

SHORELINES – September 2010

As presented to the *Island Review* magazine

Sand Coming to the Beaches of Ft. Macon and Atlantic Beach this Winter

This upcoming winter (2010-11) represents the implementation of the first of a three year *Interim Operation Plan* that has been developed by the U.S. Army Corps of Engineers (Corps) for the Morehead City Harbor Federal Navigation Project. For the sake of this conversation, we can segregate the harbor into either those areas that shoal with beach quality sand, or those areas that predominantly shoal with non-beach quality sediments (silt and clay). The areas of the navigation channel closest to Beaufort Inlet proper tend to shoal with beach quality material, while the areas closer to the N.C. Port facility and the most seaward reaches of the channel tend to shoal with non-compatible material.

Year 1 of the *Interim Operation Plan* includes dredging maintenance of the “beach quality” zone of 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). The accompanying figure depicts the navigation project (channel) footprint, the channel areas to be dredged this winter, and the general geographic limits of beach nourishment. The complete navigation channel extends roughly 3 miles south (seaward) beyond that illustrated in the figure.

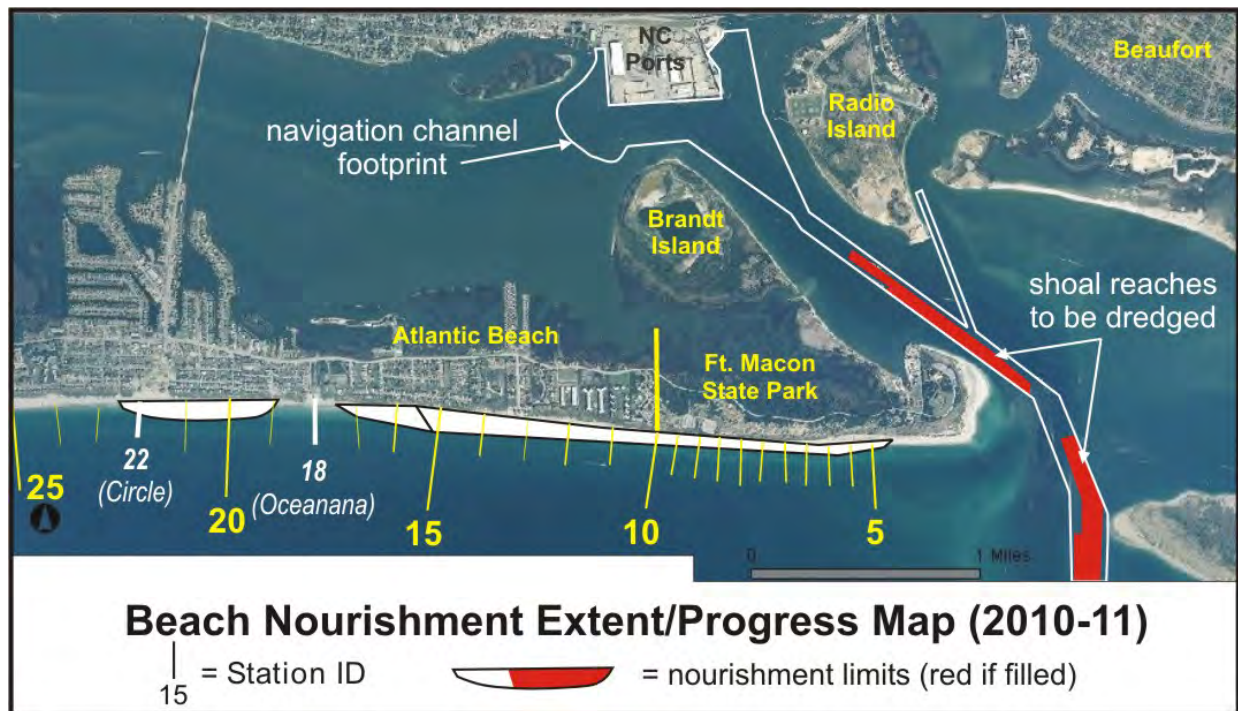


Figure 1 – Site map illustrating the proposed scope of work planned for the Morehead City Harbor Federal Navigation Project in winter 2010-11 (Year 1 of the *Interim Operation Plan*). Sand shoaling portions of the outer harbor reach will be dredged (shaded in red) and will be placed along the beaches of Ft. Macon and Atlantic Beach.

A range of 800,000 to 1,100,000 cubic yards of sand will be dredged and utilized for beach nourishment over a total of approximately 3 miles of shoreline in Year 1 of the *Interim Operation Plan*. Additionally, there will be an estimated 1,000 feet “non-nourishment” gap at the Oceanna Fishing Pier. As a quick mental image, a standard dump truck holds roughly 15 cubic yards of dry sand meaning the nourishment effort planned for this winter is equivalent to roughly 53,000 to 73,000 dump trucks worth of sand, or encompasses enough sand to extend a regulation basketball court 4,500 to 6,300 feet up in the air. The contract has been awarded to [Marinex Construction](#) for a total of \$10,546,000, who intends to utilize their new pipeline dredge, the *Savannah*. Dredging and nourishment activities must be completed between November 16, 2010 and April 30, 2011. 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. As we get closer to mid-November, the Shore Protection Office will develop a small homepage for the project including weekly updates.

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) includes “touch-up” dredging of the outer harbor with nearshore disposal (~250,000 cubic yards), and **Year 3** (2012-13) 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 is also concomitantly developing a *Dredged Material Management Plan* addressing longer term dredging and disposal issues at the harbor that encapsulates a twenty year time horizon. This later report is due October 2011, and is part of a legal settlement the Corps and Carteret County agreed to in December 2008. Hence if we have our chronology correct, the *Interim Operation Plan* will be employed between 2010 - 2013, and the *Dredged Material Management Plan* will be instituted for the following two decades (2013 - 2034). We’re hoping the *Dredged Material Management Plan* in particular appropriately considers and addresses the degradation to the beach that occurs if the majority of the beach quality sand dredged from the harbor is dumped offshore.