

Climatology of the United States

No. 20

1971-2000

Station: BERLIN, NH

COOP ID: 270690

Climate Division: NH 1

NWS Call Sign:

Elevation: 930 Feet

Lat: 44° 27N

Lon: 71° 11W

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	26.1	4.0	15.1	67	1950	5	25.9	1990	-35	1934	31	5.6	1982	1549	0	.0	.0	1.1	21.2	30.6	13.2
Feb	29.6	6.4	18.0	65	2000	28	28.2	1981	-39+	1943	17	6.9	1979	1316	0	.0	.0	1.4	16.6	27.6	10.6
Mar	38.9	17.1	28.0	80	1946	30	34.5	1977	-29	1938	4	21.0	1984	1147	0	.0	.0	5.1	8.6	28.3	3.7
Apr	51.2	30.0	40.6	89	1976	20	46.8	1986	-1	1954	5	33.1	1972	732	0	.0	.0	15.2	.7	19.2	.0
May	65.4	40.8	53.1	94+	1962	20	59.0	1998	18	1972	26	47.9	1974	372	3	.0	.3	28.8	@	4.9	.0
Jun	73.7	50.4	62.1	97	1944	30	66.9	1999	29+	1945	3	58.4	1982	117	29	.0	.8	30.0	.0	.2	.0
Jul	78.1	54.7	66.4	98	1983	5	70.0	1994	34	1946	16	63.3	1992	36	80	.0	1.5	31.0	.0	.0	.0
Aug	76.2	52.7	64.5	97	1947	15	68.2	1973	32+	1965	31	61.0	1972	71	54	.0	.6	31.0	.0	.0	.0
Sep	67.5	44.2	55.9	95	1965	23	61.8	1999	20	1947	28	51.1	1978	278	3	.0	.1	29.7	.0	3.0	.0
Oct	55.7	34.1	44.9	87	1963	8	50.7	1971	0+	1929	31	38.8	1972	623	0	.0	.0	22.8	.1	14.1	.0
Nov	42.7	25.8	34.3	77	1938	8	39.8	1999	-13	1938	26	29.2	1972	923	0	.0	.0	7.8	4.4	22.9	.2
Dec	30.9	11.9	21.4	68	2001	7	30.6	1998	-41	1933	30	4.5	1989	1351	0	.0	.0	1.7	16.4	29.7	6.7
Ann	53.0	31.0	42.0	98	Jul 1983	5	70.0	Jul 1994	-41	Dec 1933	30	4.5	Dec 1989	8515	169	.0	3.3	205.6	68.0	180.5	34.4

+ 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: 1926-2001

(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: BERLIN, NH

COOP ID: 270690

Climate Division: NH 1

NWS Call Sign:

Elevation: 930 Feet Lat: 44°27N

Lon: 71°11W

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	2.82	2.42	2.60	1986	27	7.00	1978	.14	1981	8.9	5.8	1.7	.7	.42	.66	1.06	1.45	1.86	2.30	2.81	3.44	4.28	5.65	6.96
Feb	2.18	2.11	2.45	1941	8	6.55	1981	.18	1987	7.4	4.9	1.4	.4	.51	.71	1.03	1.31	1.60	1.90	2.24	2.64	3.17	4.01	4.80
Mar	2.86	2.68	2.36	1953	27	7.23	1999	.76	1988	9.2	6.8	2.0	.4	1.18	1.44	1.81	2.11	2.40	2.69	3.00	3.36	3.81	4.51	5.14
Apr	3.22	2.83	3.41	1988	29	6.03	1996	.35	1999	9.9	7.0	1.8	.6	.98	1.29	1.75	2.14	2.52	2.91	3.35	3.85	4.51	5.54	6.49
May	3.46	3.04	2.28	1984	30	8.47	1984	.00	1992	10.9	7.6	2.3	.6	.90	1.40	1.96	2.40	2.81	3.22	3.67	4.19	4.86	5.88	6.82
Jun	3.96	3.61	10.12	1943	15	9.84	1998	1.52	1983	11.6	8.9	3.0	.6	1.54	1.91	2.43	2.87	3.28	3.69	4.15	4.67	5.34	6.36	7.29
Jul	3.70	3.68	2.79	1971	2	7.35	1996	1.43	1989	10.6	8.2	2.4	.6	1.78	2.10	2.54	2.89	3.21	3.54	3.88	4.28	4.77	5.52	6.19
Aug	4.01	3.41	4.14	1946	3	9.22	1991	1.24	1996	9.9	7.5	2.2	.9	1.42	1.80	2.35	2.81	3.25	3.70	4.19	4.77	5.50	6.63	7.67
Sep	3.59	3.40	6.50	1999	17	11.28	1999	.74	1972	10.2	6.9	2.2	.7	1.16	1.50	2.01	2.43	2.85	3.27	3.74	4.29	5.00	6.09	7.11
Oct	4.04	3.45	4.46	1995	22	10.54	1995	.66	1994	10.7	7.4	2.5	.9	1.11	1.50	2.08	2.59	3.08	3.60	4.18	4.86	5.75	7.14	8.44
Nov	3.64	3.54	4.25	1927	4	9.42	1983	1.25	1987	10.2	6.9	2.6	.7	1.36	1.71	2.19	2.60	2.99	3.38	3.81	4.31	4.94	5.92	6.81
Dec	2.98	2.81	3.06	1971	16	8.82	1973	.88	1989	10.2	6.5	1.7	.5	.85	1.13	1.56	1.93	2.29	2.67	3.09	3.58	4.22	5.23	6.16
Ann	40.46	39.55	10.12	Jun 1943	15	11.28	Sep 1999	.00	May 1992	119.7	84.4	25.8	7.6	30.98	32.87	35.26	37.05	38.63	40.15	41.71	43.42	45.47	48.44	50.97

+ 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: 1926-2001

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

Complete documentation available from:
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Climatology of the United States

No. 20 1971-2000

Station: BERLIN, NH

COOP ID: 270690

Climate Division: NH 1

NWS Call Sign:

Elevation: 930 Feet

Lat: 44° 27N

Lon: 71° 11W

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	18.0	19.5	13	9	15.0	1990	30	40.0	1979	47	1987	31	36	1973	6.4	5.8	2.4	1.2	.3	26.3	21.8	18.8	12.1
Feb	16.7	14.7	16	13	19.0	1978	7	37.0	1988	54	1982	28	49	1982	5.6	4.8	1.9	1.0	.2	26.1	24.9	22.8	17.1
Mar	16.0	15.0	11	8	20.0	1984	14	34.8	1993	61	1982	11	32	1982	4.9	4.3	2.0	1.1	.2	20.9	17.9	14.6	9.4
Apr	5.5	2.5	1	1	13.0	1975	4	19.0+	1987	22	1978	1	6	1978	2.0	1.8	.6	.4	.1	4.3	2.6	1.7	.9
May	#	.0	#	0	#	1997	7	#+	1997	#+	1997	7	#+	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	#	1986	16	#	1986	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.2	.0	#	0	2.0	1979	10	2.0+	1997	2	1997	27	#+	2000	.2	.1	.0	.0	.0	.1	.0	.0	.0
Nov	4.9	4.0	1	#	20.0	1971	26	26.0	1971	17	1971	30	2	1997	2.3	2.0	.6	.2	@	4.0	2.8	1.5	.1
Dec	18.4	16.5	6	5	12.0	1996	8	49.0	1972	38	1995	27	20	1995	6.1	5.5	2.3	1.1	.1	20.0	15.2	11.6	6.3
Ann	79.7	72.2	N/A	N/A	20.0+	Mar 1984	14	49.0	Dec 1972	61	Mar 1982	11	49	Feb 1982	27.5	24.3	9.8	5.0	.9	101.7	85.2	71.0	45.9

+ 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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No. 20 1971-2000

Station: BERLIN, NH

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Climate Division: NH 1

NWS Call Sign:

Elevation: 930 Feet

Lat: 44° 27N

Lon: 71° 11W

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	6/19	6/14	6/09	6/06	6/03	5/30	5/27	5/23	5/17
32	6/01	5/28	5/25	5/22	5/20	5/17	5/15	5/12	5/08
28	5/14	5/10	5/07	5/05	5/03	5/01	4/28	4/25	4/22
24	5/04	4/28	4/25	4/21	4/18	4/15	4/12	4/08	4/03
20	4/26	4/20	4/16	4/12	4/09	4/06	4/02	3/29	3/24
16	4/18	4/12	4/09	4/06	4/03	3/31	3/27	3/24	3/18
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	8/28	9/01	9/04	9/06	9/09	9/11	9/14	9/17	9/21
32	9/09	9/14	9/18	9/21	9/24	9/26	9/30	10/03	10/08
28	9/24	9/27	9/30	10/03	10/05	10/07	10/09	10/12	10/16
24	10/05	10/10	10/14	10/18	10/21	10/24	10/27	10/31	11/06
20	10/20	10/25	10/29	11/02	11/05	11/09	11/12	11/16	11/22
16	11/01	11/07	11/10	11/13	11/16	11/19	11/22	11/26	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	118	111	106	101	97	93	89	84	77
32	143	137	133	129	126	123	119	115	110
28	171	166	161	158	154	151	148	143	138
24	209	201	195	190	185	180	175	169	160
20	237	228	221	215	209	204	198	191	181
16	251	243	237	232	227	222	217	211	203

* 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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Station: **BERLIN, NH**

COOP ID: **270690**

Climate Division: **NH 1**

NWS Call Sign:

Elevation: **930 Feet**

Lat: **44° 27N**

Lon: **71° 11W**

Degree Days to Selected Base Temperatures (°F)

Base	Heating Degree Days (1)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Below													
65	1549	1316	1147	732	372	117	36	71	278	623	923	1351	8515
60	1394	1176	992	582	234	39	4	15	150	470	773	1196	7025
57	1301	1092	899	493	165	16	0	4	92	382	683	1103	6230
55	1239	1036	837	435	125	7	0	1	63	325	623	1041	5732
50	1084	896	682	298	54	1	0	0	19	200	473	886	4593
32	540	409	193	21	0	0	0	0	0	5	64	383	1615

Base	Cooling Degree Days (1)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Above													
32	14	17	69	279	654	902	1067	1005	715	405	131	55	5313
55	0	0	0	3	66	220	354	293	88	12	0	0	1036
57	0	0	0	2	44	168	292	234	57	7	0	0	804
60	0	0	0	0	20	102	203	153	25	2	0	0	505
65	0	0	0	0	3	29	80	54	3	0	0	0	169
70	0	0	0	0	0	3	15	9	0	0	0	0	27

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	1	1	18	114	424	678	838	776	486	206	51	4	1	2	20	134	558	1236	2074	2850	3336	3542	3593	3597
45	0	0	5	54	283	529	683	621	339	107	20	0	0	0	5	59	342	871	1554	2175	2514	2621	2641	2641
50	0	0	1	24	167	382	528	466	210	44	4	0	0	0	1	25	192	574	1102	1568	1778	1822	1826	1826
55	0	0	0	9	83	243	374	317	115	15	0	0	0	0	0	9	92	335	709	1026	1141	1156	1156	1156
60	0	0	0	1	30	130	226	180	47	1	0	0	0	0	0	1	31	161	387	567	614	615	615	615
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	18	86	268	417	534	489	301	127	29	3	0	0	18	104	372	789	1323	1812	2113	2240	2269	2272

(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/normal/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 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
- 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