

Glossary of Terms used in the Living Shorelines Stacker

Dune: A hill, mound, or ridge of sediment (usually sand) that has been deposited by wind or waves landward of a coastal beach. Dunes can also be artificially constructed.

Biodegradable materials: Plants, sand, coconut fibers, or any other organic materials that, when placed along the shoreline, will disintegrate over time.

Coastal bank: Seaward face or side of any elevated landform, other than a coastal dune, subject to tidal action.

Ecologists: Scientists who study the interactions among organisms and their environment.

Engineers (coastal): Civil engineers who are experienced in construction and development at or near the coast.

Erosion: The loss of sediment from the shoreline to the water column, caused by waves, wakes, ice, or wind.

Green infrastructure: Engineered systems that integrate natural systems and processes (i.e., nature-based features) into their design to simultaneously enhance natural resources and reduce adverse environmental impact. Also referred to as “nature-based protection,” “bioengineering,” and “soft engineering.”

Highest high tide: The maximum height reached by a rising tide for a given shoreline. The exact height of the highest high tide is based on periodic tidal forces and the effects of meteorological, hydrologic, and oceanographic conditions.

Ice scour: Erosion of the shoreline caused by ice pushed onto or against the shore by wind or waves. Daily freeze-thaw cycles can also lead to ice forming around shoreline vegetation and damaging it.

Landscape architects: Professionals trained in the art and practice of designing outdoor environments. Landscape architects may have an interdisciplinary background in fields ranging from botany, horticulture, architecture, industrial design, soil sciences, geography, and ecology.

Reef balls: Hollow, concrete, hemispherical modular structures that, when placed on intertidal flats, may provide a substrate for shellfish growth, a mechanism to break waves, and a means to capture sediment and support or restore wetland plants landward of the reef balls.

Revetment: A type of “rock/concrete structure” (see definition below). Revetments are sloped structures, constructed with paved concrete or large, heavy stones placed against the upland bank or over the slope of a shoreline. The purpose and effect of a revetment is to protect the bank/slope from erosion and waves.

Rock/concrete structure: Fixed engineering structures placed on or along the shoreline for the purpose and effect of flood and erosion control. Includes such structures as seawalls, bulkheads, and revetments. Also referred to as a “hardened structure,” “hardening,” or “armoring.”

Sand fence: A fence designed to help capture windblown, drifting sand, usually for building up or preserving dunes. Sand fences are typically constructed of thin, wooden slats that are connected with twisted wire to wooden or metal stakes. While other fence materials, such as plastic, polyethylene, and metal, are sometimes used to trap sand, they are not recommended for coastal use because of their potential negative impacts. Sand fences are also referred to as “snow fences.”

Salt marsh: A system of “wetland plants” (see definition below).

Sea level rise: A long-term increase in local mean sea level in which the height of the water, as measured along the coast relative to a specific point on land, increases over time. Changes in sea level are directly linked to a number of atmospheric and oceanic processes, such as changes in global temperatures, hydrologic cycles, global coverage of glaciers and ice sheets, and storm frequency and intensity.

Tidal range: The vertical (height) difference between high tide and low tide.

Wake (boat) energy: The force a boat’s wake is likely to have on a shoreline. Boat wake is a wave pattern on the water surface produced by a moving boat. Boat wake energy may have a different impact on a shoreline compared to natural wave energy.

Wave energy: The force a wave has on a shoreline. Different environments will have lower or higher wave energy, depending on factors such as wave height, shore orientation, wind, channel width, and bathymetry (the measurement of depth).

Wetland plants: Vegetation that is adapted to inundated conditions. In the northeast, common wetland plants incorporated into living shorelines include *Spartina alterniflora* (cordgrass) and *Juncus gerardi* (black grass).

References

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