

SHORELINES – March 2006
As presented to the *Island Review Magazine*.

UPDATE, UPDATE, UPDATE...

Traditionally our *Shorelines* articles have been focused upon a singular theme each month; however there is a lot happening along the coast and we're going to shift gears this cycle and provide a bullet-point summary of the key events. Here we go...

President's Budget for FY 2007 released on February 6th

In early February the President (actually his Administration) released his proposed budget for FY 2007, which runs from October 1, 2006 to September 30, 2007. The trends for the U.S. Army Corps of Engineers (Corps) are very similar to last year with almost no funding for beach nourishment and shallowdraft waterway dredging. The total budget is \$2.77 trillion, with \$1.494 trillion dedicated for mandatory spending programs like social security and medicare (54% of the budget), \$247 billion dedicated for interest (9%), \$537 billion for defense/homeland security (19%), and \$492 billion for true discretionary spending (18%).

The Administration provided the Corps \$4.7 billion of the total \$2.77 trillion budgeted for the Federal Government, or 0.17%. But again, very little of the Corps funding is designated for beach nourishment/shoreline protection and shallowdraft waterway dredging. The \$4.7 billion amount for the Corps is the same as the figure enacted by Congress more than five years ago in FY 2001 (i.e., what Congress approved and sent back to the President), albeit a slight improvement over last year's budget figure for the Corps issued by the Administration (\$4.5 billion). The enacted budget for the Corps this current fiscal year (FY 2006) is \$5.3 billion, which does not include any funds associated with *Katrina* or other hurricane supplemental dollars. It is important to remember that the House and Senate will take their swings at the budget later this year and ultimately pass a conference bill before returning the budget parts back to the President. However we're in for another long, hard fight this year for water resource appropriations.

Carteret County Beach Commission endorses "Virtual Mapping Initiative"

At their January 23rd regular monthly meeting, the Carteret County Beach Commission gave the green light for the Shore Protection Office to include a virtual mapping cost in the upcoming FY 2006-07 budget proposal. Bogue Banks is one of the most data-rich islands along the State's coastline, yet most of the reports that summarize major findings of these various studies are essentially "trapped" in hard copy or large electronic files available on the web. In an effort to make these data more interactive; shoreline data, bathymetry, sea turtle nesting information, aerial photos, sediment texture, and other important datasets are going to be made graphically available via the web utilizing a mapping program that allows web viewers to open, close, hide, zoom, or pan whatever data they are interested in. This will enable the user to focus on any area along the County's shoreline they desire and click the layers on and off they wish to view. For instance, a user can zoom to Atlantic Beach and request the 1937 shoreline to appear, then maybe the 2003 shoreline, and 2005 shoreline, and then maybe add the sea turtle nesting data from 2004 as well. July is the first month of FY 2006-07 and hopefully the mapping program will be launched a few months thereafter.

Public Hearing Set For June 22nd and 23rd in Greenville, N.C. for the State's Proposed Beach Nourishment Sediment Criteria Rules

After approximately four years of intense analyses and stakeholder input, the N.C. Division of Coastal Management has developed sediment criteria standards for beach

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nourishment that may be codified into law. One of the first steps of the rule-making process is a public hearing that is now scheduled to take place at a June 22nd and 23rd Coastal Resources Commission (CRC) meeting in Greenville. The CRC just adopted the Division of Coastal Management's criteria and rule language at a meeting in Atlantic Beach this past January. The proposed rules are divided into four sections that describe; (1) the characterization method of the native or recipient beach, (2) the characterization method of the proposed sources (borrow areas) of nourishment material, (3) the compatibility analyses that compare the borrow source sediments to the native beach, and (4) key excavation and construction parameters.

Sediment size is the main driving force in the rule, and the native beach and borrow site are compared to one another by looking at the ***fine*** (<0.0625 mm), ***sand*** (0.0625 – 2 mm), ***granular*** (2 – 4.76 mm), and ***gravel*** (4.76 – 76 mm) fraction of grain sizes. The numbers listed above are relative to the diameter of the grains. The essence of the compatibility analysis is that the borrow source should not exceed the fine fraction of the native beach by 5% in terms of the average weight percentage, the granular fraction by 5%, and the gravel section 5% as well. There are a couple of caveats to this rule for regularly-maintained navigation channels and emergency beach fills associated with breaches of road transportation corridors. The composition (mineralogy) of the compatibility standards is confined to a single parameter - calcium carbonate, which is often but not always shell material. The compatibility standard is "native plus 10%", meaning that borrow source sediments should not exceed the calcium carbonate percentage of the native beach by 10%. While some of this may seem like *Revenge of the Nerds*, there are important implications to how we plan and execute beach nourishment along the State's coast that will hinge upon the implementation of this rule. The public hearing is an important step in this process.

Finishing Touches Being Placed On A Regional Sand Transport Study Regarding The Morehead City Harbor Navigation Project

In 2004, the Beach Commission retained the Jacksonville, Florida based engineering firm of Olsen Associates, Inc. to conduct a regional sand transport study aimed at assessing the Federal Navigation Project at Morehead City in terms of navigation efficiency and impacts to adjacent coastal environments. The latter (impacts to adjacent coastal environments) was the crux of the study. The final draft is being reviewed and it appears we are on target to have the final report completed in March. The report is hundreds of pages long inclusive of the appendices. The report reviews the dredging and disposal practices, morphologic changes, wave refraction and littoral drift, shoreline and beach profile changes, and littoral impacts at Beaufort Inlet and the adjacent areas. The report also provides a review of a 2001 U.S. Army Corps of Engineers Section 111 Study and a series of recommended actions.

Cape Lookout Lighthouse And Associated Historic Structures Protection Project Ready To Go.

The bids for the Cape Lookout estuarine shoreline nourishment project were opened in mid January and three bids were received; two of which were considered as responsive. All the bids regardless of their status however were within the government estimate. The winning bid was provided by Southwind Construction at \$925,498 for 75,700 cubic yards of sand, or the equivalent of over 5,000 dump truck loads. Construction should begin just about the same time this edition of *Shorelines* is distributed (mid to late February).

The project includes the placement of sand along 2,600 linear feet of estuarine beach near the ferry landing and lighthouse area of the Cape Lookout National Seashore. There is

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a northern fill area that is approximately 1,000 linear feet long with an estimated fill width of 50 foot contoured at a grade of +3.5 feet relative to sea level, which is the existing beach elevation. The southern fill area is approximately 1,600 linear feet long with an estimated fill width of 100 foot also contoured at the +3.5 foot elevation. There is also a berm (or quasi-dune feature) for the southern fill area extending 1,250 linear foot, at a +7.5 foot elevation, with a top width of 15 foot. The break between the northern and southern fill areas is the pier that is commonly used for the ferry services and National Park sea-craft. The Project should be completed by the end of March.