

SHORELINES – May 2003
As presented to the Island Review Magazine.

THE SECTION 933 PROJECT

Believe it or not, we've been referencing the Section 933 Project for the past several months in our *Shorelines* articles without a proper explanation of what this Project actually entails. This month we're going to summarize the Project and discover that these three magic numbers (933) could mean a great deal of sand, storm protection, recreation, and environmental habitat for the beaches of Ft. Macon, Atlantic Beach (AB), Pine Knoll Shores (PKS), and Indian Beach (IB).

Your first set of questions may be where are the sources of sand and where is the sand going to be placed?

In order to answer this first round of questions, it will be important to lay some groundwork concerning the Morehead City Federal Navigation Project. The Harbor is constructed and maintained in accordance with the federally-mandated least cost standard and consists of two basic parts. The **Outer Harbor** is maintained annually by hopper dredging that collects sediment from the base of the channel and travels to one of two areas located 1 to approximately 2.5 miles offshore to dispose the dredged material. Material from the **Inner Harbor** on the other hand, is removed semi-annually utilizing a cutterhead-suction dredge that essentially excavates sediment from the base of the channel and transports the sediment via a floating pipeline in a direct, continuous motion. This material is "direct piped" to Brandt Island, an upland disposal site located north of Fort Macon. Every 8-10 years, the cumulative volume of sediment stored in Brandt Island must be removed to provide accommodation space for new dredged material from the Inner Harbor. The least cost standard to evacuate the material stored in Brandt Island is to pump this material to the beaches of AB and Ft. Macon. Because this represents the least cost option for the Corps, no cost are incurred by the municipalities, County, or State to nourish the beaches of AB and Ft. Macon as a result of this process. Two Pump-Outs have occurred in 1986 and 1994, with two separate, smaller-scale direct pipe projects that have nourished Fort Macon (1978 and 2002). The next scheduled Pump-Out is scheduled for this upcoming winter 2003-04.

Quite simply, if a local sponsor is interested in paying for the additional costs of transporting and placing sediment on the beaches beyond the least cost zone of AB and Ft. Macon, then a cost share program can be implemented under the Corps Section 933 Authority. The additional expenditures of transporting this sediment beyond the least cost area and along the shorelines of PKS and IB will be cost shared, with the federal share at 65% and the local share at 35%. Historically the State has funded 75% of the local share of such projects and this project anticipates that same level of funding. Thus, there are two zones for the overall beach nourishment project; (1) the least cost zone of AB and Ft. Macon (no cost), and (2) a cost-shared Section 933 zone that encompasses the shorelines of PKS and IB (including Salter Path).

As we have just been discussing, the main source of sand for the upcoming Project is contained in Brandt Island. However, there are other smaller sources of sand that provides a cumulative total of 6 million cubic yards (mcy) available for the entire Brandt Island Pump-Out/Section 933 Project. How much sand is 6 mcy? To put this into perspective, the PKS/IB Project was a 1.73 mcy restoration effort, and the recently completed EI Project was a 1.81 mcy

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effort. The volume of sand involved with the Brandt Island Pump-Out/Section 933 Project and the favorable cost-share ratio described above makes this Project one of our most important beach restoration efforts to date.

After evaluating seven possible alternatives, a locally-preferred plan was selected to distribute our most precious resource of sand along the Project area (see figure). The locally-preferred project was selected because a uniform “30-foot berm” design template is to be applied over the entire Project area. Without getting too technical, the 30-foot berm design consists of two basic elements. (1) The construction of a sand berm at an elevation of approximately 7 feet above sea level, and (2) A seaward extension from the berm to the ocean at a 1 vertical to 25 horizontal slope. The volume of sand required to achieve this template varies across the Project area based on the existing condition of the beach. Thus, although each community is receiving a different quantity of sand, the added beach width and storm protection seaward of the primary dune should be exactly the same from Fort Macon to the IB/Emerald Isle town boundary, i.e., different volumes of sand are required to achieve a uniform height and slope throughout the entire project area seaward of the frontal dune. There is no dune construction planned for the Project.

With this background in mind, would you like to know how much the project is going to cost? Who is paying for the project? What relation does access and parking have to the project? Or, do you just want to know more information on the project in general? For these details, please go to our new website address – www.protectthebeach.com. That’s “protect the beach”.com - a flashing Section 933 Project link is available at the homepage. The Brandt Island Pump-Out/Section 933 Project will truly be a community effort – let’s bring this project to fruition!

