

Climatology of the United States

No. 20

1971-2000

Station: LEWES, DE

COOP ID: 075320

Climate Division: DE 2

NWS Call Sign:

Elevation: 15 Feet

Lat: 38°46N

Lon: 75°08W

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	44.6	28.2	36.4	78	1950	25	44.7	1990	-11	1982	17	24.1	1977	887	0	.0	.0	9.6	4.2	20.4	.2
Feb	46.9	29.6	38.3	86	1997	27	47.5	1997	0+	1971	2	26.0	1978	748	0	.0	.0	10.5	3.1	17.5	.1
Mar	54.7	36.4	45.6	89	1998	30	52.4	1997	9	1950	3	40.1	1984	603	0	.0	.0	20.3	.3	10.2	.0
Apr	64.9	44.3	54.6	92+	1957	21	60.2	1994	18	1982	7	48.7	1975	319	7	.0	.2	28.4	.0	2.0	.0
May	73.9	54.1	64.0	97	1997	19	70.8	1991	32+	1966	10	59.7	1978	103	71	.0	1.0	30.9	.0	.0	.0
Jun	81.9	63.0	72.5	102	1997	21	76.5	1994	40	1967	1	68.1	1972	14	238	.2	5.3	30.0	.0	.0	.0
Jul	86.3	68.3	77.3	101+	1995	15	81.2	1999	47+	1952	2	73.3	1978	0	382	.1	9.3	31.0	.0	.0	.0
Aug	84.5	67.2	75.9	101	1997	16	79.1	1988	47	1986	30	72.5	1981	0	336	.1	6.1	31.0	.0	.0	.0
Sep	78.9	61.5	70.2	98+	1983	11	74.3	1998	37+	1950	25	67.2	1976	15	170	.0	1.4	30.0	.0	.0	.0
Oct	68.5	49.8	59.2	92	1954	4	63.7	1990	26+	1965	30	53.8	1976	216	35	.0	.0	30.7	.0	.6	.0
Nov	58.9	41.1	50.0	88	1950	1	57.3	1985	16	1955	29	41.7	1976	452	1	.0	.0	24.5	.0	6.0	.0
Dec	49.5	32.7	41.1	77	1998	7	49.1	1982	0	1958	16	29.2	1989	741	0	.0	.0	15.0	1.8	15.5	.0
Ann	66.1	48.0	57.1	102	Jun 1997	21	81.2	Jul 1999	-11	Jan 1982	17	24.1	Jan 1977	4098	1240	.4	23.3	291.9	9.4	72.2	.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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

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

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**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: LEWES, DE

COOP ID: 075320

Climate Division: DE 2

NWS Call Sign:

Elevation: 15 Feet

Lat: 38°46N

Lon: 75°08W

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	4.01	3.69	3.41	1998	28	8.79	1987	.32	1981	11.1	7.4	3.1	.9	1.17	1.55	2.12	2.62	3.10	3.61	4.17	4.82	5.68	7.01	8.25
Feb	3.22	3.07	2.11	1953	15	6.84	1979	1.01	1991	9.9	6.5	2.4	.8	1.23	1.53	1.95	2.31	2.65	3.00	3.37	3.81	4.36	5.21	5.99
Mar	4.45	4.52	3.42	1979	6	7.86	1984	1.02	1986	10.8	7.3	3.3	1.3	1.53	1.95	2.57	3.08	3.58	4.09	4.65	5.30	6.13	7.43	8.61
Apr	3.54	3.50	2.85	1983	16	8.71	1983	.54	1985	10.0	6.6	2.6	.9	1.20	1.53	2.02	2.44	2.83	3.25	3.69	4.22	4.89	5.93	6.89
May	3.91	3.75	2.10	1990	29	8.36	1984	1.03	1986	10.4	6.9	2.9	1.0	1.32	1.69	2.23	2.69	3.13	3.58	4.08	4.66	5.40	6.55	7.61
Jun	3.15	2.85	3.46	1967	19	7.64	1982	.29	1971	8.7	5.8	2.4	.7	.86	1.16	1.61	2.01	2.40	2.81	3.26	3.79	4.49	5.58	6.60
Jul	4.19	3.57	4.14	2000	15	11.26	1989	.65	1974	9.9	6.7	2.6	1.2	1.04	1.43	2.04	2.58	3.12	3.68	4.31	5.06	6.04	7.60	9.05
Aug	5.34	5.23	6.98	1953	14	12.54	1985	.59	1995	8.9	6.2	3.1	1.7	1.35	1.85	2.63	3.32	3.99	4.71	5.51	6.45	7.69	9.65	11.48
Sep	3.77	3.93	4.72	1960	12	8.12	1999	.53	1978	7.7	5.1	2.2	1.1	.92	1.27	1.82	2.31	2.79	3.31	3.88	4.56	5.45	6.86	8.18
Oct	3.42	3.11	3.46	1956	31	6.85	1971	.04	2000	7.5	5.2	2.5	1.2	.84	1.16	1.66	2.10	2.54	3.00	3.52	4.14	4.95	6.23	7.43
Nov	3.33	3.32	3.83	1950	25	7.31	1997	.87	1974	8.9	5.8	2.6	.8	1.04	1.36	1.83	2.23	2.62	3.02	3.47	3.99	4.66	5.70	6.67
Dec	3.67	3.56	2.58	1977	18	8.60	1996	.39	1988	10.6	6.5	2.9	.9	.89	1.23	1.77	2.24	2.72	3.22	3.78	4.44	5.31	6.69	7.99
Ann	46.00	44.13	6.98	Aug 1953	14	12.54	Aug 1985	.04	Oct 2000	114.4	76.0	32.6	12.5	34.67	36.92	39.76	41.90	43.80	45.61	47.48	49.53	52.01	55.58	58.65

+ 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: 1948-2001

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

Complete documentation available from:
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Station: LEWES, DE

COOP ID: 075320

Climate Division: DE 2

NWS Call Sign:

Elevation: 15 Feet

Lat: 38°46N

Lon: 75°08W

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	2.9	.9	#	0	15.0	1987	26	15.0	1987	15	1987	26	2	1977	1.6	1.0	.4	.1	@	1.5	.3	.1	.0
Feb	4.7	.6	1	0	14.0	1996	2	31.0	1996	17	1979	19	6	1978	1.3	1.1	.5	.2	.1	2.7	1.9	1.3	.3
Mar	1.2	.0	#	0	4.5	1978	3	9.2	1978	9	1978	8	2	1978	.6	.5	.2	.0	.0	.7	.5	.3	.0
Apr	.0	.0	#	0	.4	1972	7	.4	1972	#	1972	9	#	1972	@	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.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	.3	.0	#	0	5.9	1989	23	5.9	1989	5	1989	23	#	1989	.2	@	@	@	.0	@	@	@	.0
Dec	1.2	.0	#	0	4.0	1989	13	10.3	1989	4+	1989	9	#+	1989	.8	.5	.1	.0	.0	.5	.2	.0	.0
Ann	10.3	1.5	N/A	N/A	15.0	Jan 1987	26	31.0	Feb 1996	17	Feb 1979	19	6	Feb 1978	4.5	3.1	1.2	.3	.1	5.4	2.9	1.7	.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

Complete documentation available from:

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Climate Division: DE 2

NWS Call Sign:

Elevation: 15 Feet

Lat: 38° 46N

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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	4/30	4/26	4/23	4/20	4/17	4/15	4/12	4/09	4/04
32	4/20	4/15	4/12	4/08	4/06	4/03	3/31	3/27	3/22
28	4/10	4/03	3/29	3/26	3/22	3/18	3/14	3/09	3/03
24	3/30	3/23	3/18	3/14	3/10	3/06	3/02	2/25	2/18
20	3/21	3/13	3/07	3/02	2/25	2/21	2/15	2/09	2/01
16	3/04	2/24	2/19	2/14	2/10	2/06	2/01	1/26	1/17
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	10/10	10/15	10/19	10/23	10/26	10/29	11/02	11/06	11/11
32	10/21	10/26	10/29	11/02	11/05	11/07	11/11	11/14	11/19
28	10/29	11/05	11/10	11/14	11/18	11/22	11/27	12/02	12/09
24	11/22	11/27	12/02	12/05	12/08	12/12	12/15	12/19	12/25
20	12/02	12/08	12/12	12/16	12/19	12/22	12/26	12/30	1/05
16	12/13	12/20	12/26	12/30	1/03	1/07	1/12	1/17	1/26
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	216	208	201	196	191	186	181	174	166
32	236	228	222	217	212	207	202	196	188
28	270	260	253	247	241	235	229	222	211
24	301	291	284	278	272	267	261	254	244
20	326	316	308	302	296	290	284	276	266
16	>365	343	334	328	323	318	313	308	300

* 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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Climate Division: DE 2 NWS Call Sign: Elevation: 15 Feet Lat: 38°46N Lon: 75°08W

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	887	748	603	319	103	14	0	0	15	216	452	741	4098
60	732	608	449	192	37	2	0	0	2	118	312	592	3044
57	646	532	364	131	17	0	0	0	1	75	235	506	2507
55	587	479	308	97	8	0	0	0	0	53	190	449	2171
50	445	355	186	37	1	0	0	0	0	18	100	320	1462
32	96	65	7	0	0	0	0	0	0	0	1	45	214

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	232	240	427	678	991	1214	1405	1359	1145	842	541	328	9402
55	10	11	14	85	287	524	692	646	455	182	40	19	2965
57	7	8	9	59	233	464	630	584	396	142	25	13	2570
60	0	0	1	30	161	376	537	491	307	92	11	7	2013
65	0	0	0	7	71	238	382	336	170	35	1	0	1240
70	0	0	0	0	22	126	235	189	63	9	0	0	644

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	80	101	219	445	740	978	1159	1118	907	597	317	140	80	181	400	845	1585	2563	3722	4840	5747	6344	6661	6801
45	37	52	124	300	585	828	1004	963	757	445	201	70	37	89	213	513	1098	1926	2930	3893	4650	5095	5296	5366
50	13	24	64	181	430	678	849	808	607	300	110	33	13	37	101	282	712	1390	2239	3047	3654	3954	4064	4097
55	1	6	29	97	288	528	694	653	457	176	54	9	1	7	36	133	421	949	1643	2296	2753	2929	2983	2992
60	0	0	11	44	161	381	539	498	309	86	19	2	0	0	11	55	216	597	1136	1634	1943	2029	2048	2050
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	39	55	119	248	447	661	808	779	606	347	165	68	39	94	213	461	908	1569	2377	3156	3762	4109	4274	4342

(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.
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 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. 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