



North Carolina Shore & Beach Preservation Association

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P R E S S R E L E A S E

June 5, 2002

Restored North Carolina Beaches Receive Thorough Environmental Monitoring

North Carolina's restored beaches are the focus of intensive environmental monitoring this summer. Two of the areas receiving sand placements in the past 18 months are in Brunswick and Carteret counties. The three Brunswick County projects, covering parts of five beach municipalities, are all US Army Corps of Engineers projects. The nourishment of Pine Knoll Shores, Indian Beach and Emerald Isle in Carteret County is a multi-phase municipally-funded project with compulsory Corps of Engineers and NC Division of Coastal Management oversight and permits, with guidance and involvement from other federal and state agencies.

In Brunswick County, the Corps of Engineers has two independent environmental contractors monitoring any potential impacts on beach species from placement of sandy material on beaches there. The project areas being monitored and studied are the Brunswick Beaches portion of the Wilmington Harbor Channel Deepening project, the Oak Island Sea Turtle Habitat project and the Ocean Isle Beach Shore Protection project. All sand for these projects was derived from federally authorized navigation projects or from upland spoil areas created by past

navigation projects such as the Intracoastal Waterway, not from the so-called offshore borrow sites sometimes used in other beach nourishment projects.

The first contractor is CZR, Inc. This firm is monitoring nesting, resting and feeding activities of piping plover, other shorebirds, and colonial waterbirds before, during and after the placement of sand on the beaches. The monitoring is being conducted weekly during migration and the breeding seasons and every two weeks the rest of the year. Bald Head Island, Caswell Beach, Oak Island, Holden Beach and Ocean Isle Beach in Brunswick County are all being monitored. This work began in December 2000 and will continue through November 2002. The first-year final reports are available at the Corps of Engineers FTP site ([see below](#)). Total cost for this two year study of birds is about \$300,000.

The second contractor, Versar, Inc., is investigating the impacts of sand placement on benthos and fisheries. Sampling was performed immediately prior to sand placement, during the actual construction of the project, just after placement was completed, and then generally quarterly and annually after that. Essentially the same beaches that CZR monitors for birds, Versar is also monitoring for impacts to benthos and fisheries. This work began in the spring of 2001 and will continue through next winter, with the first- year report expected later this summer. Total cost for this two year study of fish and benthos is about \$900,000.

In addition, the several Brunswick Beaches towns where sand placement occurred are monitoring the nesting activities of endangered and threatened sea turtles, much as they have done every season for many years. This daily monitoring is overseen by North Carolina Wildlife Resources Commission with guidance from US Fish & Wildlife Service and other state and federal agencies.

The main objective of the environmental monitoring plan in Carteret County's Bogue Banks project areas is to document the species that inhabit and/or use the sand borrow areas and project beaches. Monitoring during the pre- and post-project phases is being conducted to determine whether and at what moment in time biological populations return to predetermined baseline conditions. Specifically, the approved Bogue Banks area plan is designed to:

- 1) Quantify the changes in benthic populations in the offshore borrow areas.
- 2) Quantify the changes in benthic populations along the beach.
- 3) Compare impacted areas with unnourished areas.
- 4) Study fish populations and foraging habitats in the surf zone.
- 5) Monitor recovery and population of ghost crabs and turtle nests in the project area.
- 6) Monitor the occurrence of threatened sea-beach amaranth in the project area.

The recommended sampling protocol in Carteret establishes June and November as sampling periods. Pre-construction sampling for the Pine Knoll Shores / Indian Beach Restoration Project was completed in June and November of 2001. Post-construction sampling is scheduled in June and November of 2002 and will serve as pre-nourishment sampling for the Eastern Emerald Isle project. Post-construction sampling will continue in the same months for the following years until recovery is actually demonstrated. The project sponsors will perform up to 10 samplings with the first five being paid for by Pine Knoll Shores and Indian Beach, and the latter five being paid for by Emerald Isle. Each individual sampling event costs \$50,000 for a total commitment of at least \$500,000. The N.C. Division of Marine Fisheries in consultation with the National Marine Fisheries Service will determine the ultimate duration of post-project sampling.

The roughly \$2 million invested in environmental monitoring as a part of these two beach restoration project areas will provide previously unavailable local data to scientists as North Carolina moves forward with efforts to conserve, restore and preserve one of its most valuable renewable resources, its public beaches.

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Download the first-year reports on Brunswick shorebird and water bird monitoring from these locations:

<ftp://ftp.saw.usace.army.mil/WilmingtonHarborMonitor/Brunswick%20Rpt%20-%202001.pdf>

<ftp://ftp.saw.usace.army.mil/WilmingtonHarborMonitor/Ocean%20Isle%202001%20Report.pdf>

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Any member of the press wishing to view sampling or other aspects of the environmental monitoring described in this press release need only contact Harry Simmons at NCSBPA, cell phone number 910-200-7867. We'll be happy to arrange for you to tag along and might even see if you can wade in and pull a net.

North Carolina Shore & Beach Preservation Association is a statewide non-profit organization whose mission is to conserve, restore and preserve North Carolina's public beaches, a beneficial renewable resource. NCSBPA is governed by a diverse coastwide board of directors which counts state and local officials, academicians, engineers, economists, geologists and other scientists among its twenty-plus members. The NCSBPA website can be found at <http://www.ncshoreandbeach.org>.