U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: NORWICH, NY **COOP ID: 306085**

Climate Division: NY 2 **NWS Call Sign:** **Elevation: 1,020 Feet** **Lat: 42˚32N** **Lon: 75˚32W**

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	31.5	13.1	22.3	66	1967	26	31.3	1990	-32+	1968	13	13.6	1994	1324	0	.0	.0	1.7	16.8	29.5	6.5
Feb	34.5	14.3	24.4	65+	1984	24	32.5	1984	-29+	1961	2	13.5	1979	1137	0	.0	.0	2.4	12.8	26.3	6.1
Mar	44.3	23.0	33.7	86	1998	31	41.3	1973	-19	1950	4	27.3	1984	973	0	.0	.0	8.9	4.6	25.5	1.2
Apr	56.6	33.1	44.9	90	1941	20	49.6	1991	8+	1969	1	36.2	1975	605	0	.0	.0	20.9	.3	16.1	.0
May	69.4	43.4	56.4	91	1975	25	61.9	1998	20	1978	1	52.1	1997	279	12	.0	.1	30.1	.0	4.1	.0
Jun	76.7	52.0	64.4	98	1933	29	67.7	1976	29+	1966	1	59.8	1977	82	62	.0	.7	30.0	.0	.2	.0
Jul	80.9	56.7	68.8	101	1936	9	71.8	1988	35+	1965	21	65.7	2000	14	132	.0	2.0	31.0	.0	.0	.0
Aug	79.1	55.5	67.3	100	1944	5	70.5	1973	27	1940	24	64.5	1982	30	100	.0	.9	31.0	.0	@	.0
Sep	71.0	48.3	59.7	99+	1953	4	63.3	1971	20+	1947	28	55.0	1975	174	14	.0	.4	29.9	.0	1.8	.0
Oct	59.8	37.4	48.6	88+	1963	8	55.6	1971	11	1974	21	43.5	1974	508	1	.0	.0	26.0	.0	11.3	.0
Nov	47.1	30.1	38.6	80	1950	2	44.0	1979	-8	1938	26	33.5	1976	793	0	.0	.0	11.2	2.0	20.8	.0
Dec	35.6	19.6	27.6	66	1982	6	34.1	1982	-26	1942	20	12.8	1989	1160	0	.0	.0	2.6	11.2	28.4	2.7
Ann	57.2	35.5	46.4	101	Jul 1936	9	71.8	Jul 1988	-32+	Jan 1968	13	12.8	Dec 1989	7079	321	.0	4.1	225.7	47.7	164.0	16.5

\+ 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

(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

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	2.80	2.43	1.97	1935	9	6.16	1999	.61	1980
Feb	2.43	2.12	1.83	1998	25	5.10	1971	.35	1987
Mar	3.09	2.91	2.16	1977	23	6.48	1977	.97	1981
Apr	3.49	3.23	2.82	1983	16	7.95	1983	1.43	1971
May	3.86	3.43	2.30	1942	23	8.15	2000	.88	1980
Jun	4.21	4.04	3.73	1980	30	8.91	1994	.78	1988
Jul	3.46	3.12	6.10	1935	8	6.55	1992	1.24	1983
Aug	3.52	3.47	3.66	1940	31	6.55	1977	.85	1995
Sep	4.17	3.75	3.57	1999	17	9.29	1977	1.67	1982
Oct	3.28	3.11	4.04	1932	6	8.00	1990	.61	1994
Nov	3.71	3.91	2.68+	1996	9	8.62	1972	1.40	1976
Dec	3.26	2.85	2.22	1996	2	6.58	1983	.93	1979
Ann	41.28	40.49	6.10	Jul 1935	8	9.29	Sep 1977	.35	Feb 1987

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	14.6	7.3	1.4	.4
Feb	11.3	5.9	1.3	.1
Mar	12.7	7.2	1.9	.4
Apr	13.2	8.1	2.2	.4
May	13.5	8.8	2.5	.6
Jun	11.8	7.9	2.8	.8
Jul	11.4	7.2	2.5	.5
Aug	11.3	7.2	2.1	.7
Sep	12.1	7.6	3.0	1.1
Oct	12.5	7.4	1.7	.7
Nov	13.8	8.0	2.1	.8
Dec	14.8	7.5	2.0	.5
Ann	153.0	90.1	25.5	7.0

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.92	1.19	1.58	1.91	2.23	2.56	2.92	3.34	3.88	4.72	5.49
Feb	.69	.92	1.27	1.57	1.87	2.18	2.52	2.92	3.44	4.25	5.01
Mar	1.38	1.66	2.04	2.35	2.64	2.93	3.24	3.59	4.04	4.72	5.34
Apr	1.51	1.82	2.26	2.62	2.95	3.29	3.66	4.07	4.60	5.40	6.13
May	1.37	1.73	2.26	2.70	3.12	3.56	4.03	4.58	5.28	6.37	7.37
Jun	1.28	1.68	2.28	2.79	3.29	3.81	4.38	5.04	5.91	7.26	8.51
Jul	1.60	1.90	2.32	2.66	2.97	3.29	3.62	4.01	4.49	5.23	5.89
Aug	1.23	1.56	2.04	2.45	2.84	3.24	3.68	4.18	4.84	5.84	6.77
Sep	1.41	1.80	2.38	2.87	3.34	3.82	4.35	4.97	5.76	6.99	8.11
Oct	.89	1.20	1.67	2.09	2.50	2.92	3.40	3.96	4.69	5.83	6.91
Nov	1.54	1.88	2.36	2.75	3.12	3.49	3.89	4.35	4.94	5.83	6.64
Dec	1.12	1.43	1.88	2.26	2.62	3.00	3.41	3.88	4.49	5.43	6.30
Ann	31.80	33.69	36.08	37.87	39.45	40.96	42.51	44.22	46.27	49.21	51.74

\+ 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

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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	19.2	19.2	7	5
Feb	13.8	11.8	8	6
Mar	11.6	8.1	5	2
Apr	3.4	1.8	#	#
May	#	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.3	.0	#	0
Nov	6.1	5.8	1	#
Dec	14.1	11.6	3	2
Ann	68.5	58.3	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	21.8	1983	16	37.2+	1994	35	1978	29	21	1978
Feb	15.8	1998	25	28.9	1993	27	1994	26	21	1994
Mar	15.0	1993	14	27.9	1999	34	1994	4	24	1994
Apr	10.0	1974	9	15.1	1983	10+	1994	1	1	1994
May	#	1997	7	#+	1997	#+	1996	12	#+	1996
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	6.0	1988	23	6.8	1988	4	1988	23	#+	2000
Nov	7.0	1986	19	24.9	1995	9	1995	15	3	1995
Dec	14.0	1973	22	29.5	1997	16+	1997	31	10	1995
Ann	21.8	Jan 1983	16	37.2+	Jan 1994	35	Jan 1978	29	24	Mar 1994

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	13.1	5.4	1.6	.7	.1
Feb	10.3	4.5	1.2	.6	.1
Mar	7.6	3.2	1.0	.6	.1
Apr	2.8	.8	.4	.2	@
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.3	.1	@	@	.0
Nov	5.4	2.3	.4	.1	.0
Dec	11.1	4.6	1.4	.6	.1
Ann	50.6	20.9	6.0	2.8	.4

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	23.4	18.2	13.4	5.3
Feb	24.2	19.8	15.8	8.5
Mar	13.0	8.9	7.0	4.0
Apr	2.1	1.0	.5	.1
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.1	@	.0	.0
Nov	5.3	2.1	.8	.0
Dec	15.6	9.1	4.2	1.0
Ann	83.7	59.1	41.7	18.9

+ 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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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	6/16	6/12	6/09	6/06	6/04	6/01	5/30	5/26	5/22
32	6/05	5/30	5/26	5/23	5/20	5/17	5/14	5/10	5/05
28	5/15	5/11	5/08	5/05	5/02	4/30	4/27	4/24	4/19
24	5/01	4/27	4/24	4/21	4/19	4/17	4/14	4/11	4/07
20	4/24	4/19	4/15	4/12	4/09	4/06	4/03	3/30	3/24
16	4/11	4/06	4/03	3/31	3/28	3/25	3/22	3/19	3/14

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	8/29	9/03	9/08	9/11	9/14	9/18	9/21	9/25	10/01
32	9/12	9/16	9/19	9/22	9/24	9/27	9/29	10/03	10/07
28	9/25	10/01	10/04	10/08	10/11	10/14	10/17	10/21	10/26
24	10/07	10/12	10/16	10/19	10/22	10/25	10/29	11/01	11/07
20	10/17	10/23	10/27	10/31	11/03	11/07	11/11	11/15	11/21
16	10/29	11/04	11/08	11/12	11/15	11/18	11/22	11/26	12/02

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	124	116	111	106	102	98	93	88	80
32	144	138	134	130	126	123	119	115	109
28	181	174	169	165	161	157	152	147	141
24	208	200	195	190	186	181	177	171	164
20	234	225	218	213	208	203	197	191	182
16	257	248	242	236	231	226	221	214	205

***** 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	1324	1137	973	605	279	82	14	30	174	508	793	1160	7079
60	1169	997	818	457	158	25	1	3	74	361	643	1005	5711
57	1076	913	725	372	103	9	0	0	38	279	553	912	4980
55	1014	857	663	318	74	4	0	0	23	229	493	850	4525
50	859	717	511	198	26	0	0	0	4	127	349	695	3486
32	350	266	102	7	0	0	0	0	0	1	31	235	992

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	49	53	152	392	756	970	1141	1093	831	517	228	98	6280
55	0	0	0	13	117	284	428	380	163	32	0	0	1417
57	0	0	0	7	84	229	366	319	119	19	0	0	1143
60	0	0	0	2	47	154	274	228	64	8	0	0	777
65	0	0	0	0	12	62	132	100	14	1	0	0	321
70	0	0	0	0	1	14	40	26	1	0	0	0	82

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	6	54	194	503	729	890	843	582	275	80	10	2	8	62	256	759	1488	2378	3221	3803	4078	4158	4168
45	1	0	26	107	352	579	735	688	432	161	38	2	1	1	27	134	486	1065	1800	2488	2920	3081	3119	3121
50	0	0	6	54	220	429	580	533	293	81	14	0	0	0	6	60	280	709	1289	1822	2115	2196	2210	2210
55	0	0	2	24	122	287	426	379	174	34	3	0	0	0	2	26	148	435	861	1240	1414	1448	1451	1451
60	0	0	0	7	54	160	273	234	89	7	0	0	0	0	0	7	61	221	494	728	817	824	824	824
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	5	47	135	318	463	585	546	363	174	52	5	0	5	52	187	505	968	1553	2099	2462	2636	2688	2693

(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:
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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

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/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