991	3.9	3.5	1.4	.5	.2	8.6	5.0	3.1	1.4
Dec	12.4	12.5	7	5	15.0	1982	28	22.5	1981	49	1983	30	39	1983	5.5	4.6	1.4	.5	@	23.8	18.8	13.4	6.7
Ann	60.4	49.1	N/A	N/A	18.0	Nov 1991	1	54.0	Nov 1991	49	Dec 1983	30	39	Dec 1983	23.9	20.6	7.8	2.6	.3	95.9	80.6	65.4	37.6

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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

[@] 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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COOP ID: 474894

Station: LUCK, WI

Climate Division: WI 1

NWS Call Sign:

Elevation: 1,220 Feet	Lat: 45°35N	Lon: 92°29W

				Freez	e Data										
			Spri	ng Freeze D	ates (Month/	Day)									
Tomas (E)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated	(*)							
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	6/13	6/07	6/03	5/31	5/27	5/24	5/20	5/16	5/10						
32	5/28	5/22	5/18	5/14	5/11	5/07	5/04	4/29	4/24						
28	5/16	5/11	5/07	5/04	5/01	4/28	4/24	4/20	4/15						
24	5/04	4/29	4/25	4/22	4/19	4/16	4/13	4/09	4/04						
20	4/23	4/19	4/15	4/13	4/10	4/07	4/05	4/01	3/28						
16	4/14	4/10	4/07	4/04	4/02	3/31	3/28	3/26	3/22						
	Fall Freeze Dates (Month/Day)														
T (T)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
lemp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	9/01	9/06	9/09	9/11	9/14	9/16	9/19	9/22	9/27						
32	9/11	9/15	9/19	9/21	9/24	9/26	9/29	10/02	10/06						
28	9/19	9/24	9/28	10/01	10/04	10/07	10/10	10/14	10/19						
24	9/29	10/05	10/09	10/13	10/16	10/19	10/23	10/27	11/02						
20	10/15	10/20	10/24	10/27	10/30	11/01	11/04	11/08	11/13						
16	10/19	10/25	10/30	11/02	11/06	11/09	11/13	11/17	11/23						
				Freeze F	ree Period										
TI. (TE)			Probability	of longer th	an indicated	freeze free p	eriod (Days))							
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	129	122	117	113	109	105	101	96	90						
32	157	149	144	139	135	131	126	121	113						
28	178	170	165	160	156	151	146	141	133						
24	204	196	190	184	179	174	169	163	154						
20	220	214	209	205	202	198	194	190	183						
16	241	232	226	221	217	212	207	201	193						

^{*} 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.

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COOP ID: 474894

Station: LUCK, WI

Climate Division: WI 1	NWS Call Sign:	Elevation: 1,220 Feet	Lat: 45°35N	Lon: 92°29W

	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1684	1325	1093	617	272	84	24	47	204	548	1030	1517	8445		
60	1529	1185	938	473	167	29	5	12	102	398	880	1362	7080		
57	1436	1101	845	391	117	13	0	4	60	313	790	1269	6339		
55	1374	1045	783	340	89	7	0	1	39	262	730	1207	5877		
50	1219	905	636	225	39	1	0	0	9	152	584	1052	4822		
32	682	442	205	17	0	0	0	0	0	5	167	528	2046		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	21	41	135	391	785	997	1173	1110	808	479	128	35	6103
55	0	0	0	24	161	314	460	398	157	24	0	0	1538
57	0	0	0	15	127	260	398	338	118	13	0	0	1269
60	0	0	0	7	84	186	310	254	71	5	0	0	917
65	0	0	0	1	34	91	174	134	23	0	0	0	457
70	0	0	0	0	11	30	79	54	4	0	0	0	178

										Gro	wing]	Degre	e Uni	ts (2)				Growing Degree Units (2)														
Base													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	33	197	539	760	923	861	566	260	34	1	0	2	35	232	771	1531	2454	3315	3881	4141	4175	4176								
45	45 0 1 11 113 391 610 768 706 423 152 13 0											0	0	1	12	125	516	1126	1894	2600	3023	3175	3188	3188								
50	0	0	2	56	255	461	613	551	283	76	2	0	0	0	2	58	313	774	1387	1938	2221	2297	2299	2299								
55	0	0	0	22	150	315	458	397	167	35	0	0	0	0	0	22	172	487	945	1342	1509	1544	1544	1544								
60	60 0 0 0 8 72 188 311 252 84 7 0										0	0	0	0	8	80	268	579	831	915	922	922	922									
Base	Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)											
50/86	0	1	19	136	340	483	610	560	339	153	16	0	0	1	20	156	496	979	1589	2149	2488	2641	2657	2657								

(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

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.

Compete documentation for the 1971-2000 Normals is available on the internet from:

www.ncdc.noaa.gov/oa/climate/normals/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 are 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.

- a. Temperature/Precipitation Tables
 - 1. 1971-2000 Monthly Normals
 - 2. Cooperative Summary of the Day
 - 3. National Weather Service station records
 - 4. 1971-2000 serially complete daily data

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

1971-2000 serially complete daily data

- b. Degree Day Table
 - 1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
 - 2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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