



Post-Ana Reconnaissance, Bogue Banks (5/11/14)

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(photos taken ~9 – 11 am, Beaufort tides = 7 am low, 2 pm high)

STORM SUMMARY & OBSERVATIONS

After spending a few days offshore, *Ana* made landfall just northward of Myrtle Beach at 6 am, May 10, 2015. *Ana* was first classified as a subtropical storm on May 7th, re-classified as a tropical storm on May 9th with higher winds and precipitation closer to the center of the low pressure circulation, and ultimately downgraded to a tropical depression before the National Hurricane Service ceased their advisories on May 10th several hours subsequent to making landfall. *Ana* was also characterized as a slow moving cyclone and the bulk of the wind, waves, and precipitation were located in the general area of Wilmington (predominantly east of the center). More locally, the maximum wind gust recorded at the Michael J. Smith Field Airport in Beaufort ([BTFN7](#)) was 35 mph from the south at 2:58 am, May 11th (sustained wind at this time was 25 mph), while the highest reported gust at Bogue Field ([KNJM](#)) was 33 mph from the east at 1:57 pm, May 9th (sustained wind was 18 mph at this time).

The closest offshore oceanographic buoy to Bogue Banks is currently Station “[ILM2](#)” located ~6 miles southeast of Masonboro Inlet situated in 57 feet of water depth, and therefore roughly 60 miles southwest from the center of Bogue Banks (Fig. 1 – next page). This buoy should be deemed as “far away” from Bogue Banks and considering the path and slow forward motion of *Ana*, ILM2 likely recorded some of the maximum wave heights and wave periods that may not be properly correlative to Bogue Banks. Nonetheless, the peak significant wave height recorded was 11.45 feet (from the southeast), 12:22 am, May 10th with a 9 second dominant wave period at that time (Fig. 2 – next page).

The [link](#) provided above contain photographs taken this morning at various stops along Bogue Banks, and essentially constitutes a “spot check”. ***In general, (1) there was no dune erosion/escarpments nor infrastructure damage to walkways or structures, (2) there was no damage to sand fencing, incipient dunes (i.e., new, “baby” dunes), or pioneer vegetation located seaward of the dunes, and (3) there is some beach flattening (equilibration). Beach equilibration*** is a common response as sand is taken from the upper part of the beach by waves and is deposited in lower parts of the beach profile – usually in shallow water. This also provides a wider base for incoming storm waves to expend their energy as well. Usually most of the sand will weld itself back to the upper parts of the beach as fair weather conditions take command (beach recovery). The “beach flattening” in response to *Ana* is not as pronounced as experienced in other cyclones – noticeable but not spectacular. ***All in all, the beaches looked “very good” – the dune system as mentioned above was unscathed and in terms of the berm (flat part of the beach); Ft. Macon looked to be extremely wide. Most of the other geo-political subdivisions had varying degrees of thinner or fatter berms that were noted, but again nothing that really grabbed our attention.***

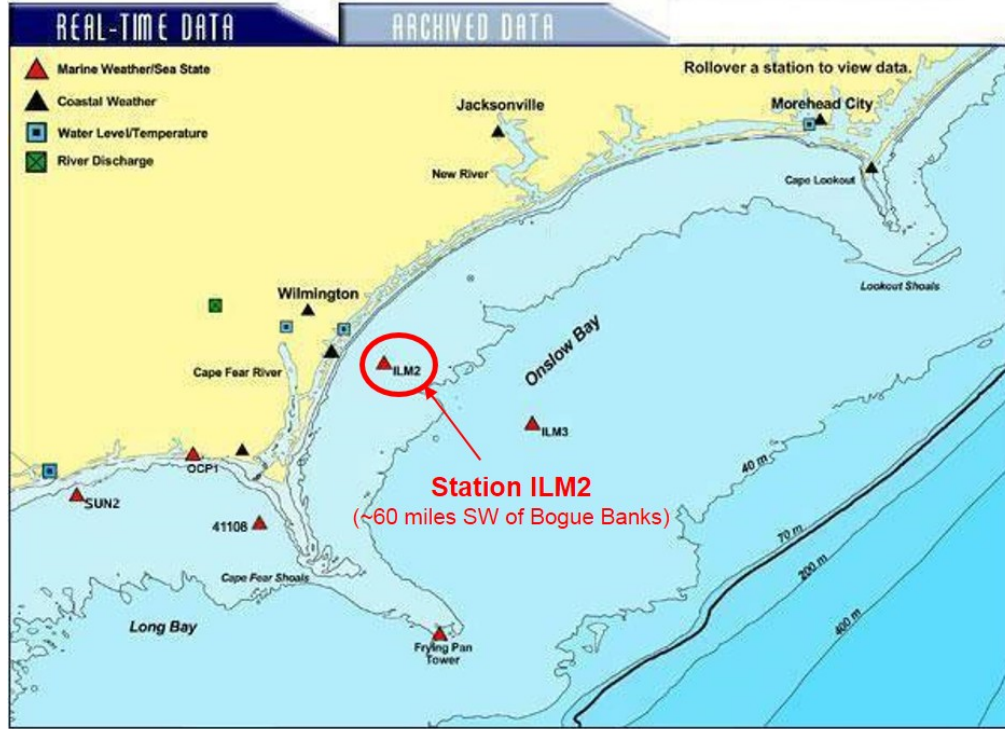


Fig. 1 – Site map of the nearest oceanographic buoy (ILM2) to Bogue Banks collecting wave data at this time, positioned approximately 60 miles southwest from the center of Bogue Banks.

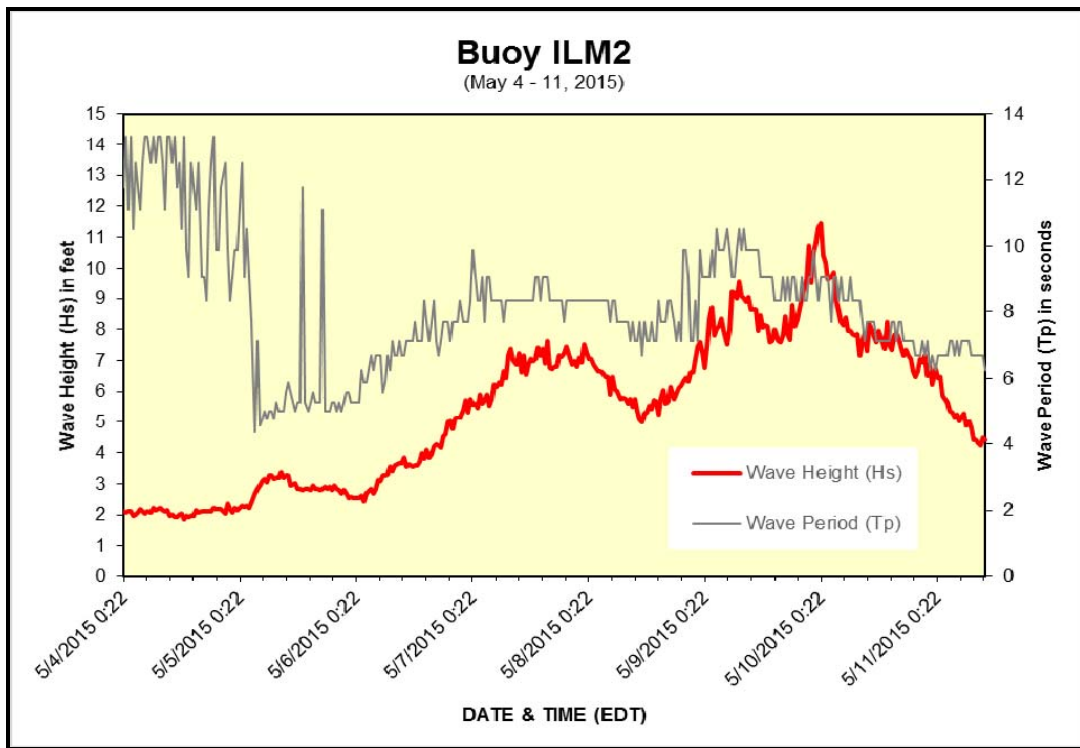


Fig. 2 - Graphic depiction of wave heights and periods over time for the closest oceanographic buoy to Bogue Banks (ILM2). The red line is significant wave height with the corresponding axis on the left margin, and the thinner gray line is the dominant wave period with the corresponding axis on the right margin.