

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
IN COOPERATION WITH State Development Board
CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 33
CLIMATOLOGICAL SUMMARY

LATITUDE 33° 02' North
LONGITUDE 80° 12' West
ELEV. (GROUND) 75' MSL

STATION Summerville, South Carolina
County Dorchester

MEANS AND EXTREMES FOR PERIOD 1935 - 1964

Month	Temperature (°F)								** Mean degree days	Precipitation Totals (Inches)						Mean number of days					Month		
	Means				Extremes					Mean	Greatest daily	Year	Snow, Sleet				Precip. .10 inch or more	Temperatures					
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year	Mean					Maximum monthly	Year	Greatest daily	Year		90° and above	32° and below	32° and below		0° and below	0° and below
(a)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30		
J	59.7	36.8	48.3	82	1957+	12	1940	526	2.87	2.50	1964	T	0.3	1940	0.3	1940	6	0	*	12	0	J	
F	62.3	38.3	50.3	85	1944	13	1943	418	3.46	3.33	1944	T	T	1964+	T	1964+	6	0	0	9	0	F	
M	68.9	44.6	56.7	93	1935	21	1960+	298	3.92	4.06	1959	T	1.0	1960	1.0	1960	7	*	0	4	0	M	
A	76.3	51.9	64.1	93	1942	29	1960+	69	3.11	3.89	1958	0	0	0	0	0	5	1	0	*	0	A	
M	83.9	60.3	72.1	100	1941	33	1963	0	3.62	3.66	1964	0	0	0	0	0	6	7	0	0	0	M	
J	88.8	68.1	78.5	104	1952	52	1961	0	5.42	8.80	1941	0	0	0	0	0	8	14	0	0	0	J	
J	89.6	71.0	80.3	103	1954	57	1964+	0	7.34	4.80	1964	0	0	0	0	0	11	16	0	0	0	J	
A	89.4	70.4	79.9	106	1954	58	1953+	0	6.71	10.23	1940	0	0	0	0	0	9	16	0	0	0	A	
S	85.1	65.8	75.5	102	1944	47	1962+	0	5.23	6.80	1945	0	0	0	0	0	6	8	0	0	0	S	
O	77.5	54.2	65.9	99	1954	27	1952	59	2.50	5.20	1962	0	0	0	0	0	4	1	0	*	0	O	
N	68.6	43.3	56.0	90	1961	15	1950	279	2.11	4.41	1963	0	0	0	0	0	4	*	*	5	0	N	
D	59.8	35.8	47.8	81	1956+	10	1962+	533	2.64	4.23	1941	0.1	3.0	1941	3.0	1941	6	0	*	13	0	D	
Year	75.8	53.4	64.6	106	Aug. 1954	10	Dec. 1962+	2182	48.93	10.23	Aug. 1940	0.1	3.0	Dec. 1941	3.0	Dec. 1941	78	63	*	43	0	Year	

(a) Average length of record, years.

+ Also on earlier dates, months, or years.

T Trace, an amount too small to measure.

* Less than one half.

** Base 65°F (H.C.S. Thom., Monthly Weather Review, January 1954)

Summerville is located in the east central portion of Dorchester County. The terrain is typically coastal plain, very flat with an average elevation of about 75 feet above sea level. Soils are mainly sandy black loams. Natural boundaries include the South Edisto River on the southwest and Four Hole Swamp River to the north. The Ashley River and Rantowles Creek drain the central and southern sections of the county, which is largely forest covered swamp land.

The prevailing climate is temperate (Cfa by Köppen, Johansson Continentiality Index 39%) and is controlled largely by the migratory air masses and pressure systems moving eastward across the nation. Maritime air dominates the summer months when the storm systems are weakest, while modified continental air is more prevalent during the winter months. There are no wind records for Summerville, but the records for Charleston Airport should be quite representative of the Summerville area. Charleston's average wind speed is 8.9 miles per hour, with a northerly direction prevailing during the winter months, a southerly direction during the summer months. The average 1:00 p. m. relative humidity for Charleston varies from 50 per cent in the spring to 65 per cent during the late summer and early fall months.

The summer temperatures are warm, characteristic of the South. An average summer will produce 1 day, most likely in June, on which the temperature will equal or exceed the 100 degree mark. The highest temperature recorded, 106 degrees occurred August 18, 1954 and September 4, 1925. The sea breeze is most effectively felt during July and August in the form of frequent afternoon thundershower activity. July and August precipitation totals also reflect the occasional heavy downpours which occur in this area as hurricanes move northward along the coast. Summer months account for 40 per cent of the annual rainfall total.

The fall season, being a transition between extremes, is generally considered the most pleasant time of the year--sunshine is at a relative maximum and rainfall at a minimum (only 20 per cent of the annual total) during the fall months. October, 1940 with .07 inch of rain is the smallest monthly rainfall total ever recorded at Summerville, where records date back to 1898. The jarring note in the fall is the relative frequency of hurricane scares. September is the month of highest hurricane frequency in the Western Atlantic and Gulf of Mexico. Damaging winds associated with hurricanes are infrequent, but squally winds and excessive rainfall are quite common because of these tropical storms.

Winters are quite mild, interrupted for brief periods by cold out-

breaks. In the last 30 years a maximum temperature of 32 degrees or less has been observed on only 6 days. In addition to about one half of the winter days recording low temperatures of 32° or less, 3 days per year can be expected to reach 20 degrees or less. Readings of less than 15° are uncommon. The lowest temperature ever recorded at Summerville, one degree below zero occurred February 14, 1899. Snow flurries are not uncommon during the winter months but a measurable snowfall has occurred only 3 times in the last 30 years. The greatest monthly snowfall total of 6.5 inches was recorded during December, 1915. Winter rainfall accounts for 18 per cent of the annual total.

Spring is marked by rapid changes from windy and cold in March to warm and pleasant in May. This is the season when severe thunderstorm and tornado alerts are most frequently issued for South Carolina, however, only one tornado has been observed in Dorchester County in the last 53 years. Spring rainfall totals account for 22 per cent of the annual total.

Summerville's growing season, for the period 1935-1964, has averaged 239 days with the average date of the last freeze in the spring, March 18 and the first freeze in the fall, November 12. The last freeze in the spring has occurred as early as February 9 and as late as April 16. The first freeze in the fall has occurred as early as October 25 and as late as December 2.

Precipitation intensities and cloudiness data are not available for Summerville but this data from Charleston should be representative. Maximum precipitation intensities from Charleston, South Carolina:

1 hour	2 hour	3 hour	24 hours
4.11	6.64	7.42	10.57
9/6/33	9/6/33	9/6/33	9/5-6/33

Mean cloudiness, sunrise to sunset on a yearly basis, Charleston, South Carolina:

	Clear (0-3 tenths)	Partly Cloudy (4-7 tenths)	Cloudy (8-10 tenths)
Days	92	110	164

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Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1935	1.72	1.94	1.66	1.93	2.53	0.85	12.27	5.58	7.13	0.20	1.41	2.26	39.48
1936	3.72	4.03	51.0	3.22	1.04	3.54	3.42	5.43	1.93	6.85	0.42	3.59	42.29
1937	4.59	4.24	2.59	6.55	0.78	4.70	4.72	8.07	2.95	3.39	4.16	2.82	49.56
1938	0.89	1.21	0.51	6.26	4.44	3.32	6.24	5.83	7.66	1.38	1.13	1.28	40.16
1939	2.51	6.39	2.17	2.59	4.88	7.90	6.43	7.91	2.44	0.25	1.03	1.55	46.05
1940	2.28	7.51	3.18	0.84	2.17	5.02	4.47	16.45	2.79	3.85	0.23	8.50	56.49
1941	1.49	1.43	6.04	2.57	2.15	15.88	8.68	6.80	0.87	3.85	0.22	4.29	46.42
1942	2.31	3.73	4.94	1.34	3.68	6.81	4.48	13.64	3.13	0.15	0.59	2.26	55.44
1943	2.98	0.80	7.36	4.26	4.07	5.11	4.42	13.66	6.06	0.37	1.85	4.46	52.19
1944	3.03	4.62	9.98	3.21	4.72	2.23	4.72	4.99	3.39	5.39	1.43	4.22	42.19
1945	1.92	4.21	1.12	2.31	3.85	7.51	12.48	4.99	3.77	2.13	1.39	4.52	59.91
1946	3.65	2.02	3.60	2.85	5.09	1.87	6.75	7.29	4.38	5.35	3.77	0.35	46.97
1947	3.74	0.08	8.47	4.10	3.50	3.56	12.74	8.81	6.96	2.83	3.14	6.47	62.40
1948	3.21	4.16	0.08	6.29	9.13	2.65	8.14	6.29	8.67	1.66	8.16	4.70	69.59
1949	3.49	3.49	1.58	2.93	7.18	7.85	4.21	11.47	3.58	0.41	2.38	1.01	46.73
1950	0.27	0.42	3.87	1.70	3.80	4.28	9.18	2.77	8.26	3.32	0.82	4.34	43.03
1951	1.01	0.92	3.14	1.53	1.05	3.54	8.97	3.14	4.93	1.32	3.63	1.65	34.83
1952	1.31	6.55	3.72	2.55	5.12	3.89	7.72	6.91	6.06	1.12	2.18	2.04	49.17
1953	1.01	3.72	3.38	0.83	3.74	4.76	2.99	2.76	5.80	1.35	1.58	6.96	38.88
1954	1.33	1.07	1.61	2.77	1.30	8.61	4.17	2.14	8.43	1.98	1.38	2.70	27.66
1955	3.36	1.66	0.60	4.02	1.30	8.61	6.75	2.46	8.43	1.98	1.61	3.67	40.71
1956	1.64	3.71	2.52	1.79	2.44	4.26	9.76	6.03	4.35	2.60	0.97	0.64	40.71
1957	0.96	2.54	5.33	5.69	5.65	5.46	2.81	4.95	8.87	1.11	3.88	3.20	45.96
1958	4.38	2.94	4.94	1.79	3.51	7.76	7.30	11.26	2.97	2.10	0.95	1.54	55.34
1959	3.86	5.00	7.45	1.79	6.85	7.26	13.97	5.21	7.28	4.97	1.21	2.04	61.25
1960	4.97	5.46	3.19	2.40	2.16	4.59	12.76	5.63	5.59	1.78	1.31	2.35	58.92
1961	1.98	4.19	2.67	8.39	1.09	6.15	6.70	13.51	5.54	2.04	0.71	2.06	51.30
1962	5.03	2.00	6.44	3.98	1.14	11.45	2.89	8.88	3.65	6.32	3.67	1.78	57.40
1963	3.60	4.64	1.00	1.41	4.23	11.52	3.98	4.24	4.87	1.95	5.91	1.15	47.50
1964	7.87	7.25	3.19	3.69	5.75	4.37	11.63	9.02	2.53	6.06	0.87	3.67	65.90

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1935	50.0	49.6	62.4	65.4	72.4	77.7	78.9	79.6	74.2	65.4	57.0	40.8	64.5
1936	45.0	46.8	59.2	65.1	72.0	78.0	82.7	81.0	77.8	68.8	53.8	45.8	64.8
1937	61.2	48.8	54.9	63.6	72.7	80.0	80.1	79.6	73.6	63.3	52.6	49.3	64.6
1938	47.0	54.8	62.4	64.7	74.8	77.0	78.4	81.7	76.4	62.8	57.6	48.0	65.5
1939	50.4	55.5	61.0	63.6	70.0	80.6	81.1	79.3	77.2	68.7	50.8	48.2	65.5
1940	37.0	46.9	54.5	62.2	70.1	79.1	79.8	78.9	72.7	63.8	55.9	52.2	62.8
1941	46.6	43.8	50.4	66.5	72.1	78.4	81.3	82.5	77.3	71.8	56.2	51.6	64.8
1942	46.6	44.1	57.5	66.5	72.1	78.4	81.3	82.5	77.3	71.8	59.5	48.6	65.0
1943	49.2	50.8	55.4	62.4	73.0	82.0	81.5	80.4	71.9	63.7	54.0	47.9	64.4
1944	48.4	54.7	57.8	63.2	72.5	80.4	78.9	79.7	78.4	63.5	53.3	44.5	64.7
1945	48.3	53.6	65.2	68.2	69.0	80.0	80.8	79.2	79.0	64.8	57.9	44.2	63.9
1946	50.3	51.9	62.2	65.0	72.6	77.2	79.3	77.6	73.8	66.1	62.0	52.5	65.2
1947	54.6	43.6	49.6	66.9	72.6	76.8	78.4	79.4	75.3	70.6	54.3	48.8	64.8
1948	41.6	48.2	59.9	66.2	72.8	79.6	81.4	78.7	73.7	61.7	61.8	52.7	64.9
1949	57.3	56.5	59.9	66.2	71.8	77.1	80.6	79.8	75.0	70.0	54.5	50.9	66.2
1950	59.1	56.5	54.4	62.0	73.4	79.7	79.0	78.2	74.3	67.1	52.6	42.9	64.8
1951	48.3	49.6	57.3	62.3	69.6	78.3	80.2	80.9	75.2	68.8	52.6	32.5	64.6
1952	55.4	50.1	56.4	62.9	73.0	82.6	81.1	80.1	74.8	62.1	56.3	47.1	65.2
1953	51.1	52.0	58.7	63.2	76.9	78.9	80.8	79.4	75.4	66.8	54.5	48.1	65.5
1954	51.1	53.1	56.0	68.0	68.0	79.3	82.7	83.7	77.6	66.8	53.2	45.8	65.4
1955	51.1	50.4	60.6	66.8	73.8	74.8	80.4	80.4	75.6	64.8	54.7	45.7	64.6
1956	43.2	55.9	55.0	62.6	73.6	77.9	80.7	81.0	73.6	67.3	54.8	56.8	65.1
1957	49.4	57.4	55.1	65.3	72.0	77.3	79.1	78.7	76.7	62.3	57.9	48.2	62.7
1958	41.2	42.0	52.1	63.4	71.6	78.0	81.1	80.8	76.3	62.3	59.4	44.3	62.7
1959	45.3	53.0	52.1	63.4	74.2	78.0	79.7	80.3	75.3	69.1	55.9	47.5	64.7
1960	47.6	47.0	44.7	65.1	71.4	77.7	80.2	80.6	76.5	67.5	56.8	41.8	63.1
1961	42.6	51.7	60.2	59.0	69.2	76.0	80.2	78.6	76.6	63.2	49.6	44.8	63.9
1962	46.2	54.4	52.9	61.0	75.4	78.3	80.9	79.1	74.0	66.4	55.1	41.2	63.7
1963	43.1	44.1	59.1	64.8	70.7	77.8	78.4	80.1	72.3	64.7	55.6	44.8	62.7
1964	44.7	56.4	64.2	64.2	72.3	79.5	77.9	78.9	74.6	62.1	59.7	50.9	63.9

SUMMERVILLE, SOUTH CAROLINA

STATION HISTORY:

Station was established July 1898 and is located 3/4 mile NE of Summerville. In August 1920 it was moved to 1 mile north of Summerville, and in December 1927 to the Clemson Coast Experiment Station. In all cases the shelter was located over sod on level ground. Observers at Summerville have been:

- 7/1898 - 5/1902 ---Prof. John Gadsden
- 6/1902 - 9/1904 ---Miss L. R. Gadsden
- 10/1904 - 7/1920 ---Miss E. H. Gadsden
- 8/1920 - 9/1924 ---E. P. Lawton
- 10/1924 - 1/1926 ---Dr. P. Dehan
- 2/1926 - 11/1927 ---Dr. William Simons
- Present ---Clemson Coast Experiment Station

