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: HUNTINGTON SEWAGE PLNT, WV **COOP ID: 464397**

Climate Division: WV 3 **NWS Call Sign:** **Elevation: 520 Feet** **Lat: 38˚25N** **Lon: 82˚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	40.7	23.5	32.1	78	1999	23	41.1	1990	-19+	1994	19	17.6	1977	1020	0	.0	.0	9.4	6.6	23.6	.8
Feb	46.1	25.1	35.6	79+	1999	12	43.1	1976	-9+	1996	4	22.5	1978	825	0	.0	.0	12.7	3.2	20.0	.2
Mar	55.7	32.7	44.2	88	1986	31	51.4	1973	-2	1980	3	37.1	1984	644	0	.0	.0	22.9	.6	14.0	@
Apr	67.1	41.1	54.1	94+	1986	26	59.1	1981	22	1985	10	48.9	1983	333	6	.0	.3	28.4	.0	4.2	.0
May	75.7	51.7	63.7	95	1987	28	71.2	1991	31	1977	10	57.7	1989	131	91	.0	1.2	31.0	.0	.2	.0
Jun	83.3	60.9	72.1	98	1999	11	75.3	1987	38	1972	11	66.7	1972	10	222	.1	6.2	30.0	.0	.0	.0
Jul	87.1	65.5	76.3	102+	1988	8	81.4	1999	47	1988	2	73.0	1984	0	350	.4	11.2	31.0	.0	.0	.0
Aug	85.5	64.2	74.9	102	1999	1	80.9	1987	44	1986	29	70.9	1976	4	309	.2	9.2	31.0	.0	.0	.0
Sep	79.2	56.3	67.8	99	1998	15	73.2	1998	35	1991	27	63.6	1974	46	127	.0	2.7	30.0	.0	.0	.0
Oct	68.7	44.2	56.5	89	1969	13	62.9	1971	22	1976	29	50.0	1976	288	23	.0	.0	30.7	.0	3.0	.0
Nov	56.6	35.2	45.9	88	1987	2	52.0	1985	11	1976	30	37.7	1976	573	0	.0	.0	21.6	.2	11.1	.0
Dec	46.1	28.2	37.2	80+	1982	2	45.6	1971	1	1989	18	23.7	1989	863	0	.0	.0	12.9	3.1	19.6	.3
Ann	66.0	44.1	55.0	102+	Aug 1999	1	81.4	Jul 1999	-19+	Jan 1994	19	17.6	Jan 1977	4737	1128	.7	30.8	291.6	13.7	95.7	1.3

\+ 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

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1967-2001

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

Issue Date: February 2004

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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	3.31	2.74	2.35	1974	10	8.79	1987	.83	1981
Feb	2.90	2.70	2.25	2000	19	5.35	2000	.54	1977
Mar	3.70	3.14	3.10	1997	1	8.49	1994	1.67	1979
Apr	3.30	3.40	1.60	1972	22	6.71	1972	.51	1976
May	4.46	4.28	3.50	1990	28	8.88	1990	1.55	1999
Jun	3.91	3.99	2.90	1979	21	7.55	1979	.83	1988
Jul	4.38	4.19	2.75+	1980	3	7.63	1996	1.00	1999
Aug	3.77	3.92	2.80	1999	25	8.41	1979	.83	1971
Sep	2.72	2.65	2.72	1995	17	7.14	1989	.45	1985
Oct	2.85	2.51	2.05	1984	28	6.92	1983	.53	2000
Nov	3.19	3.00	1.62	1996	8	7.35	1985	.55	1976
Dec	3.25	2.94	2.00	2000	18	8.22	1990	1.14	1996
Ann	41.74	41.41	3.50	May 1990	28	8.88	May 1990	.45	Sep 1985

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	12.6	7.2	2.2	.4
Feb	10.4	6.1	1.8	.6
Mar	12.6	8.3	2.2	.5
Apr	11.5	7.6	2.2	.5
May	12.1	8.4	3.4	.7
Jun	10.6	7.7	2.6	.9
Jul	10.4	7.2	2.9	1.1
Aug	9.5	6.6	2.6	1.0
Sep	8.6	5.2	2.1	.5
Oct	8.1	5.2	1.8	.7
Nov	11.4	6.9	2.1	.5
Dec	11.4	6.5	1.9	.6
Ann	129.2	82.9	27.8	8.0

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	1.24	1.71	2.13	2.54	2.96	3.43	3.98	4.70	5.83	6.89
Feb	1.01	1.28	1.68	2.01	2.34	2.67	3.03	3.45	3.99	4.82	5.58
Mar	1.43	1.77	2.26	2.67	3.05	3.45	3.87	4.36	4.99	5.95	6.82
Apr	1.08	1.39	1.85	2.25	2.62	3.01	3.44	3.94	4.58	5.57	6.49
May	1.96	2.36	2.91	3.37	3.79	4.22	4.67	5.20	5.86	6.87	7.78
Jun	1.39	1.76	2.29	2.74	3.17	3.61	4.09	4.64	5.35	6.45	7.46
Jul	1.86	2.26	2.81	3.27	3.70	4.13	4.60	5.13	5.81	6.84	7.77
Aug	1.32	1.67	2.19	2.63	3.04	3.47	3.94	4.48	5.18	6.25	7.24
Sep	.62	.87	1.27	1.63	1.99	2.37	2.79	3.30	3.97	5.04	6.04
Oct	.76	1.03	1.45	1.81	2.16	2.54	2.95	3.44	4.08	5.08	6.02
Nov	.94	1.24	1.70	2.09	2.47	2.87	3.31	3.82	4.49	5.54	6.51
Dec	1.24	1.54	1.98	2.34	2.68	3.03	3.41	3.84	4.40	5.26	6.04
Ann	32.98	34.75	36.97	38.63	40.09	41.49	42.92	44.48	46.36	49.05	51.35

\+ 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: 1967-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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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	5.3	1.8	1	#
Feb	4.8	3.6	1	#
Mar	2.4	.5	#	0
Apr	.0	.0	0	0
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	.0	.0	0	0
Nov	.3	.0	#	0
Dec	1.4	.5	#	#
Ann	14.2	6.4	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	10.0	1996	7	20.4	1977	17	1978	20	5	1978
Feb	8.0	1986	11	21.2	1985	11	1985	13	4	1985
Mar	5.0	1971	3	10.4	1971	10	1993	15	1	1993
Apr	.1	1973	11	.1	1973	0	0	0	0	0
May	.0	0	0	.0	0	0	0	0	0	0
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	.5	1972	19	.5	1972	0	0	0	0	0
Nov	3.0	1971	24	4.3	1971	1+	1976	29	#+	1976
Dec	4.2	1993	29	7.0	1981	5	1993	29	1	1993
Ann	10.0	Jan 1996	7	21.2	Feb 1985	17	Jan 1978	20	5	Jan 1978

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.3	2.0	.9	.2	.1
Feb	2.3	1.5	.7	.2	.0
Mar	1.1	.7	.3	.1	.0
Apr	@	.0	.0	.0	.0
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	@	.0	.0	.0	.0
Nov	.3	.1	@	.0	.0
Dec	1.1	.7	.1	.0	.0
Ann	8.1	5.0	2.0	.5	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	5.3	3.9	2.8	.2
Feb	4.2	2.4	.9	.1
Mar	.8	.5	.2	.0
Apr	.0	.0	.0	.0
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	.0	.0	.0	.0
Nov	.1	.0	.0	.0
Dec	.9	.2	.1	.0
Ann	11.3	7.0	4.0	.3

+ 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	5/16	5/11	5/07	5/04	5/01	4/28	4/25	4/21	4/16
32	5/03	4/28	4/25	4/22	4/19	4/16	4/13	4/09	4/04
28	4/21	4/15	4/12	4/08	4/05	4/02	3/30	3/27	3/21
24	4/07	4/01	3/28	3/24	3/21	3/17	3/14	3/10	3/04
20	3/23	3/15	3/09	3/05	2/28	2/24	2/19	2/13	2/06
16	3/17	3/09	3/03	2/26	2/21	2/16	2/10	2/04	1/27

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	9/29	10/04	10/07	10/10	10/12	10/15	10/18	10/21	10/25
32	10/08	10/14	10/18	10/21	10/24	10/27	10/31	11/03	11/09
28	10/19	10/25	10/29	11/01	11/05	11/08	11/12	11/16	11/21
24	11/04	11/09	11/12	11/15	11/18	11/20	11/23	11/26	12/01
20	11/09	11/16	11/22	11/26	12/01	12/05	12/09	12/15	12/22
16	11/26	12/03	12/08	12/12	12/16	12/20	12/25	12/30	1/06

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	186	178	173	168	164	159	155	149	142
32	212	203	197	192	188	183	178	172	164
28	239	230	224	218	213	207	202	195	186
24	262	255	250	245	241	237	232	227	220
20	300	291	285	280	275	270	264	258	249
16	332	320	312	305	298	291	284	276	264

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1020	825	644	333	131	10	0	4	46	288	573	863	4737
60	865	685	495	205	61	1	0	0	12	175	426	708	3633
57	775	601	410	141	34	0	0	0	4	121	343	623	3052
55	719	548	355	106	21	0	0	0	2	92	289	564	2696
50	575	419	235	43	6	0	0	0	0	39	173	424	1914
32	182	88	19	0	0	0	0	0	0	0	5	89	383

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	186	188	398	663	984	1203	1373	1328	1072	758	422	249	8824
55	10	3	21	79	292	513	660	615	384	136	16	11	2740
57	4	0	14	55	242	453	598	553	326	104	10	8	2367
60	0	0	6	28	177	364	505	460	244	65	3	0	1852
65	0	0	0	6	91	222	350	309	127	23	0	0	1128
70	0	0	0	1	36	106	203	175	49	6	0	0	576

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	64	101	260	481	769	989	1143	1113	869	551	260	106	64	165	425	906	1675	2664	3807	4920	5789	6340	6600	6706
45	28	51	160	342	614	839	988	958	719	402	161	53	28	79	239	581	1195	2034	3022	3980	4699	5101	5262	5315
50	8	20	88	218	460	689	833	803	569	266	89	23	8	28	116	334	794	1483	2316	3119	3688	3954	4043	4066
55	0	4	42	129	318	539	678	648	422	151	41	7	0	4	46	175	493	1032	1710	2358	2780	2931	2972	2979
60	0	0	19	62	191	389	523	493	282	72	11	1	0	0	19	81	272	661	1184	1677	1959	2031	2042	2043
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	42	75	175	310	493	667	785	767	574	352	158	65	42	117	292	602	1095	1762	2547	3314	3888	4240	4398	4463

(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

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