

Climatography of the United States

No. 20

1971-2000

Station: ASHLAND 2, NE

COOP ID: 250375

Climate Division: NE 6

NWS Call Sign:

Elevation: 1,070 Feet Lat: 41°03N

Lon: 96°21W

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	32.4	10.3	21.4	72	1981	25	33.1	1990	-33	1974	12	8.3	1979	1352	0	.0	.0	3.6	15.1	30.6	7.6
Feb	38.4	15.7	27.1	79	1972	29	37.0	1987	-25	1971	8	11.3	1979	1063	0	.0	.0	6.8	10.7	26.1	4.5
Mar	50.4	26.2	38.3	90+	1986	30	43.9	2000	-19	1960	5	29.6	1975	827	0	.0	@	15.1	3.4	21.7	.8
Apr	63.6	37.8	50.7	97	1989	27	58.6	1981	3	1975	3	44.2	1983	435	6	.0	.5	25.0	.2	8.2	.0
May	74.4	49.1	61.8	100+	1989	30	69.0	1977	25+	1967	2	56.1	1997	176	76	@	1.0	30.7	.0	.7	.0
Jun	84.9	59.5	72.2	108	1953	18	77.6	1988	39+	1969	3	67.2	1982	16	233	.4	6.9	30.0	.0	.0	.0
Jul	89.3	64.5	76.9	113	1954	13	82.9	1974	41	1971	30	71.9	1992	1	370	2.1	12.2	31.0	.0	.0	.0
Aug	86.9	62.1	74.5	110	1983	17	82.1	1983	38	1950	20	68.8	1992	15	310	1.6	10.1	31.0	.0	.0	.0
Sep	79.0	51.9	65.5	108	2000	3	71.6	1998	25+	1984	30	59.3	1993	85	97	.2	4.7	29.8	.0	.5	.0
Oct	66.5	39.4	53.0	95+	1994	1	57.9	1971	11+	1997	28	47.4	1976	376	3	.0	.3	28.2	@	6.7	.0
Nov	48.8	26.8	37.8	85	1999	14	46.3	1999	-15	1964	30	29.8	1985	817	0	.0	.0	14.2	3.5	21.7	.4
Dec	35.8	15.7	25.8	72	1976	19	31.9	1999	-26	1983	23	8.6	1983	1216	0	.0	.0	4.5	11.9	30.0	4.0
Ann	62.5	38.3	50.4	113	Jul 1954	13	82.9	Jul 1974	-33	Jan 1974	12	8.3	Jan 1979	6379	1095	4.3	35.7	249.9	44.8	146.2	17.3

+ 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/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

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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: ASHLAND 2, NE

COOP ID: 250375

Climate Division: NE 6

NWS Call Sign:

Elevation: 1,070 Feet Lat: 41°03N

Lon: 96°21W

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	.74	.58	1.42	1949	3	1.86	1973	.00+	1986	3.9	2.3	.2	.0	.00	.07	.20	.32	.44	.57	.73	.91	1.17	1.59	2.00
Feb	.70	.69	1.65	1971	22	2.57	1971	.05	1996	4.2	2.3	.2	@	.11	.17	.27	.37	.47	.58	.70	.86	1.06	1.40	1.72
Mar	2.02	1.90	1.88	1957	24	5.66	1973	.00	1994	6.5	4.7	1.4	.4	.10	.29	.59	.89	1.21	1.56	1.97	2.49	3.19	4.35	5.48
Apr	2.97	2.66	2.10	1969	16	7.25	1978	.46	1971	8.3	6.1	2.1	.6	.72	1.00	1.43	1.82	2.20	2.61	3.06	3.60	4.30	5.42	6.46
May	4.77	4.13	3.58	1965	22	9.79	1971	.56	1989	10.6	8.1	3.4	1.1	1.13	1.57	2.27	2.89	3.51	4.17	4.90	5.78	6.92	8.75	10.46
Jun	3.74	3.48	3.00	1967	21	8.66	1994	1.02	1976	8.3	6.3	2.4	1.2	1.08	1.44	1.97	2.43	2.89	3.36	3.88	4.49	5.28	6.53	7.68
Jul	3.63	3.01	7.26	1948	29	15.81	1993	.27	1974	7.7	5.5	2.4	1.1	.52	.82	1.34	1.84	2.37	2.95	3.61	4.43	5.54	7.33	9.07
Aug	4.02	2.82	3.90+	1993	29	11.86	1987	.28	1973	7.1	5.1	2.4	1.3	.52	.84	1.41	1.97	2.56	3.22	3.98	4.92	6.19	8.27	10.28
Sep	2.58	2.58	3.75	1973	26	7.78	1973	.39	1980	6.8	5.0	1.8	.6	.45	.68	1.05	1.41	1.77	2.16	2.61	3.15	3.87	5.04	6.15
Oct	2.26	1.87	2.35	1986	11	5.64	1986	.00	1999	5.8	4.4	1.2	.7	.16	.40	.76	1.09	1.44	1.82	2.25	2.79	3.51	4.69	5.83
Nov	1.76	1.85	2.38	1952	17	3.59	1972	.00+	1989	5.1	3.7	1.5	.2	.00	.39	.76	1.03	1.29	1.56	1.86	2.19	2.65	3.36	4.03
Dec	.93	.71	2.48	1984	16	4.03	1984	.07	1976	4.0	2.5	.5	.1	.14	.22	.35	.48	.62	.76	.93	1.14	1.41	1.86	2.29
Ann	30.12	29.80	7.26	Jul 1948	29	15.81	Jul 1993	.00+	Oct 1999	78.3	56.0	19.5	7.3	19.39	21.39	23.99	25.99	27.79	29.55	31.37	33.41	35.90	39.56	42.75

+ 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

Complete documentation available from:
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Station: ASHLAND 2, NE

COOP ID: 250375

Climate Division: NE 6

NWS Call Sign:

Elevation: 1,070 Feet

Lat: 41°03N

Lon: 96°21W

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	6.2	4.0	1	0	12.0	1975	11	19.0	1975	11	1979	31	8	1979	3.0	2.2	.8	.2	@	-9.9	-9.9	-9.9	-9.9
Feb	5.3	4.5	1	0	12.0	1971	22	18.0	1971	11	1979	4	8	1979	2.5	2.0	.6	.3	@	-9.9	-9.9	-9.9	-9.9
Mar	4.1	3.5	#	0	12.0	1998	8	14.0	1998	4	1979	5	#+	1988	1.5	1.1	.5	.2	.1	-9.9	-9.9	-9.9	-9.9
Apr	1.0	.0	#	0	10.0	1992	21	10.0	1992	1	1979	2	#+	1982	.5	.3	.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	.6	.0	0	0	12.0	1997	26	12.0	1997	0	0	0	0	0	.1	.1	@	@	@	.0	.0	.0	.0
Nov	2.2	1.0	#	0	7.0	1972	14	8.5	1983	11	1975	30	#+	1996	1.1	.8	.3	.2	.0	.4	.1	.0	.0
Dec	5.0	3.3	#	0	8.0	1973	19	14.0	2000	7	1981	18	2	1981	2.6	1.7	.8	.2	.0	-9.9	-9.9	-9.9	-9.9
Ann	24.4	16.3	N/A	N/A	12.0+	Mar 1998	8	19.0	Jan 1975	11+	Feb 1979	4	8+	Feb 1979	11.3	8.2	3.1	1.1	.1	-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

Complete documentation available from:

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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	5/17	5/12	5/09	5/06	5/04	5/01	4/28	4/25	4/20
32	5/10	5/05	5/01	4/28	4/26	4/23	4/20	4/16	4/11
28	4/26	4/21	4/18	4/15	4/12	4/10	4/07	4/03	3/30
24	4/15	4/11	4/07	4/05	4/02	3/30	3/27	3/24	3/20
20	4/10	4/04	3/31	3/27	3/24	3/21	3/17	3/13	3/08
16	3/31	3/25	3/21	3/18	3/15	3/12	3/09	3/05	2/28
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	9/15	9/19	9/23	9/25	9/28	10/01	10/03	10/07	10/11
32	9/22	9/28	10/01	10/04	10/07	10/10	10/13	10/17	10/22
28	10/04	10/09	10/13	10/17	10/20	10/24	10/27	10/31	11/06
24	10/15	10/21	10/25	10/28	10/31	11/03	11/07	11/11	11/16
20	10/21	10/27	11/01	11/05	11/09	11/13	11/17	11/22	11/28
16	10/31	11/06	11/11	11/15	11/19	11/23	11/27	12/01	12/08
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	164	158	154	150	147	143	139	135	129
32	183	176	172	168	164	160	156	152	145
28	210	203	198	194	190	186	182	177	171
24	236	227	221	216	212	207	202	196	187
20	256	247	240	234	229	224	218	211	202
16	271	263	258	253	248	243	238	233	225

* 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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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	1352	1063	827	435	176	16	1	15	85	376	817	1216	6379
60	1197	923	672	300	96	3	0	3	30	237	667	1061	5189
57	1104	845	582	229	61	1	0	0	13	167	579	968	4549
55	1042	793	526	187	43	0	0	0	6	127	523	906	4153
50	892	662	386	101	15	0	0	0	0	56	387	757	3256
32	409	276	70	1	0	0	0	0	0	0	72	295	1123

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	79	137	266	562	922	1207	1393	1318	1002	650	246	103	7885
55	0	10	9	58	252	517	680	605	318	63	6	0	2518
57	0	6	3	40	208	458	618	543	265	41	2	0	2184
60	0	0	0	22	150	370	525	453	192	19	0	0	1731
65	0	0	0	6	76	233	370	310	97	3	0	0	1095
70	0	0	0	1	30	121	228	188	40	0	0	0	608

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	2	37	124	347	670	961	1137	1073	768	424	104	12	2	39	163	510	1180	2141	3278	4351	5119	5543	5647	5659
45	0	11	69	229	516	811	982	918	619	290	50	2	0	11	80	309	825	1636	2618	3536	4155	4445	4495	4497
50	0	2	34	139	366	661	827	763	474	179	20	0	0	2	36	175	541	1202	2029	2792	3266	3445	3465	3465
55	0	0	9	76	238	511	672	608	340	97	4	0	0	0	9	85	323	834	1506	2114	2454	2551	2555	2555
60	0	0	3	34	135	364	517	454	222	38	0	0	0	0	3	37	172	536	1053	1507	1729	1767	1767	1767
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	8	37	97	221	414	631	769	711	492	277	77	17	8	45	142	363	777	1408	2177	2888	3380	3657	3734	3751

(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