Ecological Restoration and Construction

SALT MARSH & COASTAL BANK RESTORATION

Coastal Residence
Darien, CT

New England Environmental, Inc. (NEE) was contracted to prepare and implement a salt marsh design plan for the restoration and stabilization of 1,700 square feet of tidal marsh adjacent to a private residence. This valuable tidal bank and salt marsh was impacted as a result of winter storm erosion. NEE installed coir fascines along the banks to provide stabilization during winter storms and flooding conditions. The salt marsh was then re-planted with *Spartina alternifolia*, the plant species present prior to the destructive winter storm events.

Existing conditions prior to replanting *Spartina alternifolia*. The coir fascines installed along the bank by NEE are visible in this photograph.

Coir fascines, with adjacent *Spartina alternifolia* plantings.

The salt marsh restoration efforts conducted in Darien Connecticut successfully re-vegetated a barren salt marsh and stabilized a portion of eroding bank adjacent to a private residence. The homeowner's concerns related to erosion from winter storms were resolved with NEE's restoration. The restoration also improved wildlife habitat near the home with the installation of native coastal shrubs.

NEE Restoration Activities:

- Installed 100 ft. of 16" coir fascines along the tidal bank to eliminate shoreline erosion.
- Restored a 1,700 square ft. salt marsh flat.
- Planted 1,700 salt tolerant herbaceous plants.
- Controlled invasive *Phragmites australis* located on site.
- Installed native salt tolerant shrubs on the tidal bank.

Results:

- *Spartina alternifolia* plantings colonized the tidal marsh restoring the area of impact within two years of the site work.
- Erosion on site was significantly reduced with the use of the coir fascines along the tidal bank.

Spartina alternifolia plantings thriving within the salt marsh two years after construction.

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