

APPENDIX C

Climatology

Charleston County is bordered by Georgetown County, Berkeley County, Dorchester County, Colleton County and the Atlantic Ocean. Charleston County includes fifteen municipalities. The major rivers in the Charleston Region are the Ashley River, the Cooper River, the Wando River, the Edisto River and the Stono River. The terrain is generally level, ranging from sea level to twenty feet on the peninsula, with gradual elevation toward inland areas. The soil is sandy to sandy loam with lesser amounts of loam. Drainage varies from good to poor. A considerable portion of the community and the nearby coastal islands are vulnerable to tidal flooding, because of the very low elevation.

The climate is temperate, modified considerably by the proximity to the ocean. The marine influence is noticeable during winter when low temperatures are sometime ten to fifteen degrees higher on the peninsula than at the airport. By the same token, high temperatures are generally a few degrees lower on the peninsula. The prevailing winds are northerly in the fall and winter, southerly in the spring and summer.

Summer is warm and humid. Temperatures of 100 degrees or more are infrequent. High temperatures are generally several degrees lower along the coast than inland due to the cooling effect of the sea breeze. Summer is the rainiest season with 41% of the annual total. The rain, except during occasional tropical storms, generally occurs as showers or thunderstorms.

The fall season passes through the warm Indian Summer period to pre-winter cold spells which begin late in November. From late September to early November the weather is mostly sunny and temperature extremes are rare. Late summer and early fall is the period of maximum threat to the South Carolina coast from hurricanes.

The winter months, December through February, are mild with periods of rain. However, the winter rainfall is generally of a more uniform type. There is some chance of a snow flurry, with the best possibility of its occurrence in January, but a significant amount is rarely measured. An average winter would experience less than one cold wave and severe freeze. Temperatures of twenty degrees or less on the peninsula and along the coast are very unusual.

The most spectacular time of the year, weatherwise, is spring with its rapid changes from windy and cold in March to warm and pleasant in May. Severe local storms are more likely to occur in spring than in summer.

The average occurrence of the first freeze in the fall is early December, and the average last freeze is late February, giving an annual growing season of about 294 days.

Source: NOAA internet site, 1999

Sea breezes from the Atlantic Ocean, a raggedy riverine coastline, and the “heat island effect” of urban asphalt and concrete surfaces combine to create the propensity for isolated pop-up thunderstorms and temperature variations from place to place in the Charleston County area, often making the weather in the area more of a patchwork that varies from location to location rather than an area-wide effect. The Charleston office of the National Weather Service offers a point point and click weather forecast map for Charleston County to address this phenomenon (Petersen, 2005, August 20, p. 1).