

**SHORELINES – September 2006**  
As prented to the *Island Review* magazine.

**Sandbagged**

Most North Carolinians interested in the coast are aware of the State's ban on "hard" oceanfront and inlet erosion control structures. In general, there are four types of hard structures that are usually constructed out of timber, steel, concrete, or large rocks; (1) a ***groyne***, which is a permeable or impermeable shore perpendicular structure designed to trap sand extending from the dry sandy beach and into the ocean, (2) a ***jetty***, which is essentially a groyne but juxtaposed adjacent to an inlet in an effort to stabilize the inlet channel, (3) a ***seawall***, which is orientated shore parallel and close to the dune line/high tide line to protect property from waves and tides, and finally (4) a ***breakwater***, which is typically orientated shore parallel and positioned further out to sea to protect harbors or can be submerged to provide a "speed bump" for incoming waves.

Despite some of the advantages these structures may have to combating erosion, State policy makers and elected officials have decided time and again that the negative effects to neighboring environments, limitations to public access, and degraded aesthetic values these structures can cause do not outweigh the underlying benefits. Most of the hard structures that do exist along the State's oceanfront have been grandfathered in (the Iron Steamer seawall here in Pine Knoll Shores, the Cape Hatteras groyne field, and the Masonboro jetties for example), or have received special permission to be used to save historic sites, such as the Fort Fisher rock revetment. However, the State does allow the placement of sandbags as *temporary* erosion control structures, and recently, perceived abuses of current rules guiding sandbag installation and maintenance has created a need to re-examine the sandbag issue from top to bottom. This is the focus of *Shorelines* this month and has been recently garnering considerable media attention as well.

In 1995, the State's coastal rule-making arm, the Coastal Resources Commission amended sandbag standards to address public concerns regarding the size and longevity of sandbag clusters that in essence were creating various walls of sandbags. Parameters such as the size of individual sandbags, size and location of sandbag walls, and removal protocols were all codified into rule language. Specifically, the amendments required that sandbags be tan in color, individual bags be 3 to 5 feet wide and 7 to 15 feet long, and the sandbag wall to have a base width of 20 feet and not to exceed 6 feet in height. Sandbags are permitted where roads, associated right-of-ways, structures, and septic systems are imminently threatened.

Sandbags are allowed to remain in place for two years after the date of approval if protecting a structure less than 5,000 square foot or five years if the structure exceeds 5,000 square foot. If sandbags are located within a community actively seeking a beach nourishment project, then the longevity of the sandbags regardless of structure size is five years with one important caveat.

In 2000, a new amendment was adopted allowing sandbags to remain in place for five years or until May 2008, whichever is later, regardless of the structure size if a community is actively seeking a beach nourishment project as of October 1, 2001. This means that regardless if a community is participating in a nourishment project, just about every sand bag that exists today along the North Carolina coast will need to be removed by May 2008, or earlier, unless a variance is pursued and awarded on a case-by-case basis. That will be a mammoth issue to reconcile in the not-to-distant future.

Some of the more prominent reaches of sandbags are currently located along the beaches of Bald Head Island, Ocean Isle Beach, Figure 8 Island, North Topsail Beach, and Nags Head. Almost all of these shorelines, with the exception of Nags Head are eroding in

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response to inlet processes, which are not the same forces driving oceanfront beach erosion. Regardless, there are no provisions that currently exist directing property owners to orientate sandbags parallel with the shoreline or structure, and traditionally the height of sandbags is measured from the native beach upward to the peak of the topmost bag, not to exceed six feet. This measurement principle becomes problematic as sandbags are damaged, sink into the sand, slide off, or if the lowermost bags become covered with sand. Repairs to sand bags are allowed as long as the repairs meet their originally permitted dimensions. However, enforcement complications are commonplace relative to the 6 foot height limit as the beach elevation changes during the life of the sandbag wall and interim repairs.

The Coastal Resources Commission could entertain new proposals to the sandbag rule later this year addressing some of these orientation and repair issues, and as mentioned earlier, May 2008 is rapidly approaching, signaling the regulatory end for most of the sandbags currently existing in North Carolina.