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

THE GOLDEN RULES

Believe it or not, we're going to take a break from discussing the upcoming Brandt Island Pump-Out/Section 933 Project this month and shift our focus to the issue of sediment budgets at our inlets and beaches. The recent rejection of the jetty proposal at Oregon Inlet has placed this topic in the limelight and as we'll see in the following, there are passive and overt methods of manipulating our sediment budgets. The "point of view" article below (prepared by the Shore Protection Office) speaks to the heart of the matter and has appeared in a few newspapers locally and abroad.

"BOGUE BANKS -- We can all agree that the fire that burned the Oregon Inlet Jetty proposal to a charred crisp was fueled by the specter of negative downdrift impacts to Pea Island and the associated degradation of our most treasured environmental habitat – the beach. However, it's an interesting paradox that very little, if any attention is given to the very same processes that are occurring every dredging window as we starve our beaches of their sandy lifeblood with ocean bar dredging projects that intercept and permanently divert beach quality sand away from the very beaches that we are trying to preserve. Regardless if we are discussing the impacts of jetties or the more passive nature of ocean bar dredging, the end result is the same – no sand, no beach. It's just not as glamorous or politically savvy to target hopper dredging employed in the maintenance and operation of our Ports as it is to blame an obvious wedge of sand impounded along a jetty and a downdrift beach with a landward offset of a couple hundred feet.

How in the world did we get here? Innocently enough, the U.S. Army Corps of Engineers is congressionally mandated to construct and maintain (dredge) Federal Navigation Projects across the Country and in North Carolina by using the least-cost disposal method. Thus, the cheapest alternative to transport sand from point A to point B shall rule the day, regardless of any negative environmental, economic, or recreational impacts this practice may have to adjacent barrier islands. This usually leads to the issue at hand – massive sediment budget deficits for our beaches. How massive? Approximately 35 million cubic yards has been removed from the sediment budget at the Morehead City Harbor alone since its initial construction in 1911. That's enough sand to fill a four lane highway 30 feet deep extending from the friendly island of Bogue Banks to Raleigh (140 miles). No advanced studies are required to connect the dots here – the magnitude of sand thievery at our Navigation Projects have and continues to be a detriment to adjacent beaches and the associated environmental habitats we vigorously try to protect.

Sand is a limited resource for our beaches. Our coastal plain rivers don't posses the gradients necessary to deliver sand to the ocean, and therefore there is simply no "new sand" in the system, only reworked material from adjacent shorefaces, inlet channels and deltas, and the capes. Yet, the Corps has to doggedly abide by the least cost method, and the incremental cost of placing this resource on the beach rather than in offshore disposal sites is considered a violation of their congressional mandated policy. Ironically, local communities, the State, and even the Federal government (taxpayers) must turnaround and undertake separate beach restoration projects that are often needed to repair the beaches that have eroded as a consequence of "least cost" policy.

How do we stop this waste of natural resources and taxpayer dollars? As a starter, let me offer two golden rules that we should abide by.

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

(1) Thou shall not permanently remove beach quality sand from the active inlet/beach system. We should treat sand in our inlet/beach systems in the same manner we value surface water in our river basins and ground water in our aquifers. Dredged sand is often considered a waste product or "spoil". We monitor watersheds for surface water and have capacity use areas for ground water– we should encourage a similar mindset for the sand budget at our inlets and beaches.

(2) Thou shall marry navigation and beach restoration projects. The least-cost policy for navigation has evolved into the most expensive policy for our beaches. The Corps is unable to claim the benefits of placing dredged material destined for the beach actually on the beach when they conduct their least cost analyses. But sure enough, the additional costs for placing sand on the beach would be charged to the Navigation Project. Cost would go up and benefits would remain the same. This penny wise but pound foolish approach forces the Corps to isolate projects instead of dovetailing efforts and projects into a regional sand management approach. Our Wilmington District of the Corps has been proactive in pursuing other Federal project authorities that allow non-federal sponsors to participate in beach restoration/environmental rehabilitation projects that beneficially use dredged material for these purposes. However, this is an exception in how we approach Navigation Projects and is far from being the rule.

The solution to this dilemma is transparently obvious – permit the Corps to adequately account for the costs AND the benefits of placing sand on the beach. Sediment budgets would be restored, our beaches would be healthy, and our Ports would be able to flourish. The "least cost" policy has been implemented by Congress and therefore can be changed by Congress. There is a strong movement afoot by coastal delegates on Capitol Hill to make regional sediment planning mandatory for Navigation Projects. However, this goal will come to fruition much quicker if the same level of concern by the public and our Federal resource agencies that were emphatically expressed over the downdrft impacts at Oregon Inlet are conveyed to the issue of ocean bar dredging and the removal of beach quality sand from the inlet/beach system. In the interim, many of our unique beach habitats are hanging in the balance."