

SHORELINES – June 2005

The Southern Inlets - Part II The Government Dredging Fleet & State Proposals

Last month, we discussed the five inlets and connecting channels to the Atlantic Intracoastal Waterway (AIWW) located southwest of Cape Lookout that are maintained by the Federal government utilizing dredges owned and operated by the U.S. Army Corps of Engineers. These thoroughfares include from northeast to southwest; Bogue, New River, New Topsail, Carolina Beach, and Lockwoods Folly inlets/connecting channels. Under most circumstances, the Corps contracts with the dredging industry to satisfy the Nation's water infrastructure needs. This places these five waterways mentioned above, monickered as the Southern Inlets, in a unique maintenance situation (i.e., Federal navigation projects maintained by Federally-owned dredges). In this edition of the *Island Review*, we are going to introduce ourselves to the three government dredges that are most commonly utilized to maintain, or dredge, the Southern Inlet system.

The *Currituck*, the Corps only split-hull dredge, is 150-foot long and has a ~315 cubic yard holding capacity. Shoal material is dredged from the waterway floor utilizing dragheads that essentially vacuum the material into the belly, or hopper of the ship. The base of the 80' x 8' hopper can open along the axis of the hull, emptying the material from the hopper at nearshore disposal sites. Although the vessel is based in Wilmington, N.C., it has not been uncommon for the *Currituck* to work along the entire Atlantic seaboard from Maine to Florida in a single year. Interestingly, the *Currituck* was originally constructed in 1974 as a barge that worked in tandem with other types of dredges and was subsequently converted into a self-contained dredge in 1977.

The *Merritt* and *Fry* on the other hand are side-cast dredges, and while they similarly dredge and pump shoal material from the waterway floor, they have no capability to "hold" material. The slurry of shoal material and water in this case is sprayed approximately 100 – 300 feet away from the dredge. Side-cast dredging has been compared to mowing the lawn both figuratively and literally. The shoal material is sprayed from the side of the vessel similar to how a lawnmower spreads grass clippings. That's the literal image. From a figurative sense, just as grass begins to grow as soon as the lawnmower engine is cut, shoal material begins to enter the channels requiring future maintenance dredging. The *Merritt* and *Fry* are commonly used to maintain Bogue Inlet and the connecting channel to the AIWW.

As discussed last month, the Federal funding required to operate the government dredging fleet and maintain our waterways have always been conceptualized as a "sure thing". However, pressures on the expenditure side of the Federal budget ledger have metamorphosed this sure thing into a beast of uncertainty in the past couple of years, and provide the following as food for thought in relation to the dredging methodologies used for the southern inlets.

The private-sector dredging industry does not have a fleet of side-cast dredges and there are very few split hull dredges available as small as the *Currituck* that would be appropriate to use along the Southern Inlet system. If the Federal funding well does go dry for maintenance dredging, then the question may not be just who (or what entity) will begin to assume the financial responsibility for maintenance dredging, but also what type of equipment will need to be used. If side cast dredging is not an option, then where will dredged shoal material be placed? Who will undertake the regulatory permitting processes of finding suitable disposal sites? And of course who ultimately pays for all these analyses before the actual operation cost-sharing costs are considered?

On a timely note, the North Carolina Joint Legislative Transportation Oversight Committee just issued a request for proposal last month to firms capable of preparing a study analyzing the costs, benefits, and management issues related to maintaining North Carolina's shallow draft navigation channels. The proposals were due to the State on May 2nd and the study will be completed in two phases with funding stemming from the State's Highway Trust Fund.

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A report due June 9th will outline what the Corps has spent for shallow draft inlet maintenance over the past five years, what equipment was utilized, and the estimated cost of buying and operating that equipment. The second report, due Nov. 9th, will list and map all the authorized Corps shallow inlet navigation projects in North Carolina. It will also provide details regarding the history and cost of maintenance and other management issues, and will discuss needs for additional navigation channels in the state.

The results of this study and potential offshoots could have a huge bearing on how Federal, State, and Local governments will maintain waterways in the future, including dredged material management for beach nourishment, upland habitat, and other beneficial uses – stay tuned!!



A shipboard view of the sidecast dredge, the *Fry*, in action last summer along the Bogue Inlet connecting channel.



The *Fry's* draghead, the workhorse that maintains many of the waterways comprising the "Southern Inlet System".