

# LOCAL CLIMATOLOGICAL DATA

## ANNUAL SUMMARY WITH COMPARATIVE DATA, 1966

### WILMINGTON, DELAWARE

#### NARRATIVE CLIMATOLOGICAL SUMMARY

Delaware is part of the Atlantic Coastal Plain consisting mainly of the flat low land with many marshes. Small streams and tidal estuaries comprise the drainage of the state. Wilmington, at the northern end of the state, marks the beginning of low rolling hills extending northward and northwestward into Pennsylvania. The Delaware River, the Delaware Bay, and the Atlantic Ocean are along the eastern boundary of the state. The broad Chesapeake Bay lies 35 miles, or less, to the west of the western boundary of nearly the entire state. These large water areas influence to a considerable extent the climate of the Wilmington, Delaware, region.

Summers are warm and humid and winters are usually mild. During the summer maximum temperatures are usually in the eighties. The maximum temperature reaches 100° on the average of one year in six. During the coldest part of the year, mid-January, the normal daily average temperature is 33°. On the average, zero temperatures may be expected one year in three. Most of the winter precipitation falls as rain. Seasonal snowfall has been as little as 1 inch, and there has been a season with nearly 50 inches snowfall. Snow is frequently mixed with rain and sleet. Snow seldom remains on the ground more than a few days.

The average date for the last occurrence in spring of temperature as low as 32° F. is mid-April. The average date for the first occurrence in fall of temperature as low as 32° F. is late October. The average freeze-free period is approximately

200 days.

The proximity of large water areas and the inflow of southerly winds cause the relative humidity to be quite high all year. During the summer months the average relative humidity is approximately 75 percent. Fog is relatively frequent and may occur in any month. Light southeast winds blowing up the Delaware Bay favor the formation of fog. Light north-northeast winds bring in smoke from Philadelphia and from the heavy industry area located along the Delaware River north of Wilmington.

Rainfall distribution throughout the year is fairly uniform; however, the greatest amounts normally come during the summer months. Mostly, the summer rainfall comes in the form of thunderstorms. Moisture deficiencies for crops occur occasionally, but severe droughts are rare. During the fall, winter, and spring seasons, much of the rainfall comes as a result of storms forming over the southern states, or the south Atlantic and then moving northward along the Atlantic Coast. During the late summer and early fall, hurricanes occasionally cause heavy rainfall, but winds seldom reach hurricane force in Wilmington. Heavy rains occasionally cause minor flash flooding, but the streams and rivers of northern Delaware are not subject to major flooding. Strong easterly and southeasterly winds sometimes cause high tides in the Delaware Bay and the Delaware River, resulting in the flooding of lowlands and damage to bay front and river front properties.



U.S. DEPARTMENT OF COMMERCE  
JOHN T. CONNOR, Secretary  
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION  
ROBERT M. WHITE, Administrator  
ENVIRONMENTAL DATA SERVICE

LATITUDE                    39° 40' N  
 LONGITUDE                75° 36' W  
 ELEVATION (ground)    78 Feet

## METEOROLOGICAL DATA FOR THE CURRENT YEAR

**WILMINGTON, DELAWARE**  
**GREATER WILMINGTON AIRPORT**  
**1966**

Month	Temperature						Degree days	Precipitation						Relative humidity			Wind &						Number of days			Temperatures																
	Averages			Extremes				Total			Greatest in 24 hrs.			Snow, Sleet			1:00 A.M., EST			7:00 A.M., EST			1:00 P.M., EST			7:00 P.M., EST			Resultant			Fasted mile			Sunrise to sunset							
	Daily maximum	Daily minimum	Monthly	Highest	Date	Lowest		Total	Greatest in 24 hrs.	Date	Total	Greatest in 24 hrs.	Date	Total	1:00 A.M., EST	7:00 A.M., EST	1:00 P.M., EST	7:00 P.M., EST	Direction	Speed	Direction	Speed	Direction	Speed	Direction	Speed	Clear	Partly cloudy	Cloudy	Precipitation	Snow, Sleet	Thunderstorms	Heavy fog	90° and above	22° and below	22° and below	0° and below	0° and below				
JAN	36.5	22.0	29.3	60	1	5	29+	1103	2.82	0.80	29-30	17.2	11.2	29-30	69	69	58	66	30	7.5	12.3	32	26	30	6.4	10	16	12	10	1	5	1	6	16	22	16	6	0	0			
FEB	40.2	23.5	31.9	56	13	5	6	921	4.90	2.29	12-13	10.0	5.1	24	76	79	63	70	30	3.9	9.4	27	16	28	6.2	8	12	11	1	1	6	1	7	7	22	16	6	0	0			
MAR	53.1	32.7	42.9	70	22	21	28	676	0.81	0.59	24	7	6	1	74	75	46	58	28	3.2	10.8	30	27	1	6.2	8	10	5	0	1	3	1	1	1	6	1	6	1	0	0		
APR	57.0	38.8	47.9	75	21	27	5	507	3.16	0.89	12-13	1	1	1	76	77	54	65	36	0.9	10.2	23	5	27+	7.7	1	12	17	12	1	3	1	1	1	3	1	6	1	0	0		
MAY	70.4	50.1	60.3	88	6	32	11	186	3.35	1.22	21-22	0.0	0.0	1	78	75	52	59	19	1.2	9.6	25	19	5	6.5	6	12	13	16	3	2	2	1	1	1	6	1	6	1	0	0	
JUN	83.9	61.0	72.5	96	24	44	1	24	0.70	0.55	10	0.0	0.0	1	79	78	47	58	25	2.2	8.4	21	30	16+	5.4	8	10	12	3	0	0	2	2	1	1	1	6	1	6	1	0	0
JUL	88.3	66.0	77.2	102	4+	54	21	0	3.09	1.32	27	0.0	0.0	1	76	73	43	54	26	2.2	8.5	24	30	8	4.6	13	11	7	8	0	11	4	1	1	5	1	6	1	0	0		
AUG	85.2	64.3	74.6	92	31+	57	26+	0	1.42	0.56	11	0.0	0.0	1	84	84	51	71	24	3.0	7.7	32	22	11	5.7	10	8	13	4	0	1	4	1	1	6	1	6	1	0	0		
SEP	74.6	56.0	65.3	91	3	43	27+	84	8.53	3.72	14	0.0	0.0	1	80	81	55	67	33	2.7	9.0	25	6	21	7.2	5	9	16	11	1	2	0	0	0	0	0	0	0	0	0		
OCT	64.7	42.4	53.6	78	4	29	31	346	5.17	3.88	18-19	0.0	0.0	1	80	83	49	66	29	3.5	8.3	30	31	29	4.2	17	6	8	5	0	0	5	0	0	0	0	0	0	0	0	0	
NOV	56.4	36.7	46.6	69	10	24	20	545	1.75	0.63	28	1	1	1	79	82	56	69	26	2.2	8.3	27	16	3	5.9	6	13	11	9	0	0	1	1	1	2	12	23	12	0	0		
DEC	42.7	26.8	34.8	72	12	10+	28+	931	3.81	1.14	20-21	21.5	12.4	1	24	77	76	59	73	30	4.3	9.5	24	29	29+	5.6	12	7	12	10	4	1	3	0	0	6	6	6	0	0	0	
YEAR	62.8	43.4	53.1	102	JUL 1	4+	5	FEB 6+	39.51	3.88	OCT 1	48.7	12.4	1	DEC 24	77	78	53	65	29	2.7	9.3	32	22	11+	6.0	104	111	150	104	11	26	28	29	23	108	0	0	0	0	0	0

## NORMALS, MEANS, AND EXTREMES

Means and extremes in the above table are from the existing or comparable location(s). Annual extremes have been exceeded at other locations as follows: Highest temperature 107 in August 1918; lowest temperature -15 in February 1934; maximum monthly precipitation 14.91 in August 1911; minimum monthly precipitation 0.06 in October 1924; maximum precipitation in 24 hours 6.53 in August 1945; maximum monthly snowfall 27.0 in January 1935; maximum snowfall in 24 hours 22.0 in December 1909.

(a) Length of record, years.  
 (b) Climatological standard normals (1931-1960).  
 \* Less than one half.  
 + Also on earlier dates, months or years.  
 T Trace, an amount too small to measure.  
 Below-zero temperatures are preceded by a minus sign.  
 The prevailing direction for wind in the Normals,

Unless otherwise indicated, dimensional units used in this bulletin are: temperature in degrees F.; precipitation, including snowfall, in inches; wind movement in miles per hour; and relative humidity in percent. Degree day totals are the sums of the negative departures of average daily temperatures from 65° F. Sleet was included in snowfall totals beginning with July 1948. Heavy fog reduces visibility to 1/4 mile or less.

& Figures instead of letters in a direction column indicate direction in tens of degrees from true North, i.e., 09-East, 18-South, 27-North, and 00-Calm. Resultant wind is the vector sum of wind directions and speeds divided by the number of observations. If figures appear in the direction column under "Fastest mile" the corresponding speeds are fastest observed 1-minute values.

WILMINGTON, DELAWARE  
GREATER WILMINGTON AP

**AVERAGE TEMPERATURE**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1931	33.6	35.0	39.2	50.5	61.7	71.0	77.2	74.2	72.1	59.2	52.0	42.2	55.7
1932	44.2	38.3	37.6	50.2	62.0	70.7	75.0	74.6	68.8	57.6	44.1	36.4	55.0
1933	40.4	35.6	39.6	52.1	64.7	72.4	74.3	74.4	69.7	55.6	42.4	34.1	54.6
1934	36.2	20.2	38.0	51.0	64.2	74.0	77.4	71.3	68.8	54.0	48.0	34.4	53.1
1935	30.0	32.0	45.8	50.1	59.1	70.1	76.6	74.0	65.2	56.4	49.0	29.7	53.2
1936	28.2	25.0	46.8	49.6	65.0	70.8	75.9	75.8	68.8	57.5	43.0	38.3	53.7
1937	41.0	35.4	37.6	51.0	63.8	72.0	75.7	75.8	65.1	54.4	46.6	34.2	54.2
1938	32.8	36.4	45.0	54.1	60.9	70.4	75.9	76.5	66.0	57.6	47.8	35.8	54.9
1939	32.6	36.8	42.6	50.2	64.2	72.4	74.6	76.0	68.4	57.0	42.8	36.8	54.6
1940	22.9	33.0	36.4	46.8	61.2	70.3	75.4	70.8	64.8	52.1	44.8	39.0	51.5
1941	30.8	30.2	35.6	56.3	64.9	70.7	75.0	73.0	70.2	61.4	48.0	38.8	54.6
1942	31.0	30.4	43.8	54.8	65.6	71.4	75.4	72.6	67.9	57.4	46.2	31.3	54.0
1943	31.9	34.8	42.6	47.4	63.4	75.4	75.0	75.2	67.0	54.5	44.3	33.6	53.8
1944	34.4	32.4	38.9	50.0	67.3	71.7	75.8	74.7	71.2	55.2	45.6	31.6	54.2
1945	26.1	33.4	51.6	55.4	60.2	71.0	74.6	71.6	54.7	47.3	30.0	53.8	
1946	34.2	35.0	50.4	50.2	61.6	67.4	73.4	69.6	68.4	59.1	47.8	37.4	54.5
1947	37.8	27.8	36.2	51.4	60.9	68.0	73.0	75.2	67.5	62.2	49.2	33.4	53.1
1948	25.9	31.0	42.4	51.0	61.6	70.6	75.4	73.6	66.8	54.2	49.4	36.3	53.2
1949	39.2	38.6	43.2	52.0	62.9	72.9	78.7	75.1	64.2	60.4	44.5	37.5	55.8
1950	42.7	33.6	37.6	48.3	50.1	69.7	74.0	72.5	63.9	57.6	50.3	32.4	53.1
1951	34.2	34.8	41.5	51.6	61.9	70.4	75.9	73.8	67.0	59.1	41.5	37.6	54.1
1952	37.0	37.6	40.5	54.6	61.0	73.4	78.4	74.3	67.4	52.4	45.9	37.4	55.0
1953	37.6	38.4	44.4	52.3	65.0	72.2	77.0	74.5	68.2	58.0	45.2	38.7	56.0
1954	31.3	40.4	41.5	55.6	60.6	72.0	74.2	72.9	68.5	59.6	43.8	35.1	54.8
1955	31.5	34.1	43.5	54.8	64.8	68.7	74.1	77.9	67.2	58.1	43.3	29.9	54.6
1956	31.8	37.5	45.8	49.9	59.9	71.7	73.4	73.4	64.6	56.8	45.2	41.3	53.7
1957	28.6	37.4	42.2	54.1	62.9	74.2	75.9	73.4	67.6	53.3	46.6	37.9	54.6
1958	30.8	27.3	39.0	53.4	60.7	67.4	76.5	73.0	62.8	55.4	43.8	28.6	52.0
1959	30.9	33.0	41.1	54.3	65.6	72.0	75.4	76.0	70.4	59.5	44.7	38.0	55.1
1960	35.1	35.9	32.8	56.4	60.6	71.0	73.1	74.9	68.0	55.3	45.9	28.4	53.1
RECORD	32.7	33.1	41.9	52.1	62.8	71.3	75.9	74.0	67.8	56.7	45.6	34.9	54.1
MEAN	40.4	41.3	51.3	62.6	73.5	81.7	85.7	83.5	77.5	66.6	54.2	42.6	63.4
MAX	24.9	24.8	32.5	41.6	52.0	60.8	66.1	64.4	58.0	46.8	36.9	27.2	44.7
MIN													

**TOTAL DEGREE DAYS**

Season	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total	
1930-31	0	3	7	340	589	947	964	836	794	422	155	9	5064	
1931-32	0	1	25	208	385	697	641	770	843	440	135	15	4160	
1932-33	0	0	37	235	619	859	753	820	781	378	88	30	4600	
1933-34	0	0	22	292	671	951	888	1246	828	409	104	1	5412	
1934-35	0	12	21	333	504	944	1080	919	587	448	220	12	5080	
1935-36	0	3	55	264	474	1086	1133	1152	557	458	90	6	5278	
1936-37	0	0	33	238	660	828	739	828	841	410	102	0	4673	
1937-38	0	2	87	333	603	945	987	792	617	337	145	17	4865	
1938-39	0	0	53	238	515	900	995	734	700	445	132	5	4718	
1939-40	0	3	21	274	658	863	1298	924	876	539	144	15	5615	
1940-41	3	23	83	392	600	801	1049	968	904	288	104	19	5234	
1941-42	1	6	26	198	501	802	1048	954	651	311	56	8	4562	
1942-43	0	9	70	234	536	1037	1022	837	688	519	108	5	5085	
1943-44	2	0	62	323	611	967	935	888	801	443	37	12	5081	
1944-45	0	3	38	307	577	1029	1197	877	426	284	174	5	4966	
1945-46	1	6	18	314	526	1076	951	833	447	437	139	67	4815	
1946-47	0	8	22	196	505	846	1036	876	410	182	25	4942		
1947-48	0	0	113	122	656	972	1230	982	681	419	156	11	5342	
1948-49	0	0	55	338	468	892	805	741	681	394	122	13	4509	
1949-50	0	3	87	164	613	854	862	872	841	494	163	13	4806	
1950-51	0	2	114	232	598	1001	948	838	718	396	125	19	4991	
1951-52	0	2	45	214	699	842	862	789	751	309	140	8	4661	
1952-53	0	4	32	391	579	848	846	740	691	377	67	18	4533	
1953-54	0	0	53	215	589	810	1040	684	723	289	163	7	4573	
1954-55	0	0	36	249	530	920	1031	857	660	300	83	30	4796	
1955-56	0	0	45	226	645	1081	1021	790	810	456	199	13	5286	
1956-57	1	1	120	249	569	727	764	703	344	129	6	4763		
1957-58	0	0	65	359	544	836	1056	1050	800	347	149	31	5237	
1958-59	0	0	64	297	565	1123	1051	890	734	325	103	22	5174	
1959-60	0	0	44	256	605	831	920	840	994	279	4915			
1960-61	0	0	18	297	565	1130	1215	843	687	486	203	6	5450	
1961-62	0	0	36	250	553	876	1042	940	729	400	123	6	5054	
1962-63	0	0	4	113	266	1072	1130	1044	641	370	180	10	5502	
1963-64	0	0	3	104	199	502	1128	982	962	616	467	91	21	5128
1964-65	0	0	9	49	372	514	854	1108	873	816	467	63	27	5152
1965-66	0	12	40	349	593	839	1103	921	676	507	186	24	5250	
1966-67	0	0	84	346	545	931								

**TOTAL SNOWFALL**

Season	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1930-31	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	0.5	3.0	0.0	0.0	5.7
1931-32	0.0	0.0	0.0	0.0	0.5	1.0	1.0	1.0	0.0	0.0	0.0	0.0	8.5
1932-33	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	30.0
1933-34	0.0	0.0	0.0	0.0	0.5	1.5	2.6	2.2	1.2	0.0	0.0	0.0	44.6
1934-35	0.0	0.0	0.0	0.0	0.0	2.0	2.7	2.4	1.0	0.0	0.0	0.0	35.6
1935-36	0.0	0.0	0.0	0.0	0.0	0.8	1.45	4.7	1.10	1.0	0.0	0.0	31.0
1936-37	0.0	0.0	0.0	0.0	0.5	1.5	5.0	5.5	5.0	7.5	1.0	0.0	13.0
1937-38	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	7.5
1938-39	0.0	0.0	0.0	0.0	0.0	8.5	0.3	12.0	1.0	1.0	0.0	0.0	23.3
1939-40	0.0	0.0	0.0	0.0	0.0	0.0	1.5	4.7	8.1	2.8	2.0	0.0	0.0
1940-41	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.5	6.6	9.0	0.0	0.0	28.1
1941-42	0.0	0.0	0.0	0.0	0.0</td								

# STATION LOCATION

WILMINGTON, DELAWARE  
GREATER WILMINGTON AIRPORT

Location	Occupied from	Occupied to	Airline distance and direction from previous location	Latitude North	Longitude West	Ground at temp- erature site	Elevation above Ground							Remarks		
							Sea level	Wind instruments	Extreme thermometers	Psychrometer	Telepsychrometer	Tipping bucket rain gage	Weathering rain gage	B" rain gage	Hygrothermometer	
<b>COOPERATIVE</b>																
Wilmington, Delaware 6th and King Streets	4- 1-94	7-12-16		39° 45'	75° 33'	86							35'			Ordinary thermometer exposed outside N window; Sept. '09 max. and min. in use, exposure of thermometers poor.
Porter Reservoir Wilmington, Delaware 1.9 miles NNE of P. O.	3- 1-12	Present		39° 46'	75° 33'	260		3'					3'			Home made shelter in use; C. R. shelter September 1936, good exposure over sod. Precipitation record began 7-12-12.
Wilmington, Delaware 10th and King Streets 1 block S of P. O.	7-12-16	10-31-58	1.9 mi. SSW	39° 45'	75° 33'	99							47'			Precipitation only most of time.
<b>AIRPORT STATION</b>																
Bellanca Field New Castle, Delaware 6.1 miles SSW Wilmington Post Office	4-20-31	6- ?-34		39° 40'	75° 36'											
DuPont Airport Wilmington Delaware 3 miles WNW Wilmington Post Office	4-27-42	12- 8-42	6.8 mi. N	39° 46'	75° 36'											
New Castle County Airport Tower, Wilming- ton, Delaware, 5.6 miles SW of Post Office	5-19-47	11- 6-47	5.6 mi. SSW	39° 40'	75° 36'		75									Airway Observation by County Tower employees.
New Castle County Airport, Admn. Bldg.	11- 7-47	12- 5-47	125 yds. SW	39° 40'	75° 36'	73	75	5	5				3			Wind instruments of previous location used.
New Castle County Airport, Terminal Bldg.	12- 5-47	7-16-56	150 ft. NE	39° 40'	75° 36'	73	34	5	5				4			Exposure of instruments good.
New Terminal Building New Castle County AP *	7-16-56	Present	7/8 mi. SE	39° 40'	75° 36'	78	20	5	5				5	4		Exposure of instruments excellent. *Name changed to Greater Wilming- ton Airport, May 1961.

Requests for additional information should be directed to the Weather Bureau Office for which this summary was issued.

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