



“ Every day, on every project, we are helping to create a more adaptive, resilient, and sustainable world. ”

Restoring coastlines and protecting homes

SumCo Eco-Contracting is devoted to the specialized field of ecological construction. We provide nature-based solutions for erosion control and the restoration of coastlines for beachfront property owners.

Coastal protection has been around for many decades. It is not a new concept. What is new, however, are the types of solutions that are now allowed by regulatory authorities. These changes reflect the growing need for coastal protection due to climate change. The rise in sea levels are threatening an increasing number of properties in coastal environments.

Research has suggested that the concept of “hard” coastal bank protection (e.g., rock revetments, concrete or sheetpile seawalls) actually increases the rate of beach erosion. Storm-driven waves and surf hit the hard structures and reflect back towards the ocean, removing beach sand in the process. Such research has led to the creation of the field of “soft” structures. The advantage of a soft structure is that they absorb the impact of storm-driven waves. This reduces the degree of wave reflection and thus beach erosion. Regulatory authorities prefer soft structures in most situations due to the reduced rate of beach erosion. The first such installations were in Nantucket, MA back in the 1990’s, and have expanded from there to other parts of New England and along the coast. SumCo is proud to deliver the latest (soft) techniques in stabilization and storm resistance, including:

- Annual sand nourishment of beaches and dunes that lose sand due to winter storm erosion
- Coir fiber rolls, sand filled coir envelopes
- Permeable gabion structures
- Elcorock geotube pillows that are permeable but non-bio-degradable
- Sand drift fencing to accrete wind-blown sand

CONTACT OUR EXPERIENCED COASTAL TEAM TODAY!



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PROJECT PARTNER AWARD WINNER

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Heavy Duty Sand Drift Fence – Cape Cod, MA

The purpose of the sand drift fence is to accumulate wind-blown sand to naturally rebuild/renourish a dune or the toe of a coastal bank. A “heavy duty sand drift fence” is for locations where waves and surf are particularly intense, and therefore the fence has to be designed to withstand such forces during storm season (winter & early spring). Subsequently, during the non-storm seasons (late spring, summer and fall), the fence can resume its role in naturally accreting sand for restoring/expanding a dune at the toe of a coastal bank.



Cobble Revetment with Coir Logs – Johnstown, RI

The cobble revetment in this photo was constructed with a combination of natural stone and a coir fiber roll installation at the top of the revetment. The revetment was due to a lower wave impact at this location. The design assumption was that the low profile of the revetment would be sufficient to reduce most wave impacts on the coastal toe. The coir fiber rolls would then absorb overspray and wave action that overtops the cobble portion of the revetment during severe storms.



Coir Fiber Roll Installation – Sandwich, MA

This installation highlights Coir envelopes stacked in an array with posts to help keep them in place. Coir envelopes at this location were the only protection allowed due to dune protections. Dunes under the Wetland Act are meant to furnish sand to the near shore ocean environment. This regulation dictates that coastal protection is limited to “soft” structures in this situation vs a rock revetment (“hard” structure).



Elcorock Geo Tubes – Plymouth, MA

The coastal bank protection in this photo is a hybrid “soft” structure. Elcorock tubes are sand filled “pillows” stacked in a terrace configuration going up the coastal bank. Instead of a biodegradable coir material, the pillow is made of geotextile, a non-biodegradable material which has a greater life expectancy and durability. The entire installation is covered with sand and planted with beach grass for a natural coastal bank appearance.

Other Projects



Dune Re-Nourishment
Duxbury, MA



Whitcreek Hydraulic Dredging & Beneficial Use
Sussex County, DE



Coir Envelopes
Sandwich, MA



Beach Access Stair Set
Truro, MA



Coir Envelopes
Nantucket, MA



Coir Fiber Rolls & Netting
Nantucket, MA



Coir Envelopes
Sandwich, MA



Maushop Village Beach Nourishment
Mashpee, MA

Contact



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Stream Restoration



Coastal Stabilization

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