

Climatography of the United States

No. 20

1971-2000

Station: IDA GROVE 5 NW, IA

COOP ID: 134038

Climate Division: IA 4

NWS Call Sign:

Elevation: 1,320 Feet Lat: 42° 24N Lon: 95° 31W

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	26.3	6.9	16.6	67	1981	24	28.3	1990	-32	1970	19	3.8	1979	1500	0	.0	.0	.9	19.6	30.7	10.2
Feb	32.7	12.7	22.7	69	2000	29	33.5	1987	-30	1958	16	9.0	1979	1184	0	.0	.0	3.6	13.3	27.1	5.6
Mar	44.7	23.9	34.3	95	1986	29	41.7	2000	-24	1960	5	25.5	1975	951	0	.0	@	12.4	5.2	23.8	1.2
Apr	59.0	35.3	47.2	97	1980	22	54.1	1981	3	1975	3	40.9	1983	537	2	.0	.2	23.9	.4	10.8	.0
May	71.2	48.2	59.7	101	1967	25	66.8	1977	19	1961	2	53.2	1997	218	54	.0	.8	30.6	.0	1.2	.0
Jun	80.9	58.5	69.7	105	1985	8	74.6	1988	34	1969	3	64.2	1982	27	167	.3	5.1	30.0	.0	.0	.0
Jul	84.3	63.2	73.8	105	1955	31	78.0	1980	42+	1967	4	67.0	1992	7	279	.2	8.6	31.0	.0	.0	.0
Aug	82.0	61.0	71.5	103	1955	27	78.5	1983	36	1986	28	65.9	1992	21	223	.1	5.8	31.0	.0	.0	.0
Sep	74.4	51.2	62.8	101	2000	3	69.1	1998	22	1984	29	57.0	1993	128	62	@	2.1	29.7	.0	1.0	.0
Oct	62.0	38.5	50.3	93	1953	2	54.8	1973	10+	1960	20	44.3	1976	459	1	.0	.1	27.4	.1	8.4	.0
Nov	43.2	24.6	33.9	79	1999	9	44.3	1999	-13	1959	14	25.2	1991	933	0	.0	.0	10.8	5.4	23.1	.7
Dec	29.5	12.2	20.9	68	1998	2	29.4	1979	-28+	1983	19	3.9	1983	1367	0	.0	.0	1.6	15.5	30.2	5.6
Ann	57.5	36.4	47.0	105+	Jun 1985	8	78.5	Aug 1983	-32	Jan 1970	19	3.8	Jan 1979	7332	788	.6	22.7	232.9	59.5	156.3	23.3

+ 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/normals/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

058-A

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: IDA GROVE 5 NW, IA

COOP ID: 134038

Climate Division: IA 4

NWS Call Sign:

Elevation: 1,320 Feet Lat: 42°24N

Lon: 95°31W

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	.78	.72	1.25	1993	13	3.66	1975	.00+	1991	4.4	2.2	.5	.1	.00	.03	.14	.25	.38	.53	.72	.95	1.28	1.84	2.40
Feb	.67	.46	1.33	1971	19	4.21	1971	.00	1988	4.4	2.2	.2	@	.02	.07	.16	.26	.36	.49	.63	.82	1.08	1.51	1.94
Mar	2.04	1.60	1.70	1991	23	5.21	1979	.00	1994	7.1	4.6	1.4	.4	.12	.32	.64	.94	1.26	1.61	2.01	2.51	3.19	4.31	5.39
Apr	3.07	2.64	2.68	1975	28	8.56	1986	.77	1981	9.2	6.2	2.1	.7	.71	.99	1.44	1.84	2.25	2.67	3.15	3.72	4.46	5.65	6.77
May	3.88	3.37	4.20	1990	19	7.92	1990	1.31	1994	10.6	7.7	3.0	.8	1.56	1.92	2.42	2.84	3.23	3.63	4.06	4.56	5.19	6.16	7.04
Jun	4.67	4.22	4.40	1996	20	10.81	1996	1.55	1987	8.7	6.9	3.0	1.6	1.53	1.97	2.63	3.18	3.71	4.27	4.87	5.58	6.49	7.90	9.20
Jul	3.79	3.56	3.82	1982	6	8.87	1982	.85	1976	8.9	6.0	2.6	1.1	1.06	1.42	1.96	2.44	2.90	3.39	3.93	4.56	5.39	6.68	7.89
Aug	3.81	3.94	11.01	1962	31	8.43	1980	.51	1976	8.2	5.7	2.3	1.0	.92	1.28	1.83	2.33	2.82	3.34	3.92	4.62	5.52	6.96	8.31
Sep	2.86	2.67	4.88	1978	13	6.55	1978	.65	1984	7.5	5.1	2.0	.6	.66	.93	1.35	1.73	2.10	2.50	2.94	3.47	4.17	5.28	6.32
Oct	2.14	1.75	2.94	1954	2	6.10	1984	.15+	1988	6.3	4.0	1.6	.5	.27	.44	.75	1.05	1.36	1.71	2.11	2.61	3.28	4.39	5.46
Nov	1.42	1.39	2.40	1991	30	3.98	1991	.02	1976	5.6	3.0	.9	.3	.14	.25	.44	.64	.86	1.10	1.38	1.74	2.22	3.03	3.82
Dec	.81	.78	1.70	1984	16	2.62	1984	.17	1989	4.7	2.5	.5	.1	.14	.21	.33	.44	.55	.68	.81	.98	1.20	1.56	1.91
Ann	29.94	31.35	11.01	Aug 1962	31	10.81	Jun 1996	.00+	Mar 1994	85.6	56.1	20.1	7.2	19.98	21.86	24.29	26.16	27.82	29.45	31.13	33.00	35.29	38.62	41.52

+ 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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Climate Division: IA 4

NWS Call Sign:

Elevation: 1,320 Feet

Lat: 42°24N

Lon: 95°31W

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	6.8	3.3	3	2	9.0	1975	10	24.1	1975	20	1975	31	13	1975	3.0	2.1	.8	.2	.0	14.4	9.8	6.0	1.4
Feb	7.5	6.5	4	1	11.0	1971	19	21.0	1972	23	1975	15	21	1975	2.7	1.9	.9	.3	.1	12.8	9.1	6.5	3.1
Mar	6.1	5.0	1	#	13.0	1990	8	24.0	1990	22	1975	11	12	1975	2.1	1.7	.8	.3	.1	3.3	1.9	.9	.2
Apr	1.2	.0	#	#	4.0	1983	14	6.5	1983	9	1985	1	1	1985	.7	.5	.2	.0	.0	.8	.3	.1	.0
May	#	.0	#	0	#	1997	1	#+	1997	#+	1997	1	#+	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	.2	.0	#	0	3.0	1991	31	3.0	1991	3	1991	31	#+	1997	.1	.1	@	.0	.0	.1	@	.0	.0
Nov	3.2	3.0	1	#	6.0	1991	1	13.7	1991	11	1991	5	5	1991	1.7	1.1	.3	.1	.0	3.0	1.2	.9	.2
Dec	6.7	5.7	2	1	8.0	1982	28	16.5	1978	18	1985	20	10	1985	2.7	2.0	.8	.4	.0	9.7	4.2	1.8	.0
Ann	31.7	23.5	N/A	N/A	13.0	Mar 1990	8	24.1	Jan 1975	23	Feb 1975	15	21	Feb 1975	13.0	9.4	3.8	1.3	.2	44.1	26.5	16.2	4.9

+ 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

Complete documentation available from:

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NWS Call Sign:

Elevation: 1,320 Feet

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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	5/15	5/11	5/09	5/06	5/04	5/01	4/28	4/24
32	5/14	5/09	5/05	5/02	4/29	4/26	4/23	4/20	4/15
28	5/07	5/01	4/28	4/24	4/21	4/18	4/15	4/11	4/06
24	4/20	4/16	4/13	4/10	4/08	4/05	4/03	3/31	3/26
20	4/15	4/10	4/06	4/03	3/31	3/28	3/25	3/22	3/17
16	4/07	4/01	3/29	3/25	3/22	3/19	3/16	3/12	3/07
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	9/10	9/15	9/18	9/21	9/24	9/27	9/30	10/04	10/09
32	9/15	9/21	9/25	9/28	10/02	10/05	10/08	10/12	10/18
28	9/26	10/01	10/05	10/08	10/12	10/15	10/18	10/22	10/27
24	10/04	10/10	10/15	10/19	10/22	10/26	10/30	11/03	11/09
20	10/15	10/22	10/27	11/01	11/05	11/09	11/13	11/18	11/25
16	10/25	10/31	11/05	11/09	11/12	11/16	11/20	11/25	12/01
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	161	154	149	144	140	136	131	126	119
32	177	169	164	159	155	150	145	140	132
28	193	186	181	177	172	168	164	159	152
24	220	212	206	201	197	192	187	181	173
20	243	234	228	223	218	213	208	201	193
16	258	250	244	239	234	230	225	219	211

* 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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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	1500	1184	951	537	218	27	7	21	128	459	933	1367	7332
60	1345	1044	796	395	126	5	0	4	55	312	783	1212	6077
57	1252	960	703	317	85	2	0	1	28	234	693	1119	5394
55	1190	904	642	268	63	1	0	0	16	188	635	1057	4964
50	1035	774	499	164	25	0	0	0	3	96	496	904	3996
32	525	348	120	5	0	0	0	0	0	2	128	412	1540

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	48	87	192	461	859	1130	1295	1226	924	567	185	68	7042
55	0	0	1	34	209	441	582	513	250	40	3	0	2073
57	0	0	0	22	169	382	520	452	201	25	0	0	1771
60	0	0	0	11	117	296	427	362	138	10	0	0	1361
65	0	0	0	2	54	167	279	223	62	1	0	0	788
70	0	0	0	0	19	72	149	116	20	0	0	0	376

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	11	84	296	638	915	1061	991	708	365	71	3	0	11	95	391	1029	1944	3005	3996	4704	5069	5140	5143
45	0	2	42	185	484	765	906	836	561	240	28	1	0	2	44	229	713	1478	2384	3220	3781	4021	4049	4050
50	0	1	13	106	343	615	751	681	417	138	11	0	0	1	14	120	463	1078	1829	2510	2927	3065	3076	3076
55	0	0	4	54	214	466	596	526	286	67	3	0	0	0	4	58	272	738	1334	1860	2146	2213	2216	2216
60	0	0	1	23	118	319	441	373	172	27	0	0	0	0	1	24	142	461	902	1275	1447	1474	1474	1474
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	13	67	193	396	599	712	661	449	233	51	1	0	13	80	273	669	1268	1980	2641	3090	3323	3374	3375

(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.

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