

Dunes provide first line of protection

Sand dunes serve as temporary protective barriers during storm tides and are extremely efficient in terms of their capacity to dissipate and absorb wave energy. Frontal dunes are the first mounds of sand located landward of the beach that offer protection to the land and structures behind them from erosion and flooding. The performance of frontal dunes in dissipating wave energy comes at the expense of their own erosion under the assault of storm tides.

Where frontal dunes are absent or damaged, they may be rebuilt or repaired mechanically using earth-moving equipment to restore and maintain their capacity to reduce or prevent dune scarp, retreat and overwash. Known as beach bulldozing or "pushing sand," the process of moving sand from the lower foreshore to rebuild and repair frontal dunes in the upper backshore differs from nourishment in that it is redistribution within, not an addition of sand to, the beach and dune system. Severely eroded areas will require replenishment with sand from outside the system in order to restore and maintain frontal dunes.

Methods of sand redistribution differ with regard to the type of earth-moving equipment used, the volume and rate at which sand is moved, the location and size of the borrow zone, and the placement of sand in the

Long Beach PRESERVATION TRUST



backshore. Limitations along a particular beach are the space available for sand placement -- the distance between the mean high-water line and the dune scarp -- and the volume of sand available from the borrow zone.

The Town of Long Beach purchased a front-end loader this year with accommodations tax funds to restore and maintain frontal dunes. Using town-owned equipment, operated by town staff rather than hiring an outside contractor, not only significantly reduces the cost of a dune maintenance program, but also enables work to continue throughout the permitted period from November to May.

A study conducted at Topsail Beach by the Institute of Marine Sciences, University of North Carolina-Chapel Hill, concluded that sand redistribution can be beneficial in reducing dune scarp retreat and preventing overwash without causing adverse impacts to the beach. The method being used by Long Beach for its dune maintenance program is similar to the technique used in that study.

Frontal dunes that are mechanically restored by sand redistribution or replenishment have the added advantage of possessing essentially the same aesthetic and ecological qualities as their natural counterparts. Dry, stable dunes are essential to the survival of loggerhead sea turtles.

The absence of dunes in the eastern portion of Long Beach has resulted in the death of several nesting loggerhead sea turtles that have wandered into the street. The absence of dunes also minimizes the number of areas that are suitable nesting sites. Countless hatchlings are lost to the tide or simply dropped at sea because no suitable nesting area can be found.

A Sea Turtle Habitat Restoration Project, now in design by the U. S. Army Corps of Engineers, can enable us to rebuild habitat for an endangered species and assist in the preservation of our beach and coastline for ourselves and for future generations to appreciate and enjoy.

The initial fund-raising goal for the Long Beach Preservation Society is \$331,250, the local share for the project. Members of the society will continue to remind our elected representatives in the N. C. General Assembly and U. S. Congress of the need to fully fund the state and federal cost-share of this important model project in the 1998-99 budget.

Contributions may be made payable to the Long Beach Preservation Trust Fund, Town of Long Beach, P. O. Box 217, Long Beach, NC 28465.

Aquarium activities for April

The following programs are scheduled during April at the North Carolina Aquarium at Fort Fisher:

Canoeing the Salt Marsh, Saturdays, April 4 and April 18, 9 a.m.; Surf Fishing Workshop, Sunday, April 5, 9 a.m.; Children's Discovery Time, Wednesdays, April 8 and April 29, 10 a.m.; Foods from the Sea, Saturday, April 11, 11 a.m.; Nature Crafts, Saturdays, April 11 and April 25, 2 p.m.; Holiday Button Crafts, Saturday, April 18, 2 p.m.; Salt Marsh and Crabbing Expedition, Sunday, April 19, 9 a.m.; Crabbing and Clamming Combo Class, Saturday, April 25, 10 a.m.

Gould scholarship auction scheduled Saturday, April 11

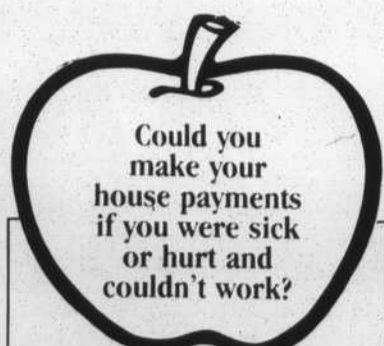
Items are being accepted for the second annual Paul Gould Memorial Emergency Medical Services Scholarship Fund Benefit Sale to be held Saturday, April 11, beginning at 9 a.m. at the Southport Rescue Squad building.

Persons may drop-off non-clothing items at the Southport Rescue Squad building, or call the rescue squad at 457-7916 to have items picked-up at their home.

Tutor training held April 3-4

Brunswick County Literacy Council's next tutor training workshop will be held in two sessions Friday, April 3, from 6 to 9 p.m. and continuing Saturday, April 4, from 9 a.m. to 4 p.m. at Supply.

Margarete O'Leary will be the trainer and participants will learn how to teach reading using phonics and other methods. Those who complete the workshop will be certified as Laubach tutors. Laubach Literacy Action is the largest volunteer literacy organization in the country.



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