Argument for use of Geotube® technology for Dune Restoration and Dune Reinforcement

Geotube® Marine Structures are Proven Technology

- Geotube® marine structures have been in use in the Northeastern US and across the US for approximately 25 years and used internationally for over 50 years.
- Geotube® marine structures performed as designed during Super Storm Sandy. Although sections were uncovered by the waves, the tubes were not damaged. Resulting remediation of these dunes was minimized. Property was protected.

Geotube® Marine Structures are an Environmentally Friendly Method of Protecting Sand Dunes

- They conform to the shape of the natural dune
- They do not rust and disintegrate leaving residuals that could harm people or marine animals
- They provide a heavy and dense monolithic structure inside the dune that will withstand the force of storm surges without being eroded and/or destroyed.
- Geotube® sand dune cores remain embedded in the sand dune and unless the sand is removed in a storm, do not require maintenance.

Alternatives

No manmade intervention

Sheet piling - Works, but aesthetically, unattractive

Sea wall - Very expensive and eliminates the beach

Multi-ton armor rock dune revetments

- Not eco-friendly (heavy carbon footprint to transport rock)
- Very expensive to haul in and place huge armor rock
- Dangerous to walk on or attempt to cross
- Eliminates view of beach

Wire baskets

- Baskets are filled from the top leaving a sharp, steep profile and exposed edges which are subject to UV degradation and open to potential vandalism.
- Fabric liner suffers from UV degradation allowing sand to flow out in wave climate.
- Exposed baskets rust and breakdown leaving dangerous debris on the beach.