CLIMATE OF SOUTH CAROLINA

Several factors combine to give South Carolina a pleasant, mild, and humid climate. It is located at a relatively low latitude (32 to 35 degrees North) and most of the State is less than 1,000 feet in elevation. The nearby Atlantic Ocean and warm Gulf Stream influence SC's precipitation and temperature. The mountains modify many cold air masses approaching from the north and west.

Temperature – Some factors affecting temperature are elevation, latitude, and distance inland from the coast. Lower temperatures can be expected in the hills of the Upper Piedmont and Mountain regions, where latitude, elevation, and distance inland all have large values. Higher temperatures and humidity are found along the southern coast. Annual average temperatures are almost 10 degrees lower in the extreme Upper Piedmont than along the coast between Charleston and Savannah.

The growing season for most crops is limited by Fall and Spring freezes. The freeze-free period, the time between the last temperature of 32° F in the winter and the first hard freeze in the fall, is quite important to agriculture. The average length of the freeze free period varies from about 200 days in the coldest area to about 280 days along the coast. Freezes have occurred as early as October 3 and as late as May 11.

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Precipitation - Rainfall is generally adequate in all parts of the state. Annual rainfall averages from 60 to 80 inches in the highest elevations of the Mountain Region to less than 45 inches in parts of the Inner Coastal Plain and the Sandhills. The Mountain Region generally receives 56 inches or more, the Upper Piedmont between 47 to 55 inches, the Lower Piedmont averages 45 to 58 inches, the Outer Coastal Plain with amounts of 46 to 53 inches. The state has high interannual and seasonal variabilities of precipitation. Periods of insufficient rainfall can produce droughts and times of too much rainfall can produce flooding. The most recent severe drought occurred from 1998-2002. This drought devastated agriculture, created hazardous navigation or ceased the flow of some rivers, dropped lakes to record low levels, destroyed forestry resources, and drastically lowered shallow and deep groundwater resources. Minor flooding occurs somewhere in South Carolina every year. It can occur on any of the many streams and rivers. A certain amount of control can be managed on the larger rivers that have dams. Other common flooding events in South Carolina include coastal flooding and flash floods.

Solid forms of precipitation include snow, sleet, and hail. Hail events within thunderstorms occur most frequently from March through early June. These thunderstorms usually accompany squall lines or cold fronts. Snow and sleet may occur separately, together or mixed with rain during the winter months. Snow may fall from one to three times in winter. Statewide snows of significant amounts usually occur when a cyclonic storm moves northeastward along or just off the coast. Intense storms of this type can bring record snowfall to the Sandhills and the southern edge of the Lower Piedmont. Freezing rain occurs from one to three times per winter in the northern half of the state. This rain, which freezes on contact with the ground and other objects, can cause hazardous driving conditions, breakage of limbs, treetops, and power lines. Timber losses can be heavy and power and telephone services are often disrupted over a large area during such storms.

Temperature and Precipitation Climatology (based on station period of record)

	Temperature			Precipitation	
Station	Annual Mean °F	# Days >= 90° F	# Days <= 32° F	Annual Total (in.)	# Days >= 1.00 "
Charleston	66.5	30	10	46.13	13
Florence	63.6	63	45	43.32	11
Columbia	63.5	76	56	47.32	14
Aiken	64.0	75	50	49.10	15
Grnville-Sptbg	60.2	36	63	50.13	14
Caesars Head	54.5	1	81	75.88	26

Growing Season Fall and Spring Freeze Dates

Station Name	Date of Latest Spring Freeze	Date of Median Spring Freeze	Date of Earliest Fall Freeze	Date of Median Fall Freeze
AIKEN	April 25	March 28	October 8	November 5
BEAUFORT	April 6	March 6	October 29	November 22
BLACKVILLE	April 23	March 23	October 14	November 8
CALHOUN FALLS	April 23	April 1	October 4	November 7
CHARLESTON INTL AP	April 20	March 10	October 28	November 20
CHERAW	April 24	March 31	October 7	November 5
CHESTER	May 11	April 10	October 4	October 28
CLEMSON UNIVERSITY	May 8	April 7	October 3	November 1
COLUMBIA METRO AP	April 24	March 30	October 4	November 3
CONWAY	April 26	March 17	October 12	November 14
FLORENCE RGNL AP	April 20	March 21	October 14	November 9
KERSHAW	May 8	March 31	October 13	November 5
LONGCREEK	May 10	April 11	September 25	October 26
ORANGEBURG	April 23	March 21	October 14	November 9
UNION	May 9	April 12	October 3	October 27
WALTERBORO	April 30	March 23	October 4	November 7

References:
Climates of the States, South Carolina, NCDC Publication Clim-60, National Climatic Data Center.