

SHORELINES – November 2003
As presented to the Island Review Magazine.

“Hurricane *Isabel*”

This is the first issue of the Island Review since Hurricane *Isabel* made landfall along Core Banks on Thursday, September 18, 2003. As many of us have seen in the media or witnessed first hand, *Isabel* wreaked havoc in Carteret County, the Outer Banks, and the mid-Atlantic Seaboard as she spun and dissipated to the north. Now that most of us have come to terms with *Isabel*, it is a good time to reflect and review what impacts this Hurricane imparted along the County's only developed barrier island, Bogue Banks.

Fortunately, Bogue Banks was situated along the west side of *Isabel*. The northeast quadrant is the most powerful region of a Hurricane, and accordingly has the highest recorded winds and storm surges. We all remember the 1996 - 1999 Hurricane seasons and the tropical storms/hurricanes that impacted Bogue Banks during this time frame. The focus of these high-energy events were in the order of 100 miles west of Bogue Banks near Wilmington, yet the island suffered some very serious damage, especially from *Floyd*. Conversely, Bogue Banks was approximately 35 miles west from the eye of *Isabel*, yet the island incurred very little beach erosion.

A few other factors regarding *Isabel*'s approach were also favorable for Bogue Banks. (1) *Isabel* moved fairly quickly. (2) *Isabel* hit Carteret County during a period when the full moon tide was not in effect. And (3) the predominantly offshore, northerly winds that were experienced days before and during *Isabel*'s landfall helped reduce the swell impact as *Isabel* approached. On the down side, *Isabel* did hit during that afternoon's high tide.

In terms of the actual condition of the beach, some of the beach ridges along Bogue Banks may have been escarped by *Isabel* but when the storm moved northward, the winds rotated out of the southwest and blew nearly an equivalent amount of sand along the primary dune. This event essentially "masked" any scarping (i.e., vertical cliffs) that did occur. In some areas, it appears that the beach berm/toe of the dune area may have actually gained sand. The nourished beaches for the most part fared very well. There are a couple of erosional hot spots located in the Emerald Isle Project that were observed the day after *Isabel* impacted the area, but these are very few and far between. The Pine Knoll Shores and Indian Beach project also fared well, and the beaches of Atlantic Beach and western Emerald Isle appeared to be in a healthy, relatively wide state. The Pointe in Emerald Isle also sustained no visible damage to the sand bags and no episodes of flooding have been reported.

On the other hand, the bathhouse area of Fort Macon was impacted by *Isabel*. There are 15-foot high or greater scarps along the State Park beach, and the bathhouse access has been damaged and is closed for repair. Fort Macon was the closest area to *Isabel* and the beach profile going offshore is very steep and may have contributed to this one and only area of true, recognizable damage for Bogue Banks.

While the impacts from *Isabel* along Bogue Banks were minimal, Down East Carteret County suffered some very serious damage to personal property, businesses, and infrastructure. The main transportation artery of the Outer Banks, Highway 12, was completely destroyed in stretches along Ocracoke Island, and Hatteras Island was breached between the towns of Hatteras Village and Frisco. Recovery appears to be progressing nicely in these areas as the 2003 Hurricane season thankfully draws to a close.