

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
IN COOPERATION WITH DURHAM CHAMBER OF COMMERCE

CLIMATOLOGICAL SUMMARY

MEANS AND EXTREMES FOR PERIOD 1925-1954

DURHAM, NORTH CAROLINA

Climatology of the U. S.

Station Durham, North Carolina

Station No. 31-2515-2

Latitude 36° 02' N
Longitude 78° 58' W
Elev. (Ground) 406 Ft.

Month	Temperature (°F)								Mean Degree Days**	Precipitation Totals (Inches)							Mean Number Of Days						Month	
	Means			Extremes						Mean Monthly	Greatest Daily	Year	Snow, Sleet, Hail				Precip. .10 Inch Or More	Temperatures						
	Daily Maximum	Daily Minimum	Monthly	Record Highest	Year	Record Lowest	Year	Mean Monthly					Maximum Monthly	Year	Greatest Daily	Year		90° And Above		32° And Below		0° And Below		
																		°	And	°	And	°		And
(a)	30	30	30	30		30		30	30	30	30	30	30	30	30	30	30	30	30	30	30			
Jan.	53.0	31.2	42.1	78	1952+	-6	1940	710	3.34	2.06	1946	2.3	12.5	1940	12.0	1940	6	0	1	18	*	Jan.		
Feb.	55.4	32.4	43.9	83	1930	2	1936	591	2.96	2.37	1942	1.5	18.0	1948	10.0	1948	6	0	*	15	0	Feb.		
Mar.	62.9	37.7	50.3	91	1945	10	1940	471	3.43	2.86	1936	0.9	16.0	1927	16.0	1927	7	*	0	11	0	Mar.		
Apr.	72.5	45.6	59.1	93	1930+	20	1953	184	3.16	2.40	1928	0.0	0.0	.....	0.0	.....	6	1	0	2	0	Apr.
May	80.6	55.0	67.8	99	1941	32	1947	30	2.97	1.89	1926	0.0	0.0	.....	0.0	.....	6	4	0	*	0	May
June	87.6	63.7	75.7	105	1954	43	1938	0	3.84	3.59	1946	0.0	0.0	.....	0.0	.....	7	13	0	0	0	June
July	89.7	67.5	78.6	105	1954	50	1947	0	4.73	2.55	1928	0.0	0.0	.....	0.0	.....	8	16	0	0	0	July
Aug.	88.3	65.9	77.1	105	1932	46	1952	0	4.24	3.02	1936	0.0	0.0	.....	0.0	.....	7	14	0	0	0	Aug.
Sept.	83.6	60.4	72.0	105	1954	36	1951	20	3.27	3.62	1953	0.0	0.0	.....	0.0	.....	5	7	0	0	0	Sept.
Oct.	74.1	47.7	60.9	99	1933	21	1952	155	2.52	3.21	1932	0.0	0.0	.....	0.0	.....	4	1	0	2	0	Oct.
Nov.	62.3	37.0	49.7	87	1950	12	1951	459	2.81	3.40	1952	T	1.5	1938	1.5	1938	5	0	0	11	0	Nov.		
Dec.	52.9	31.1	42.0	79	1951	3	1935	713	3.01	2.05	1943	0.9	14.0	1930	14.0	1930	6	0	1	19	0	Dec.		
Year	71.9	47.9	59.9	105	1954+	-6	1940	3333	40.28	3.62	1953	5.6	18.0	1948	16.0	1927	73	56	2	78	*	Year		

(a) Average length of record, years.

T Trace, an amount too small to measure.

+ Also on earlier dates, months or years.

* Less than one half.

** Base 65° F.

NARRATIVE CLIMATOLOGICAL SUMMARY

THE CITY OF Durham is located centrally in the county of the same name, lying within the Piedmont section of North Carolina, about thirty-five miles south of the Virginia line and a similar distance west of the inland limits of the Coastal Plain. The terrain of both city and county is rolling, with an average elevation near that of the weather station, or about 400 feet above mean sea level. The range of elevation within the county is almost entirely between 200 and 600 feet. Situated between the coast and the mountains and at some distance from both, the area enjoys a lower humidity than the coast without the rigorous winters of the mountains. In fact, the mountain barrier, by warding off many of the outbreaks of cold air which move southeastward from the northern plains, often shelters this part of North Carolina from severe cold. The few cases of zero weather on record have resulted from slow filtering of cold air down from the northeastern states rather than sudden outbreaks from the northwest.

The freeze-free growing season in Durham usually lasts from early April to late October, averaging just under 200 days in length. Afternoon temperatures are warm in summer, often reaching 90 degrees, but entire summer seasons may pass without 100 degrees being recorded. Most of the highest readings tabulated in the Climatological Summary occurred during the unusually hot summer of 1954. Even in the hottest weather, temperatures drop rapidly at night, rarely failing to go below 70 degrees by morning. Even in 1954 there was no night when the mercury did not drop below 75 degrees.

There are no distinct wet and dry seasons of the year in Durham. The greatest rainfall, on an average, comes in July and August, when it is most needed by crops, lawns and gardens. The driest months are during the harvest season, October and November. Most summer rain is produced by thundershowers, but winter rains are more likely to be slow and steady. Some snow or sleet may be seen nearly every year, but measurable amounts

usually fall only once or twice a season, and heavy accumulations on the ground are rare. Hail was recorded at the weather station only once during the thirty year period, 1925-1954.

The range in temperature on record for Durham is less than that for Atlanta, Georgia, where extremes of 103 degrees and -9 degrees have been recorded. The average annual snowfall is less than half that of Richmond and one-fifth that of New York City, and is smaller than that of Nashville or Raleigh. The average daily minimum temperature in July is lower than that of Philadelphia, Washington, or Kansas City, while in winter the corresponding temperature is considerably higher than any of these. Temperatures higher than Durham's highest of record have occurred in every state except Rhode Island and Connecticut, while lower temperatures than Durham's lowest of record have occurred in every state except Florida.

The relative humidity in Durham averages near eighty percent at sunrise, dropping off to near fifty percent at early afternoon. The prevailing direction of the wind is from the southwest, at an average speed of eight miles per hour.

Daily maximum and minimum temperature readings have been made at the City of Durham Water Plant since 1921, and rainfall records date back to 1901. Increasing population and growth of community industry during the years have had little effect on the exposure of weather instruments, since a considerable area surrounding the station is free from encroachment of residential or industrial building. The climate shown by the records, therefore, is as nearly representative of the surrounding country as is possible in an area of varying elevation and exposure.

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(OVER)

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1925	37.5	46.6	50.0	60.2	63.2	78.2	79.7	75.2	77.2	56.9	46.8	38.9	59.2
1926	36.5	45.5	44.2	57.1	66.4	74.0	80.2	80.0	74.7	62.4	46.8	41.7	59.1
1927	40.0	49.8	50.8	57.6	68.6	71.8	77.0	74.0	72.2	61.9	53.0	42.8	60.0
1928	40.8	42.5	50.2	56.0	65.0	74.2	79.4	79.0	66.9	63.6	51.0	41.6	59.2
1929	41.8	39.8	54.8	62.0	68.1	73.4	76.7	75.6	71.0	58.4	52.2	42.5	59.7
1930	42.9	47.2	48.4	58.8	69.6	74.0	80.2	75.3	76.6	57.3	47.4	37.4	59.6
1931	40.6	44.4	45.4	57.3	66.0	76.3	82.0	76.0	75.9	62.8	55.2	49.8	61.0
1932	50.1	49.2	47.2	58.6	67.2	76.8	81.0	78.4	72.6	61.7	47.2	44.8	61.2
1933	48.0	44.2	50.4	59.6	72.6	77.8	78.2	77.6	77.0	61.7	48.8	47.3	61.9
1934	44.6	35.4	48.3	60.8	67.8	78.2	81.2	79.4	73.2	59.6	53.0	41.8	60.3
1935	40.5	43.8	56.2	57.3	65.8	75.5	78.4	77.4	70.4	60.5	53.0	34.6	59.6
1936	36.0	37.5	53.3	56.3	69.6	74.4	78.8	78.2	72.2	62.2	48.6	42.6	59.1
1937	49.5	43.7	48.2	56.7	68.2	77.2	77.2	77.2	67.4	57.6	46.8	39.9	59.1
1938	40.2	47.4	55.3	58.9	67.6	72.1	75.8	78.1	69.5	58.0	51.6	40.8	59.6
1939	43.2	47.8	52.6	58.1	67.2	77.7	76.4	76.6	72.8	61.8	46.0	43.0	60.3
1940	28.6	41.5	46.3	56.2	65.6	.....	.....	.....	.....	.....	.....	.....	.....
1941	38.4	37.0	44.0	61.6	68.8	75.1	79.7	77.9	74.0	67.4	49.9	44.2	59.8
1942	38.3	38.6	51.2	59.8	68.2	76.2	78.3	75.1	71.8	61.4	51.2	40.0	59.2
1943	42.1	42.9	48.6	56.2	68.8	78.9	77.6	77.6	67.6	58.1	47.8	40.6	58.9
1944	40.2	44.0	47.0	58.6	70.8	77.0	75.8	74.6	72.0	59.0	48.3	37.1	58.7
1945	39.5	44.0	61.5	63.7	65.2	76.2	77.4	76.2	73.7	58.5	51.6	36.2	60.3
1946	41.8	44.8	56.2	60.4	67.0	74.4	75.8	73.8	70.9	59.8	.....	46.2	.....
1947	46.2	36.0	42.2	61.8	68.5	73.8	74.4	78.0	71.4	64.2	47.1	39.5	58.6
1948	35.1	42.2	54.8	61.2	67.8	75.0	79.4	75.6	70.2	58.0	55.6	45.3	60.0
1949	50.5	50.0	52.3	57.7	68.4	76.7	80.8	77.3	69.5	63.6	49.1	44.2	61.6
1950	52.2	45.8	49.4	57.7	69.0	75.0	76.4	75.8	69.8	63.1	47.6	37.1	59.9
1951	41.6	44.4	49.8	58.3	66.6	74.7	79.8	80.2	71.2	64.3	47.9	44.6	60.3
1952	47.3	45.2	49.1	59.9	69.3	80.6	80.9	76.8	69.3	55.7	49.7	40.9	60.4
1953	47.1	46.5	51.1	59.4	72.5	74.6	79.7	79.9	71.7	62.8	50.6	44.2	61.7
1954	43.0	48.2	51.3	64.7	64.2	75.9	79.8	78.2	75.0	63.8	47.3	40.0	60.9

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1925	5.99	1.22	1.25	1.89	2.08	2.47	0.33	3.36	1.91	2.14	1.37	1.45	25.46
1926	3.94	4.40	3.47	2.32	0.89	2.12	2.49	1.92	1.36	1.41	2.93	4.08	31.33
1927	1.52	2.86	2.45	3.14	0.53	4.79	6.66	4.21	2.33	4.05	1.98	3.86	38.38
1928	1.87	2.57	2.42	5.76	2.30	3.43	5.93	5.26	7.63	1.10	0.33	1.14	39.74
1929	1.43	6.46	5.12	3.08	4.48	7.44	4.10	7.90	1.80	6.19	4.53	1.79	54.32
1930	2.94	1.05	1.79	2.01	3.00	5.38	3.69	1.25	2.80	2.60	1.30	3.32	31.13
1931	1.48	1.17	1.88	4.03	4.84	2.09	3.88	7.91	0.18	1.21	0.11	4.91	33.69
1932	4.27	2.36	3.06	1.50	3.10	3.15	1.25	1.73	0.69	6.96	5.06	4.43	37.56
1933	2.55	2.54	1.68	3.81	1.48	3.44	5.01	4.15	0.17	0.83	0.49	1.56	27.71
1934	1.18	4.08	4.11	3.18	4.58	5.61	4.72	5.22	5.60	0.71	6.35	1.94	47.28
1935	2.37	2.13	3.99	3.20	3.37	1.00	5.47	1.54	6.01	2.11	2.71	2.62	36.52
1936	5.90	4.44	5.32	5.71	0.22	5.92	7.56	4.18	2.70	3.46	1.88	4.93	52.22
1937	6.00	3.45	1.55	4.98	0.64	3.28	3.82	14.07	3.26	3.61	1.41	1.65	47.72
1938	3.47	0.73	4.16	3.39	4.19	5.83	5.80	2.92	3.62	1.25	2.71	3.68	41.75
1939	4.17	7.32	4.82	3.52	2.47	5.95	7.68	7.23	0.65	2.24	1.41	2.08	49.54
1940	3.21	2.66	3.32	3.06	4.88	2.63	2.53	7.42	0.55	0.48	5.86	2.29	38.89
1941	1.54	1.26	3.00	2.01	1.76	1.85	5.24	0.91	1.72	0.85	0.40	2.20	22.74
1942	1.34	3.21	4.39	0.69	4.65	3.27	5.19	3.68	6.38	4.43	1.86	4.40	43.49
1943	3.72	1.37	4.14	3.12	2.90	5.52	7.14	1.60	2.24	0.36	1.25	3.39	36.75
1944	3.35	4.84	5.67	3.88	1.87	2.55	7.60	2.14	9.05	1.81	4.44	2.18	49.38
1945	1.85	4.41	1.55	2.66	2.90	2.49	10.58	4.39	11.49	2.19	1.38	5.46	51.35
1946	3.72	3.19	1.82	3.37	4.82	4.99	5.08	2.93	3.93	3.24	2.42	0.92	40.43
1947	5.75	1.29	2.51	2.15	1.76	6.13	3.10	2.51	3.66	5.45	6.89	0.95	42.15
1948	3.32	3.48	4.17	3.75	4.78	1.70	3.51	3.55	4.11	2.14	8.36	4.62	47.49
1949	2.72	2.77	1.81	2.79	4.15	4.62	4.08	.....	2.33	2.75	2.70	1.65	.....
1950	2.46	1.05	2.48	1.56	5.90	6.02	7.46	1.37	2.82	2.68	1.05	2.62	37.47
1951	1.74	1.93	2.71	4.66	1.33	5.16	3.29	2.64	1.26	1.55	2.29	4.87	33.43
1952	4.51	4.65	6.56	3.78	3.80	1.33	3.77	11.95	1.26	0.97	5.47	3.30	51.35
1953	4.60	4.35	6.62	3.80	1.73	4.30	2.46	1.44	5.50	0.58	1.57	5.50	42.45
1954	7.25	1.52	4.97	1.86	3.63	0.88	2.59	3.52	1.17	6.34	3.88	2.62	40.23