

SHORELINES – February 2014

As presented to the *Island Review* magazine

Sand to the East, Sand to the West

I'm not a huge Jimmy Buffett fan (sorry there Parrotheads), but a part of the chorus contained in his song *Fins* goes ...“You got fins to the left, fins to the right”. So using this chorus as a metaphor, Bogue Banks will receive “sand to the east, sand to the west” this winter under the direction of the U.S. Army Corps of Engineers as they maintain (dredge) two distinct navigation projects.

Sand to the West – Bogue Inlet Crossing in the Atlantic Intracoastal Waterway (AIWW) with concurrent nourishment along the Point.

The area where the Bogue Inlet Channel meets the AIWW near the Cedar Point estuarine shoreline is known as the *inlet crossing*. There are actually a total of eight such inlet crossings across the State including from north to south; Bogue, Bear to Brown, New River, Topsail Creek, Shinn Creek, Carolina Beach, Lockwoods Folly, and Shallotte inlet crossings. Because a pipeline dredge is used, the disposal area for each crossing involves an upland or beach target site, and are usually maintained under a single or series of dredging contracts.



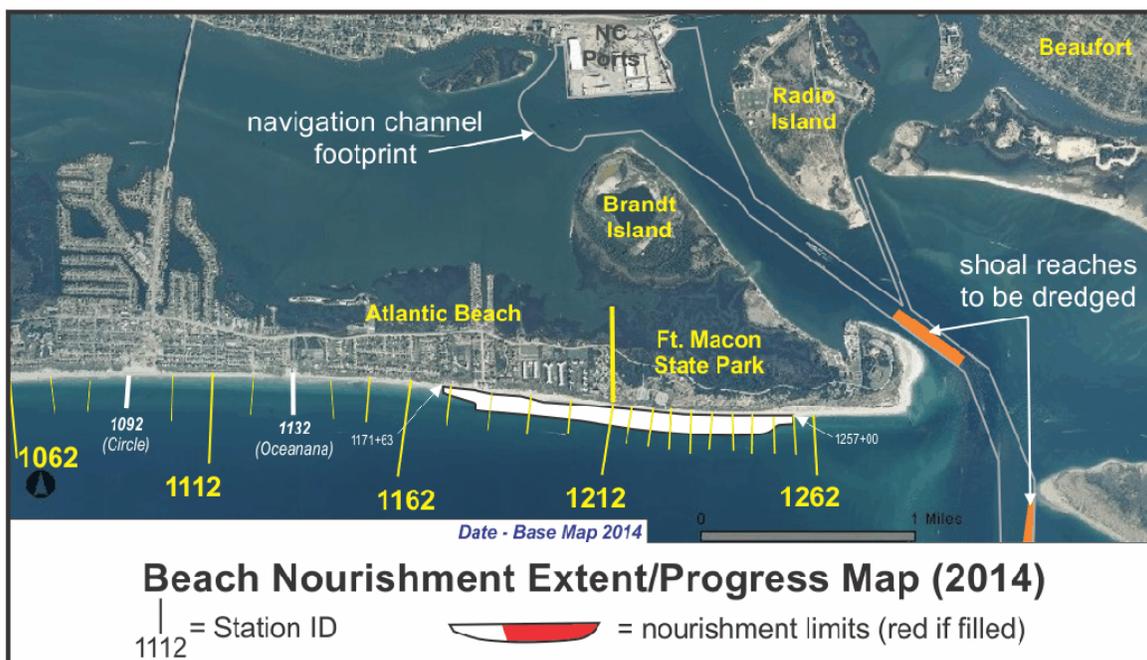
Sand to the West – Site map depicting the area of the AIWW scheduled for maintenance dredging this winter near the shorelines of Cedar Point and the concurrent nourishment area located at the Point, Emerald Isle.

The next cycle of maintenance work at the Bogue Inlet AIWW crossing that includes concurrent beach nourishment is scheduled for winter 2013-14 and is part of a larger contract including the Lockwoods Folly and Shallotte Inlet Crossings (mentioned

immediately above). A contract was recently awarded to [Southwind Construction](#) and is expected to take between January 1 and March 31, 2014 to complete starting at the northernmost inlet crossing (Bogue) and progressing southwards to Lockwoods Folly and eventually concluding at Shallotte Inlet. Similar to the 2006 and 2010 Bogue Inlet Crossing work, the Town of Emerald Isle received regulatory clearances to place the dredged shoal material near the inlet shoreline at the Point rather than the oceanfront disposal area traditionally utilized for inlet crossing work. The estimated volume associated with the Bogue Inlet AIWW crossing for 2014 is approximately 50,000 cubic yards (approximately 3,500 dump truck loads of material). The proposed fill template for the nourishment reach will be determined "on the fly" as a balance is struck between; (a) the actual volume of sand that is pumped to the Point shoreline, (b) the volume of sand that is lost as part of the hydraulic delivery process (i.e., fine-grained sediments lost to the template), (c) existing bathymetry and shoreline configuration at the time of nourishment, and (d) the area that is desired to be filled.

Sand to the East – Morehead City Harbor with concurrent nourishment along Ft. Macon and Atlantic Beach.

Beginning in federal Fiscal Year 2011 (October 1 2010 – September 30, 2011) the Corps began implementing a rotating 3-year cycle *Interim Operation Plan* that has been developed in order to adequately maintain the Morehead City Harbor Federal Navigation Project. **Year 1** (2010-11, **2013-14**, etc.) of the *Interim Operation Plan* includes dredging maintenance the harbor near Beaufort Inlet with concurrent nourishment to the beaches of Ft. Macon and Atlantic Beach (i.e., the sand is dredged from the inlet and placed directly along the beach). Therefore, we are currently in "Year 1" of the Interim Operation Plan and roughly 600,000 cubic yards of sand will be dredged and utilized for beach nourishment over a total of approximately 1.6 miles of shoreline as represented in the accompanying figure.



Sand to the East – Site map depicting reaches of the Morehead City Harbor Federal Navigation Project scheduled for maintenance dredging this winter and the concurrent nourishment area located at Ft. Macon and Atlantic Beach.

This year's contract has been awarded to [Weeks Marine](#) for a total of ~\$7,900,000, and dredging/nourishment activities must be completed between November 16, 2013 and April 30, 2014. This is considered as the "environmental window", and is designated as the timeframe when the impact risks associated with dredging and nourishment to both land- and water-based habitat and wildlife are at their minimum. This year's effort is scheduled to start on or near January 15, 2014 and includes just one-half of the volume of sand dredged and pumped in 2010-11.

Year 1 is the only phase of the *Interim Operation Plan* that places sand dredged from the harbor along the beaches of Bogue Banks. **Year 2** (2011-12, 2014-15, etc.) includes "touch-up" dredging of the outer harbor with nearshore disposal (~250,000 cubic yards), and **Year 3** (2012-13, 2015-16, etc.) includes a more robust maintenance event for the outer harbor, with an estimated 750,000 cubic yards of sand to be disposed in the nearshore disposal area. Areas of the harbor containing non-beach compatible shoal material will be dredged in Years 2 and 3, and will be disposed in either Brandt Island (identified in the accompanying figure), or dumped in the southwest corner of the Offshore Dredged Material Disposal Site, located roughly 3 miles offshore.

Importantly, the Corps and the National Park Service (NPS) are also concomitantly developing a *Dredged Material Management Plan* (DMMP) addressing longer term dredging and disposal issues at the harbor that encapsulates a twenty year time horizon. A draft of this later report was just released in October 2013 and is part of a legal settlement the Corps and Carteret County agreed to in December 2008. Thus, the *Interim Operation Plan* will be continued to be employed until the final DMMP is approved and instituted (likely 2015 - 2036).

The Draft DMMP is deficient because; **(a)** it proposes to nourish Shackleford Banks for the first time ever, **(b)** the proposed Shackleford Banks nourishment zone (middle of the island) does not mitigate the area the navigation project has clearly impacted (western tip), **(c)** by nourishing Shackleford Banks and not ensuring what specific quantities are delivered to Shackleford Banks or Bogue Banks, the DMMP clearly provides less nourishment than has been historically placed along Bogue Banks as mitigation for the navigation project, **(d)** the DMMP provides no mechanism to ensure that most of the sand is placed west of Ft. Macon and well into Atlantic Beach – sand placed along Ft. Macon migrates rapidly into Beaufort Inlet, providing almost no benefit for Atlantic Beach and other communities west. And lastly, **(e)** after insisting time and again, the Corps/NPS did not provide any mechanism to allow non-federal sponsors on occasion to pay for the additional cost of placing sand on the beaches of Bogue Banks rather than dumping the sand offshore as outlined in ever year "2" and "3" of the DMMP.

The County and local governments are cooperatively working with or if required, adversely working against the Corps/NPS to ensure changes are made to the DMMP.