

Hurricanes ^[1]

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Hurricane Floyd aftermath in Edenton, NC. Photo by Flickr user pcumby.

Hurricanes have always been a major, highly visible, component of the weather and climate of North Carolina, but their number has differed dramatically from decade to decade. Table 5 includes all hurricanes and hurricane remnants that appear to have had an impact somewhere in the state. (The category is expressed as the [Simpson-Saffir scale](#) ^[4], which is shown below in References and Additional Resources). The actual numbers, especially early in the 20th century, include some estimates. Before satellite tracking arrived in the 1960s, for example, it was not clear whether a period of [coastal erosion or flooding](#) ^[5] was the result of an unseen and unreported hurricane offshore or of a [frontal system](#) ^[6] passing off the coast. The general results, however, are likely to be reliable. A rather small number of storms influenced the state in the 1911-1930 period, and they were not very intense. Then there was a slow increase, culminating in the 1950s with a whole series of storms, Hazel being especially notable as the only storm of the century to be a [category 4](#) ^[4] storm while over the state. Then came another quiet period from 1961 until 1980. In fact the present active period did not really get going until the late 1980s, most notably with Hugo in 1989.

None of the hurricanes in the active period from Hugo onwards have been unprecedented in their size, or in the amount of wind and rain they bring. Many have given around 10 inches of rain in some small areas, and up to 6 inches over a much broader region. The locations affected, and the type of impact, depend strongly on the track of the eye of the storm. [Hurricane Isabel](#) ^[7] is a typical example (Figure 10). The storm came ashore near [Cape Lookout](#) ^[8] in the early afternoon of September 18, 2003. It arrived as a category 2 storm, but decreased to a category 1 over land as the eye tracked north-northwest. The storm left the state over [Northampton County](#) ^[9] before 8:00 p.m. that evening. Much of the Piedmont received somewhat less than 4 inches of rain from the storm, the [Coastal Plain](#) ^[10] getting between 4 inches and 7 inches. Some wind-related damage and river-based flooding ensued, but greater problems arose from the interaction of wind and water. As with most hurricanes, the strongest winds were to the east of the eye, being above 90 mph from the southeast over most of the [Tidewater region](#) ^[10], compared to less than 70 mph from a northerly direction over the [Piedmont](#) ^[10]. The strong winds over the Tidewater pushed the waters of the sounds northwards, causing severe flooding on the north shores.

Table 5. The number and intensity of hurricanes affecting North Carolina by decade in the 20th Century										
Category	1901-1910	1911-1920	1921-1930	1931-1940	1941-1950	1951-1960	1961-1970	1971-1980	1981-1990	1991-2000
4	--	--	--	--	--	1	--	--	--	--
3	2	--	--	1	1	4	--	--	2	2
2	--	--	--	2	--	2	--	--	1	3
1	6	3	5	3	5	2	4	1	1	2
Tropical	--	3	--	1	3	3	3	6	4	5
Total	8	6	5	7	9	12	7	7	8	12

*The decadal frequency and intensity of hurricanes influencing North Carolina. The numbers for tropical storms (TS) are estimated in the earlier years.

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