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: 306314

Lon: 76°30W

Station: OSWEGO EAST, NY

Climate Division: NY 9 NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 30.5 16.7 23.6 69 1950 25 32.5 1990 -21 1957 15 13.8 1994 1284 0 .0 .0 1.2 17.7 28.6 3.1 Jan 32.5 18.2 25.4 63+ 2000 27 32.7 1984 -21 1934 9 14.4 1979 1110 0 .0 .0 1.8 14.9 25.3 2.0 Feb Mar 41.4 26.4 33.9 83+ 1998 31 41.1 1973 -9 1950 4 26.9 1984 965 0 .0 .0 6.7 6.7 23.1 .2 7 1975 Apr 53.1 36.3 44.7 90 1990 28 50.1 1987 13 1982 38.6 609 0 .0. @ 17.0 .4 9.8 .0 May 65.7 46.2 56.0 91 1987 30 62.6 1998 28 +1978 4 51.0 1997 296 16 .0 @ 29.7 .0 .5 .0 55.4 3 60.8 75.2 65.3 96+ 1953 21 69.8 1999 36+ 1986 1980 74 82 .0 .4 30.0 .0 .0 .0 Jun Jul 80.0 70.8 95+ 28 74.8 1999 44 8 65.4 1992 9 189 .0 1.5 31.0 0. 61.6 1964 1969 .0 .0 1982 15 78.2 60.5 69.4 96 1944 11 72.8 1995 42 1969 27 66.3 150 .0 .6 31.0 .0 .0 .0 Aug Sep 70.5 53.5 62.0 96 1953 5 66.6 1999 30 +1991 30 58.5 1975 121 29 .0 .1 30.0 .0 .1 .0 46.4 1972 Oct 58.9 43.2 51.1 86 1937 6 56.8 1971 21 1972 20 433 1 .0 .0 26.2 .0 2.6 .0 46.7 34.5 40.6 78+ 1950 46.8 1999 5 1933 16 35.5 1996 732 0 .0 .0 11.0 1.5 12.2 .0 Nov 1 Dec 35.7 23.6 29.7 69 1998 7 36.9 1998 -23 1933 29 16.2 1989 1096 0 .0 .0 2.6 10.6 24.9 .6 Sep Jul Dec Jan 39.7 47.7 96+ 1953 5 74.8 1999 -23 1933 29 13.8 1994 6744 467 .0 2.6 218.2 127.1 5.9 55.7 51.8 Ann

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

Issue Date: February 2004 068-A

(1) From the 1971-2000 Monthly Normals

Elevation: 350 Feet Lat: 43°28N

- (2) Derived from station's available digital record: 1926-2001
- (3) Derived from 1971-2000 serially complete daily data

⁺ Also occurred on an earlier date(s)

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

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Climate Division: NY 9 NWS Call Sign: Elevation: 350 Feet Lat: 43°28N Lon: 76°30W

										Pı	recipi	tation	(incl	nes)										
	Mo	ans/	P	recip	itatio	on Total	s			M	ean N	Numbo Pays (3		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										
		ans(1)				Extremes	5			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	3.79	3.63	2.47	1998	8	8.43	1978	1.55	1981	20.5	10.2	1.8	.3	1.59	1.93	2.42	2.81	3.19	3.56	3.97	4.44	5.03	5.93	6.75
Feb	2.83	2.48	2.15	1961	26	5.33	1971	.67	1987	16.3	8.3	1.3	.2	1.16	1.42	1.78	2.08	2.37	2.66	2.97	3.33	3.78	4.48	5.11
Mar	3.36	3.19	2.69	1971	4	5.60	1992	1.13	1981	15.6	8.9	1.8	.3	1.76	2.03	2.41	2.70	2.97	3.24	3.52	3.85	4.25	4.85	5.38
Apr	3.32	3.07	1.45	1969	19	5.74	1973	1.39	1999	13.7	8.3	2.1	.3	1.27	1.58	2.02	2.39	2.73	3.09	3.47	3.91	4.48	5.34	6.13
May	3.17	2.96	2.08	2000	13	6.12	1990	.92	1977	13.1	7.7	2.0	.4	1.11	1.41	1.85	2.21	2.56	2.92	3.31	3.77	4.35	5.26	6.08
Jun	3.42	3.36	2.07	1970	18	6.78	1976	1.19	1983	11.8	7.7	2.4	.4	1.35	1.67	2.12	2.49	2.84	3.19	3.58	4.02	4.59	5.45	6.24
Jul	3.03	2.73	3.80	1974	3	9.35	1992	1.09	1978	10.2	6.4	2.1	.5	.98	1.26	1.69	2.05	2.40	2.76	3.15	3.62	4.21	5.14	5.99
Aug	3.80	3.59	2.92	1992	29	7.86	1992	1.46	1999	11.1	7.1	2.2	1.0	1.71	2.05	2.51	2.89	3.25	3.60	3.98	4.42	4.97	5.80	6.55
Sep	4.17	3.77	3.32	1975	26	7.55	1975	2.07	1998	12.8	8.1	3.0	.8	2.23	2.56	3.02	3.37	3.70	4.03	4.37	4.76	5.24	5.97	6.61
Oct	3.77	3.62	3.32	1995	21	8.10	1995	.91	1994	14.0	8.3	2.5	.7	1.32	1.67	2.19	2.63	3.04	3.47	3.94	4.48	5.18	6.25	7.24
Nov	4.47	4.46	3.25	1963	30	7.00	1995	1.68	1978	17.1	10.6	2.6	.7	2.51	2.85	3.31	3.68	4.01	4.33	4.68	5.06	5.54	6.26	6.89
Dec	3.80	3.83	2.50	1958	8	6.26	1990	1.71	1998	19.2	10.5	2.0	.2	2.10	2.40	2.80	3.11	3.40	3.68	3.98	4.31	4.73	5.35	5.90
Ann	42.93	41.11	3.80	Jul 1974	3	9.35	Jul 1992	.67	Feb 1987	175.4	102.1	25.8	5.8	35.43	36.96	38.88	40.31	41.55	42.74	43.95	45.27	46.85	49.09	51.00

⁺ 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: 1926-2001

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

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Station: OSWEGO EAST, NY

Climate Division: NY 9 NWS Call Sign: Elevation: 350 Feet Lat: 43°28N Lon: 76°30W

										Snov	w (incl	hes)													
						Sn	ow To	tals							Mean Number of Days (1)										
	Mean	s/Medi	ians (1)	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	44.3	37.3	11	10	32.0	1974	13	120.3	1978	60	1978	21	34	1994	19.3	10.8	5.5	2.9	.9	24.0	19.9	17.5	10.9		
Feb	34.0	27.2	14	11	32.0	1972	5	93.1	1972	54	1978	2	39	1978	14.3	8.2	3.7	1.9	.4	23.5	21.1	19.7	15.1		
Mar	17.4	13.8	6	4	20.0	1971	4	53.6	1971	36	1971	4	22	1993	10.2	5.1	2.2	.8	.2	16.6	13.1	11.3	7.7		
Apr	4.3	3.3	#	#	9.0	1983	20	17.9	1983	7	1983	20	2	1975	3.0	1.4	.4	.2	.0	2.0	1.0	.6	.0		
May	.0	.0	0	0	.1	1973	17	.1+	1977	0	0	0	0	0	.1	.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	#	1993	30	#+	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Oct	.4	.0	#	0	3.8	1972	19	3.8	1972	2	1997	23	#+	2000	.5	.1	.1	.0	.0	.1	.0	.0	.0		
Nov	9.3	6.5	1	#	12.9	1976	12	36.9	1976	12	1997	16	2	1997	5.5	2.7	.8	.6	.1	4.9	2.6	1.3	.1		
Dec	26.4	26.7	4	3	25.0	1995	12	69.9	1995	30+	1995	12	14	1995	15.0	7.9	3.5	1.7	.5	16.5	11.0	7.8	3.7		
Ann	136.1	114.8	N/A	N/A	32.0+	Jan 1974	13	120.3	Jan 1978	60	Jan 1978	21	39	Feb 1978	67.9	36.2	16.2	8.1	2.1	87.6	68.7	58.2	37.5		

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

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[@] 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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				Freez	e Data											
			Spri	ng Freeze D	ates (Month/	/Day)										
Temp (F)		P	robability of	later date i	n spring (thr	ru Jul 31) tha	n indicated((*)								
icmp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	5/26	5/21	5/18	5/15	5/12	5/10	5/07	5/04	4/29							
32	5/11	5/07	5/04	5/01	4/28	4/26	4/23	4/20	4/16							
28	4/26	4/22	4/19	4/17	4/14	4/12	4/09	4/07	4/02							
24	4/13	4/09	4/06	4/03	4/01	3/30	3/27	3/24	3/20							
20	4/05	4/02	3/30	3/28	3/26	3/24	3/22	3/19	3/15							
16	3/31	3/27	3/25	3/22	3/20	3/18	3/16	3/13	3/09							
			Fal	ll Freeze Da	tes (Month/D	Day)										
Temp (F)		Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	9/21	9/26	9/30	10/03	10/06	10/09	10/12	10/16	10/21							
32	9/30	10/06	10/10	10/13	10/16	10/19	10/22	10/26	10/31							
28	10/19	10/24	10/27	10/30	11/02	11/05	11/08	11/11	11/16							
24	11/04	11/09	11/13	11/16	11/19	11/22	11/25	11/28	12/03							
20	11/15	11/20	11/24	11/27	11/30	12/02	12/05	12/09	12/14							
16	11/22	11/27	11/30	12/03	12/06	12/08	12/11	12/15	12/19							
		•		Freeze F	ree Period	•		•								
Temp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)									
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	165	159	154	150	146	142	138	133	126							
32	192	184	179	174	170	165	161	155	148							
28	223	215	210	205	201	197	192	187	179							
24	251	244	239	235	231	227	223	218	211							
20	266	260	255	252	248	244	240	236	229							
16	279	272	268	264	260	256	252	247	241							

^{*} 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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	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	1284	1110	965	609	296	74	9	15	121	433	732	1096	6744		
60	1129	970	810	461	177	23	0	1	42	289	582	941	5425		
57	1036	886	717	374	120	9	0	0	18	212	492	848	4712		
55	974	830	655	319	89	5	0	0	9	167	433	786	4267		
50	819	690	506	196	35	0	0	0	1	80	295	635	3257		
32	309	242	105	6	0	0	0	0	0	0	20	192	874		

Base						Coolin	g Degree I	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	48	55	163	386	742	998	1203	1159	899	591	278	119	6641
55	0	0	0	10	119	313	490	446	218	45	1	0	1642
57	0	0	0	5	88	258	428	384	167	28	0	0	1358
60	0	0	0	2	51	182	335	291	101	12	0	0	974
65	0	0	0	0	16	82	189	150	29	1	0	0	467
70	0	0	0	0	3	24	76	53	3	0	0	0	159

	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 Jun													Jul	Aug	Sep	Oct	Nov	Dec						
40	7	8	58	197	509	768	966	921	669	357	119	21	7	15	73	270	779	1547	2513	3434	4103	4460	4579	4600
45	1	0	30	111	359	618	811	766	519	225	55	5	1	1	31	142	501	1119	1930	2696	3215	3440	3495	3500
50	0	0	12	57	225	468	656	611	371	122	21	1	0	0	12	69	294	762	1418	2029	2400	2522	2543	2544
55	0	0	5	28	124	325	501	456	235	52	3	0	0	0	5	33	157	482	983	1439	1674	1726	1729	1729
60	0	0	1	11	57	194	346	302	123	17	0	0	0	0	1	12	69	263	609	911	1034	1051	1051	1051
Base				Gro	wing De	gree Unit	s for Co	rn (Mont	thly)						Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)		
50/86	0	2	33	107	281	482	650	610	396	170	47	6	0	2	35	142	423	905	1555	2165	2561	2731	2778	2784

(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.

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