

U. S. DEPARTMENT OF COMMERCE
CHARLES SAWYER, Secretary
WEATHER BUREAU
F. W. REICHELDERFER, Chief

LOCAL CLIMATOLOGICAL SUMMARY

WITH COMPARATIVE DATA

1951

WILMINGTON, DELAWARE

Compiled under the direction of

G. C. Anderson



CHATTANOOGA: 1952

LATITUDE 39° 40' N.
 LONGITUDE 75° 36' W.
 ELEVATION (ground) 73 feet.

METEOROLOGICAL DATA FOR THE CURRENT YEAR

WILMINGTON, DELAWARE
 1951

Month	Temperature						Degree days	Precipitation						Relative humidity				Wind				Number of days																
	Averages			Extremes				Total	Greatest in 24 hrs.	Date	Snow, Sleet, Hail			1:30 a., EST	7:30 a., EST	1:30 p., EST	7:30 p., EST	Average hourly speed	Fastest mile			Percent of possible sunshine	Average sky cover sunrise to sunset	Sunrise to sunset			Precipitation .01 inch or more	Snow, Sleet, Hail 1.0 or more	Thunderstorms	Heavy fog	Max. temp.		Min. temp.					
	Daily maximum	Daily minimum	Monthly	Highest	Date	Lowest					Date	Total	Greatest in 24 hrs.						Date	1:30 a., EST	7:30 a., EST			1:30 p., EST	7:30 p., EST	Speed					Direction	Date	Clear	Partly cloudy	Cloudy	90° and above	32° and below	32° and below
Jan.	44.0	24.4	34.2	66	20	14	9	948	3.64	1.16	14-15	2.6	1.1	30-31	75	76	59	69	8.5	WNW	34	WNW	21	7.1	5	9	17	12	2	0	6	0	0	3	27	0		
Feb.	44.3	25.3	34.6	68	13	9	9	838	2.96	1.03	21	0.7	0.7	7	72	73	57	66	9.5	WNW	32	NW	7	5.9	7	7	12	7	0	0	3	4	4	21	0			
Mar.	51.1	31.9	41.5	66	23	22	27	718	3.76	1.47	19-20	T	T	14	76	75	53	67	10.6	WNW	34	SSE	30	6.6	7	9	16	13	0	0	0	0	0	17	0			
Apr.	63.1	40.1	51.6	83	29	35	18	396	2.56	0.91	2-3	0.0	0.0	0	77	72	48	65	9.3	WNW	34	SSE	12	6.4	7	9	17	12	0	0	0	0	0	0	0	0		
May	73.7	50.1	61.9	89	16	39	14	125	3.56	1.40	23-24	0.0	0.0	0	84	74	48	65	7.4	WNW	33	SSE	17	6.3	7	10	14	11	0	0	0	0	0	0	0	0		
June	80.3	60.5	70.4	91	1	50	12	19	4.27	1.26	22-23	0.0	0.0	0	90	83	60	74	7.6	SSE	30	WNW	27	6.5	7	9	13	12	0	0	0	0	0	0	0	0	0	
July	86.2	65.5	75.9	94	27	55	7	0	3.84	1.98	4-5	0.0	0.0	0	89	83	55	74	6.5	SSE	28	NW	19	6.4	7	10	16	8	0	0	0	0	0	0	0	0		
Aug.	84.4	63.1	73.8	94	16	49	5	2	3.23	1.77	11-12	T	T	21	90	87	56	77	5.8	WNW	30	NNE	20	6.5	9	12	10	6	0	0	0	0	0	0	0	0	0	
Sept.	78.2	55.7	67.0	88	1	38	30	45	1.16	0.70	15	0.0	0.0	0	90	86	51	73	7.3	WNW	29	NW	28	5.5	11	12	10	7	0	0	0	0	0	0	0	0	0	0
Oct.	68.7	49.5	59.1	91	5	39	14	214	3.17	1.37	7	0.0	0.0	0	83	84	49	75	7.5	NNE	28	NW	18	6.2	10	9	13	7	0	0	0	0	0	0	0	0	0	0
Nov.	51.0	32.0	41.5	71	14	17	28	699	7.32	2.32	7	T	T	3	75	78	58	66	8.7	WNW	22	SSE	14	6.6	8	9	17	9	0	0	0	0	0	0	0	0	0	0
Dec.	46.5	28.7	37.6	71	7	6	17	842	5.79	1.82	20-21	6.6	6.6	14	76	76	60	74	8.2	WNW	35	SSE	20	6.5	7	9	15	12	1	0	0	0	0	0	0	0	0	0
Year	64.3	43.9	54.1	94	July 27+	Dec. 6	17	4846	45.26	2.32	Nov. 7	9.9	6.6	Dec. 14	81	79	55	71	8.1	NW	35	SSE	Dec. 20	6.3	96	97	172	116	3	33	49	14	11	102	0			

MEANS AND EXTREMES FOR PERIOD OF RECORD

Month	Temperature						Mean degree days	Precipitation						Relative humidity				Wind				Mean number of days															
	Means			Extremes				Mean total	Maximum monthly	Year	Minimum monthly	Year	Snow, Sleet, Hail			1:30 a., EST	7:30 a., EST	1:30 p., EST	7:30 p., EST	Mean hourly speed	Fastest mile			Pct of poss. sunshine	Average sky cover sunrise to sunset	Sunrise to sunset			Precipitation .01 inch or more	Snow, Sleet, Hail 1.0 or more	Thunderstorms	Heavy fog	Max. temp.		Min. temp.		
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest							Year	Mean total	Maximum monthly						Year	Maximum in 24 hrs.	Year			1:30 a., EST	7:30 a., EST	1:30 p., EST					7:30 p., EST	Speed	Direction	Year	Clear
Jan.	44.0	24.4	34.2	66	1950	14	916	3.80	5.5	1948	1.97	1950	1.56	1948	5.1	4	13	1948	4.0	1948	76	4	4	71	8.2	WNW	4	4	4	4	4	4	4	4	4		
Feb.	43.3	25.7	34.5	74	1949	2	852	3.23	4.7	1948	3.66	1948	1.03	1951	6.5	4	14	1948	9.7	1948	74	77	62	70	9.1	WNW	4	4	4	4	4	4	4	4	4		
Mar.	51.5	31.3	41.4	86	1948	10	735	3.82	4.7	1950	3.00	1949	1.47	1951	0.4	1.6	1948	1.6	1948	74	74	54	65	10.7	WNW	9	9	14	14	1	1	1	1	1	19		
Apr.	61.5	39.9	50.7	83	1949	23	426	2.53	3.07	1948	1.81	1950	1.49	1948	T	T	1950	T	1950	75	72	51	62	8.0	WNW	8	8	16	11	0	0	0	0	0	4		
May	72.1	51.0	61.6	90	1948	37	142	2.08	3.35	1948	3.32	1950	1.83	1948	0.0	0.0	0.0	0.0	0.0	87	80	57	72	8.0	WNW	4	4	11	16	13	0	0	0	0	0		
June	81.5	60.3	70.9	95	1948	45	14	3.24	5.25	1948	0.98	1949	2.08	1948	0.0	0.0	0.0	0.0	0.0	88	82	56	72	8.4	SSE	7	7	12	11	0	0	0	0	0	0		
July	86.2	65.9	76.1	100	1949	55	0	3.88	6.16	1949	1.15	1948	2.32	1949	0.0	0.0	0.0	0.0	0.0	90	83	57	73	7.8	WNW	11	11	14	10	0	0	0	0	0	0		
Aug.	84.2	63.3	73.3	99	1948	48	1949	3.35	4.58	1948	3.05	1950	1.77	1951	T	T	1951	T	1951	91	86	56	73	8.5	WNW	7	7	14	9	0	0	0	0	0	0		
Sept.	75.7	55.0	65.4	91	1948	38	1950	3.29	7.06	1950	1.16	1951	2.29	1950	0.0	0.0	0.0	0.0	0.0	88	87	56	76	8.6	WNW	11	11	13	9	0	0	0	0	0	0		
Oct.	67.7	48.0	57.9	91	1951	29	1948	2.63	3.63	1949	1.25	1948	1.48	1950	0.0	0.0	0.0	0.0	0.0	85	85	55	76	8.9	WNW	7	7	14	8	0	0	0	0	0	0		
Nov.	55.1	35.1	45.1	85	1950	17	1951	4.38	7.32	1951	1.15	1949	2.76	1950	0.2	0.8	1950	0.7	1950	82	82	56	71	8.7	WNW	10	8	12	10	0	0	0	0	0	12		
Dec.	44.8	27.1	36.0	71	1951	6	1950	3.97	5.79	1951	1.95	1950	1.99	1948	3.4	6.6	1951	6.6	1951	76	77	59	71	7.7	NW	8	8	15	11	1	0	0	0	4	23		
Year	64.0	44.1	54.1	100	July 1949	2	Jan. 1948-4902	40.20	7.35	May 1948	0.98	June 1949	2.76	Nov. 1950	15.6	14.8	Feb. 1948	9.7	Feb. 1948	82	80	57	71	8.1	NW	7.9	86	105	174	132	4	33	52	18	13	103	0

REFERENCE NOTES

- (a) Length of record, years.
- * Less than one half.
- No record.
- † Airport data.
- ‡ City Office data.
- + Also on later dates, months, or years.
- T Trace, an amount too small to measure.

Unless otherwise indicated, dimensional units used in this bulletin are: temperature in degrees F.; precipitation and snowfall in inches; wind movement in miles per hour; and relative humidity in percent.

Sky cover is based on 0 for no clouds or obstructions to 10 for complete sky cover. Degree days are based on daily average temperatures of 65° F. Sleet and hail were included in snowfall totals, beginning with July 1948.

Data for earlier years may be obtained by contacting the Weather Bureau Office for which this summary was issued.

Heavy fog in the Means and Extremes Table also includes data referred to at various times

in the past as "Dense" or "Thick". The upper visibility limit for heavy fog is 1/4 mile. Data entered in the column headed "Fastest Mile" in the first table are the fastest mile observed. This station is not equipped with automatic recording wind instruments.

Below zero temperatures are preceded by a minus sign.

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AVERAGE TEMPERATURE

TOTAL PRECIPITATION

Table with columns: Year, Jan., Feb., Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec., An 1. Rows include years from 1900 to 1951 with temperature data.

Table with columns: Year, Jan., Feb., Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec., Annual. Rows include years from 1900 to 1951 with precipitation data.

MONTHLY AND SEASONAL DEGREE DAYS

Table with columns: Season, July, Aug., Sept., Oct., Nov., Dec., Jan., Feb., Mar., Apr., May, June, Total. Rows include seasonal data from 1920-21 to 1939-40.

Table with columns: Season, July, Aug., Sept., Oct., Nov., Dec., Jan., Feb., Mar., Apr., May, June, Total. Rows include seasonal data from 1940-41 to 1951-52.

The horizontal lines drawn on the Average Temperature, Total Precipitation, Monthly and Seasonal Degree Days, and Monthly and Seasonal Snowfall tables separate the data according to station location (see Station Location table).

MONTHLY AND SEASONAL SNOWFALL

WILMINGTON, DELAWARE
1951

Season	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1899-1900	0	0	0	0	0	0.5	1.5	8.5	6.0	0	0	0	16.5
1900-1901	0	0	0	0	0	0.5	10.0	3.0	T	0	0	0	13.5
1901-1902	0	0	0	0	2.0	1.0	8.0	4.5	3.5	0	0	0	19.0
1902-1903	0	0	0	0	0	5.0	5.0	4.0	0	0	0	0	14.0
1903-1904	0	0	0	T	T	2.0	6.1	4.4	5.0	0	0	0	17.5
1904-1905	0	0	0	0	T	13.0	16.3	9.3	0.5	T	0	0	39.1
1905-1906	0	0	0	0	0	3.0	0.8	3.7	11.5	0	0	0	19.0
1906-1907	0	0	0	0	0.5	T	7.7	24.5	12.0	T	0	0	44.7
1907-1908	0	0	0	0	0	5.0	9.0	7.0	2.0	0	0	0	23.0
1908-1909	0	0	0	0	2.0	4.0	4.5	2.0	5.5	T	0	0	18.0
1909-1910	0	0	0	0	0.5	23.5	11.0	2.0	1.0	T	0	0	38.0
1910-1911	0	0	0	0	0	12.0	4.0	6.5	2.0	T	0	0	25.5
1911-1912	0	0	0	0	0	T	16.5	0.8	7.0	0	0	0	24.3
1912-1913	0	0	0	0	0.5	12.0	T	1.5	0	0	0	0	14.0
1913-1914	0	0	0	0	0	0	0.7	13.0	13.3	0	0	0	27.0
1914-1915	0	0	0	0	0	1.5	2.0	2.1	10.2	12.0	0	0	27.8
1915-1916	0	0	0	0	T	6.0	1.4	5.7	6.0	6.7	0	0	25.8
1916-1917	0	0	0	0	0	14.0	4.5	7.4	0.7	5.5	0	0	32.1
1917-1918	0	0	0	0	1.5	3.7	24.0	2.7	0	T	0	0	31.9
1918-1919	0	0	0	0	0	0.8	0.5	2.0	1.0	T	0	0	4.3
1919-1920	0	0	0	0	0	6.2	2.5	11.2	4.5	T	0	0	24.4
1920-1921	0	0	0	0	0	0.5	1.0	8.2	2.0	3.0	0	0	14.7
1921-1922	0	0	0	0	0	8.0	20.3	6.0	0.8	0	0	0	35.1
1922-1923	0	0	0	0	T	2.2	5.0	7.0	6.0	0.5	0	0	20.7
1923-1924	0	0	0	0	0	1.5	0.2	12.2	1.5	8.0	0	0	23.4
1924-1925	0	0	0	0	0.5	0.5	13.5	T	T	0	0	0	14.5
1925-1926	0	0	0	3.0	0.8	T	3.0	17.9	T	T	0	0	24.7
1926-1927	0	0	0	0	0	4.5	6.7	6.3	T	1.2	0	0	18.7
1927-1928	0	0	0	0	T	6.0	12.0	0.7	2.0	0.8	0	0	21.5
1928-1929	0	0	0	0	T	6.0	1.0	8.7	T	0	0	0	15.7

Season	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1929-1930	0	0	0	0	0.2	2.5	7.0	1.5	T	T	0	0	11.2
1930-1931	0	0	0	0	0	T	1.2	1.0	0.5	3.0	0	0	5.7
1931-1932	0	0	0	0	0.5	T	1.0	T	7.0	T	0	0	8.5
1932-1933	0	0	0	0	0	T	13.0	T	13.0	4.0	0	0	30.0
1933-1934	0	0	0	0	0.5	5.5	T	26.2	12.5	T	0	0	44.7
1934-1935	0	0	0	0	T	0.2	27.0	7.4	1.0	T	0	0	35.6
1935-1936	0	0	0	0	0.8	14.5	4.7	11.0	T	T	0	0	31.0
1936-1937	0	0	0	0	0	T	0.5	T	5.0	7.5	T	0	13.0
1937-1938	0	0	0	0	T	T	1.0	3.5	3.0	T	0	0	7.5
1938-1939	0	0	0	0	8.5	0.3	12.0	T	2.5	T	0	0	23.3
1939-1940	0	0	0	0	T	1.5	4.7	8.1	2.8	2.5	0	0	19.6
1940-1941	0	0	0	2.0	T	5.0	5.5	6.6	9.0	0	0	0	28.1
1941-1942	0	0	0	0	T	0	3.5	2.3	2.2	0	0	0	8.0
1942-1943	0	0	0	0	0	5.0	5.1	1.0	8.0	T	0	0	19.1
1943-1944	0	0	0	0	T	0.0	2.5	3.7	9.5	1.0	0	0	16.7
1944-1945	0	0	0	0	T	4.9	7.0	6.5	0	0	0	0	18.4
1945-1946	0	0	0	0	T	10.5	1.0	2.0	0	0	0	0	13.5
1946-1947	0	0	0	0	0	0.5	4.3	13.5	2.2	0	0	0	20.5
1947-1948	0	0	0	0	T	6.0	13.0	14.8	1.5	0	0	0	35.4
1948-1949	0	0	0	0	0	6.4	4.2	10.1	T	0	0	0	20.7
1949-1950	0	0	0	0	0	T	0.6	0.4	T	T	0	0	1.0
1950-1951	0	0	0	0	0.8	0.7	2.6	0.7	T	0	0	0	4.8
1951-1952	0	0	0	0	T	616							

STATION LOCATION

Location	Occupied from	Occupied to	Airline distance and direction from previous location	Latitude	Longitude	Elevation above								REMARKS	
						Sea level	Ground								
						Ground	Actual barometer elevation (ft.)	Wind instruments	Extreme thermometers	Psychrometer	Telepsychrometer	Tipping bucket rain gage	Weighing rain gage	8" rain gage	
CITY OFFICE															
Wilmington, Delaware 6th & King Streets	4/1/94	9/17/30		39° 45'	75° 33'								35'	a.Gnd	Ordinary thermometer exposed outside N window; Sept. '09 max. and min. in use. Exposure thermometers "poor".
Porter Reservoir Wilmington, Del.	3/1/12	Present	2 mi. NNE(1)	39° 46'	75° 32'	260			3'				3'		Home made shelter in use; C.R. shelter Sept. 1936, good exposure over sod. Pcpn. readings began 7/12/12.
Wilmington, Del. 10th & King Sts.	9/17/30	Present	4 bl. NE(1)	39° 45'	75° 33'	99							47'	a.Gnd	Pcpn. observations only; Temperature obs. ending unknown; obs. by Street and Sewer Dept.
AIRPORT STATION															
Bellanca Field, New Castle, Del.			6 mi. SSW(1)	39° 40'	75° 36'										Airway Observations telephone to Central Airport, Camden, N. J.
duPont Airport, Wilmington, Del.	4/27/42 7/27/42	7/27/42 12/8/42	3 mi. NW(1)	39° 46'	75° 36'										One commissioned employee 9/7/42 to 12/8/42.
New Castle Co. Airport Wilmington, Delaware	7/18/47	11/6/47	5 mi. SSW(1)	39° 40'	75° 36'										Airway Obs. By County Tower employees Ceiling, visibility and wind only.
New Castle Co. Airport Wilmington, Delaware	11/7/47	12/5/47	5 mi. SSW(1)	39° 40'	75° 36'	73	78.94		5	5			3	31	Temp. location in Administration Bldg. during pending completion permanent quarters 150 ft. to the NE. No barometer.
New Castle Co. Airport Wilmington, Delaware	12/5/47	Present	5 mi. SSW(1)	39° 40'	75° 36'	73	79.69		5	5			3	34	Barometer readings started January 16, 1948. Exposure of instruments good.

- (1) All distances are from first location.
- (2) No observational records from locations 4 and 5 available at WBAS, Wilmington
- (3) Wilmington Post Office 1 block N from No. 3 location.

Data considered official for local records and for the Local Climatological Summary obtained as follows:
 Location No. 1 - Temperature April 1894 - Feb. 1912, Precipitation April 1894 - July, 1912.
 Location No. 2 - Temperature March 1912 - Dec. 1947, Precip. July 1912 - Dec. 1947.
 Location No. 8 - All elements beginning Jan. 1, 1948.

CLIMATE OF WILMINGTON, DELAWARE

Delaware is part of the Atlantic Coastal Plain consisting mainly of flat low land with many marshes. Wilmington, at the northern end of the state, marks the beginning of low rolling hills extending northward into Pennsylvania. The Delaware River and the Delaware Bay extend along the entire eastern side of the state while the broad Chesapeake Bay is twenty-five miles, or less, from the western boundary of the state. These large water bodies modify the climate of Delaware to a considerable extent.

The climate of northern Delaware when considered "all the year round" can well be described as mild and favorable for agricultural and manufacturing interests. Winters are seldom severe. February is the coldest month with an average temperature of 24.6 degrees. Zero temperatures are infrequent. Since 1894 only 35 days with zero or below have been recorded in the Wilmington area. The average date of the first snowfall is December 7th and the average annual snowfall is 22.5 inches. As a rule snow does not remain on the ground more than a few days. The average number of days with a maximum of 32 degrees or below is 17. Spring comes early in Delaware. The average date of the last killing freeze is April 18th. The average maximum temperature for March and April is 51.8 and 62.7 degrees respectively. The average date of the first killing freeze in Autumn is October 21st. Considering the latitude of northern Delaware, the growing season of 185 days is remarkably long.

The warmest month of the year is July with an average temperature of 76.0 degrees, an average maximum temperature of 85.7 and an average minimum of 66.4 degrees. During the past fifty years there have been 9 days with a

temperature of 100 degrees or over. The average annual number of days 90 degrees or over is 20. The proximity of large water areas and southerly winds blowing along the eastern slope of the Appalachian Mountains cause the relative humidity to be quite high during all seasons of the year. During the summer months the average relative humidity is 76%. Air-mass thunderstorms are frequent during the summer months, usually occurring during the late afternoon of hot humid days bringing welcome relief. A feature of the summer weather is the cooling southeasterly afternoon "ocean breeze" from the Delaware Bay and the Delaware River. Prevailing winds are from the NW October to April and from the SW May through September.

The average number of days with heavy fog is 53. Heavy fogs usually occur during every month of the year, however the maximum number occur during the Fall and Winter seasons. Light SE winds blowing up the Delaware Bay favor the formation of heavy fog.

The average annual precipitation of 44.78 inches is remarkably uniform throughout the year. August is the wettest month averaging 5.08 inches while October and November with 3.14 inches are the driest months. Long droughts are uncommon. Tropical hurricanes moving northward along the Atlantic Coast occasionally cause heavy rain in northern Delaware but winds seldom reach hurricane force. There is almost a complete freedom from tornadoes. Strong easterly and southeasterly winds occasionally cause high tides resulting in the flooding of lowlands.

STATION HISTORY

The Weather Bureau Office located at the New Castle County Airport is situated in level country sloping gently to the Delaware River, three miles to the east, and to a swamp two miles to the west. The instrument shelter is over sod, the

immediate terrain slopes gently to the north. There are no obstructions to the wind instruments. The exposure of all instruments is considered good.