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: TANGIER ISLAND, VA **COOP ID: 448323**

Climate Division: VA 1 **NWS Call Sign:** **Elevation: 5 Feet** **Lat: 37˚50N** **Lon: 76˚00W**

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	44.4	31.1	37.8	71	1967	27	46.7	1972	2	1982	17	26.2	1977	845	0	.0	.0	8.0	3.2	17.0	.0
Feb	46.8	32.1	39.5	68+	1997	27	46.6	1990	2	1979	18	26.3	1978	716	0	.0	.0	10.3	1.8	15.3	.0
Mar	54.7	38.3	46.5	82	1985	29	51.2	2000	14+	1980	1	41.3	1996	573	0	.0	.0	23.5	.3	5.3	.0
Apr	64.8	47.1	56.0	91	1985	22	61.6	1994	27	1964	1	50.3	1978	283	12	.0	.1	29.4	.0	.2	.0
May	74.3	56.6	65.5	96	1991	31	72.5	1991	38	1978	2	60.8	1978	78	92	.0	.4	31.0	.0	.0	.0
Jun	82.9	66.0	74.5	98	1959	30	78.8	1991	46	1997	4	68.6	1972	8	291	.0	2.6	30.0	.0	.0	.0
Jul	87.6	71.7	79.7	100	1993	10	84.6	1993	50+	1967	30	74.9	2000	0	453	@	11.1	31.0	.0	.0	.0
Aug	86.2	70.3	78.3	97	1999	1	81.7	1988	52	1973	24	74.4	2000	0	411	.0	7.2	31.0	.0	.0	.0
Sep	80.9	65.0	73.0	94+	1995	1	76.7	1998	43	1974	26	70.8	1996	4	243	.0	1.2	30.0	.0	.0	.0
Oct	69.8	54.2	62.0	91	1954	4	68.4	1971	33	1965	29	55.6	1977	161	68	.0	.1	30.9	.0	.0	.0
Nov	59.7	44.1	51.9	87	1993	15	59.5	1985	23+	2000	23	45.5	1976	397	5	.0	.0	26.6	@	2.2	.0
Dec	49.8	35.4	42.6	74+	1998	9	54.4	1971	7	1960	22	30.0	1989	701	0	.0	.0	15.8	.9	10.9	.0
Ann	66.8	51.0	58.9	100	Jul 1993	10	84.6	Jul 1993	2+	Jan 1982	17	26.2	Jan 1977	3766	1575	@	22.7	297.5	6.2	50.9	.0

+ 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: 1952-2001

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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	3.14	2.80	2.09	1976	27	6.65	1987	.17	1981
Feb	3.18	2.92	3.76	1984	15	7.52	1998	1.34	1978
Mar	4.54	4.19	4.05	1958	19	10.68	1994	1.16	1986
Apr	2.79	2.55	2.21	1980	27	5.68	1993	.41	1985
May	3.64	3.37	2.93	1995	1	7.49	1995	.58	1986
Jun	2.87	2.60	4.13	1979	11	7.87	1982	1.01	1990
Jul	3.96	4.27	4.05	1980	23	10.06	2000	.00	1983
Aug	3.74	3.42	10.62	1953	14	10.01	1989	.40	1997
Sep	3.56	2.61	5.76	1979	6	12.17	1979	.61	1978
Oct	3.08	2.60	3.92	1960	28	6.40	1976	.04	2000
Nov	2.96	2.80	3.10	1977	6	7.44	1997	.80	1991
Dec	3.21	2.96	2.86	1977	18	6.96	1983	.37	1971
Ann	40.67	40.40	10.62	Aug 1953	14	12.17	Sep 1979	.00	Jul 1983

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	7.7	5.9	2.1	.9
Feb	6.5	5.4	2.1	.4
Mar	7.4	5.8	2.7	1.2
Apr	6.8	5.1	1.5	.5
May	7.2	6.0	1.9	.8
Jun	6.8	5.4	1.8	.6
Jul	7.8	5.8	2.4	1.0
Aug	6.8	5.4	2.6	1.1
Sep	5.5	3.7	1.7	.9
Oct	5.4	3.8	1.8	.8
Nov	5.6	4.1	1.5	.5
Dec	7.4	5.4	2.0	.7
Ann	80.9	61.8	24.1	9.4

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	.75	1.04	1.50	1.91	2.32	2.75	3.23	3.80	4.55	5.74	6.87
Feb	1.40	1.68	2.08	2.40	2.70	3.01	3.33	3.70	4.18	4.89	5.54
Mar	1.42	1.85	2.49	3.04	3.57	4.12	4.73	5.44	6.35	7.78	9.10
Apr	.84	1.11	1.50	1.85	2.18	2.52	2.90	3.35	3.93	4.83	5.67
May	.98	1.32	1.85	2.31	2.76	3.24	3.76	4.39	5.20	6.48	7.67
Jun	.96	1.23	1.63	1.97	2.29	2.62	2.99	3.41	3.96	4.81	5.59
Jul	.54	1.05	1.72	2.28	2.84	3.43	4.09	4.87	5.90	7.55	9.09
Aug	.49	.79	1.33	1.85	2.39	3.00	3.70	4.57	5.74	7.66	9.51
Sep	.63	.95	1.47	1.95	2.45	2.99	3.60	4.34	5.33	6.92	8.44
Oct	.42	.67	1.11	1.54	1.99	2.48	3.05	3.76	4.70	6.25	7.75
Nov	.82	1.10	1.52	1.89	2.26	2.64	3.06	3.56	4.21	5.23	6.18
Dec	.79	1.09	1.56	1.98	2.39	2.82	3.31	3.89	4.64	5.84	6.96
Ann	29.06	31.31	34.19	36.37	38.31	40.18	42.12	44.25	46.84	50.59	53.84

\+ 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: 1952-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	1.2	.0	#	0	3.0	1973	8	9.8	1977	5	1986	29	#	1988	.6	.5	.1	.0	.0	.3	.3	.1	.0
Feb	1.4	.0	#	0	6.1	1978	6	11.3	1978	5	1987	17	#	1987	.6	.5	.1	@	.0	.2	.1	.1	.0
Mar	.6	.0	#	0	6.0	1980	1	8.0	1980	8	1980	2	1	1980	.2	.2	.1	@	.0	.2	.1	.1	.0
Apr	#	.0	0	0	#	1985	9	#+	1985	#	1985	9	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1999	.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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	#	.0	0	0	#	1996	21	#+	1996	#	1996	21	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.1	.0	#	0	1.5	1976	8	1.5	1976	3	1985	20	#	1985	.1	.1	.0	.0	.0	.2	@	.0	.0
Ann	3.3	.0	N/A	N/A	6.1	Feb 1978	6	11.3	Feb 1978	8	Mar 1980	2	1	Mar 1980	1.5	1.3	.3	@	.0	.9	.5	.3	.0

+ 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	4/17	4/13	4/09	4/06	4/04	4/01	3/29	3/26	3/21
32	4/05	3/31	3/28	3/25	3/22	3/19	3/16	3/13	3/08
28	3/25	3/20	3/16	3/13	3/11	3/08	3/05	3/01	2/24
24	3/15	3/08	3/02	2/26	2/22	2/18	2/14	2/08	2/01
20	3/04	2/24	2/18	2/12	2/07	2/02	1/26	1/16	0/00
16	2/22	2/12	2/04	1/28	1/21	1/12	12/28	0/00	0/00

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	10/23	10/30	11/04	11/08	11/12	11/16	11/20	11/25	12/01
32	11/07	11/14	11/19	11/24	11/28	12/02	12/06	12/11	12/18
28	11/19	11/25	11/29	12/03	12/07	12/10	12/14	12/18	12/25
24	12/03	12/10	12/15	12/19	12/23	12/27	12/31	1/05	1/12
20	12/09	12/19	12/26	1/01	1/07	1/14	1/22	2/02	0/00
16	12/22	1/01	1/09	1/16	1/24	2/03	0/00	0/00	0/00

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	249	240	233	227	221	216	210	203	194
32	273	265	259	254	250	245	240	234	226
28	295	287	281	275	270	265	260	254	245
24	330	321	314	308	303	298	292	286	276
20	>365	>365	351	336	328	321	314	307	298
16	>365	>365	>365	>365	>365	>365	344	329	314

***** 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	845	716	573	283	78	8	0	0	4	161	397	701	3766
60	692	576	419	164	25	0	0	0	0	83	265	557	2781
57	607	499	329	108	10	0	0	0	0	50	196	474	2273
55	549	446	272	77	5	0	0	0	0	34	157	421	1961
50	412	322	148	26	0	0	0	0	0	11	80	304	1303
32	83	48	2	0	0	0	0	0	0	0	1	50	184

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	262	257	452	719	1038	1273	1476	1434	1228	930	599	378	10046
55	14	11	9	107	329	583	763	721	538	251	64	36	3426
57	10	8	3	77	273	523	701	659	478	205	44	26	3007
60	2	0	0	43	195	434	608	566	389	145	22	17	2421
65	0	0	0	12	92	291	453	411	243	68	5	0	1575
70	0	0	0	2	31	167	305	260	114	24	0	0	903

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	69	88	232	492	794	1039	1235	1195	994	686	369	159	69	157	389	881	1675	2714	3949	5144	6138	6824	7193	7352
45	28	31	117	347	639	889	1080	1040	844	531	234	78	28	59	176	523	1162	2051	3131	4171	5015	5546	5780	5858
50	5	7	46	211	484	739	925	885	694	378	127	38	5	12	58	269	753	1492	2417	3302	3996	4374	4501	4539
55	0	0	14	103	336	589	770	730	544	236	51	9	0	0	14	117	453	1042	1812	2542	3086	3322	3373	3382
60	0	0	3	44	191	440	615	575	394	122	16	0	0	0	3	47	238	678	1293	1868	2262	2384	2400	2400
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	29	38	110	258	491	726	884	857	690	401	177	64	29	67	177	435	926	1652	2536	3393	4083	4484	4661	4725

(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