Demonstration of Living Shoreline Technology to Protect and Restore Salt Marsh in Coastal Massachusetts

UPDATE



Martha's Vineyard Shellfish Group, Inc.



Demonstration of Living Shoreline Technology:

Delaware Bay Living Shoreline Initiative



Project Sites

Two low energy

- Muddy Creek (Lagoon Pond)
- Trapps Pond (Sengekontacket)

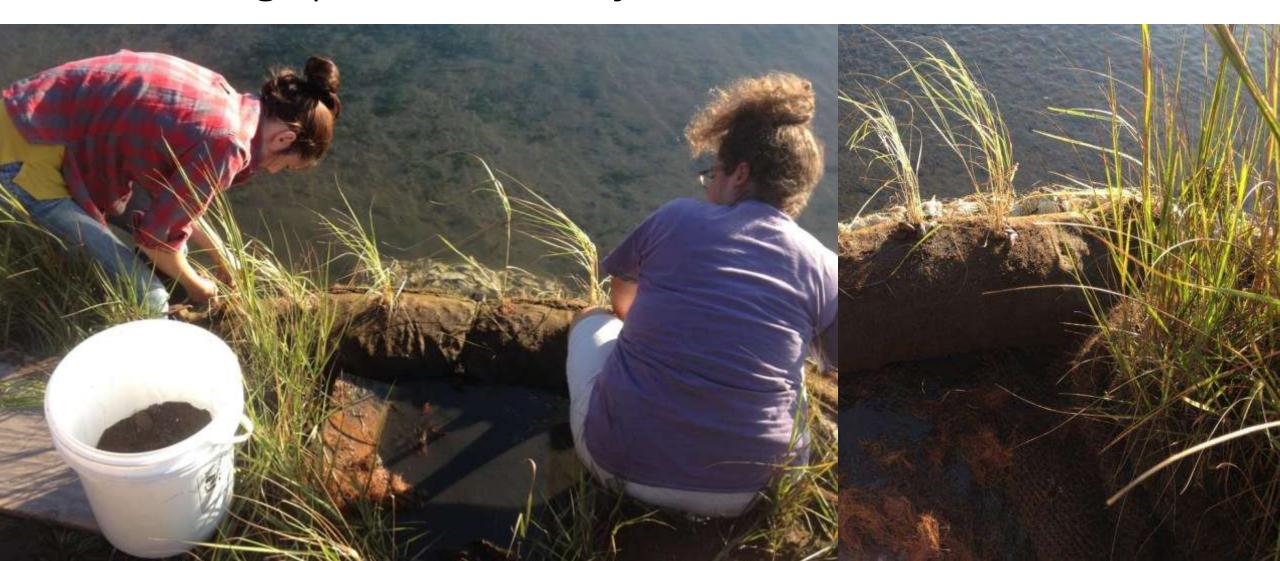
Two high energy

- Felix Neck (Sengekontacket)
- MVSG Dock (Lagoon Pond)



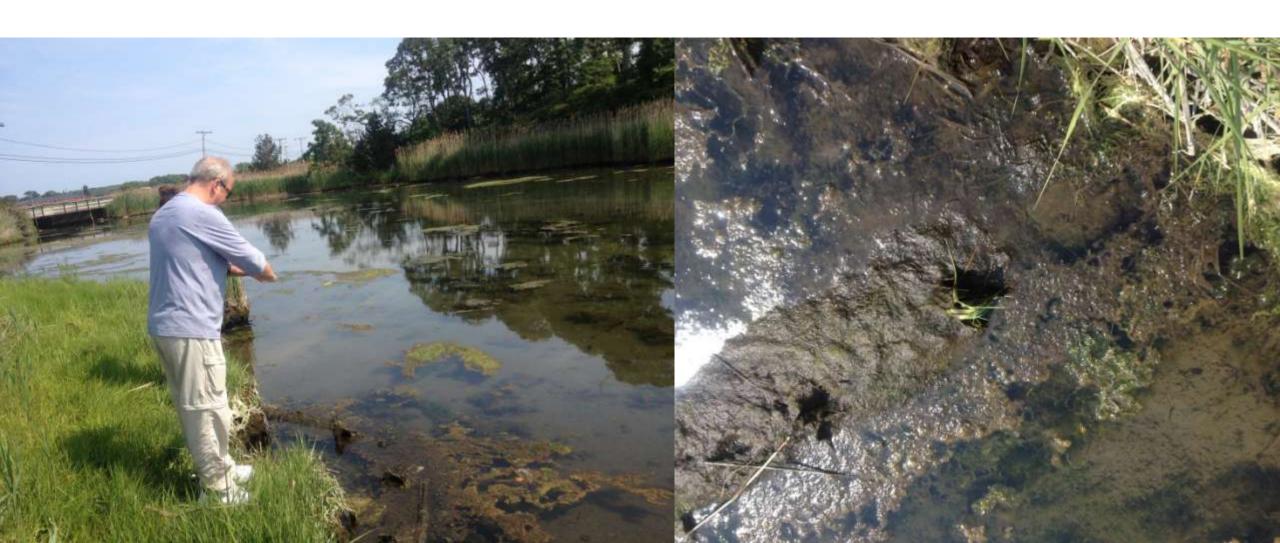
Four sites on Martha's Vineyard will be employed by this proposed project: Muddy Creek and the MVSG dock in Lagoon Pond, and Felix Neck and Trapps Pond in Sengekontacket Pond.

Mud Creek Planting Spartina alterniflora





Mud Creek - Spring 2015



Mud Creek

July 2015



















Felix Neck

Final installation



Felix Neck – Damage shortly after installation



Felix Neck

October 2015

Total destruction after

Northeast storm









Conclusions

- DELSI living shoreline method has application for salt marsh restoration/protection in relatively protected sites.
- At sites exposed to waves, the method did not succeed.
- For the high energy sites. a new design that incorporates logs that will stay in place and not break apart will be required.
- A log design/arrangement that approximates a pyramidal shape might be less likely to roll
- Coir log construction needs to be much stronger to hold together when subjected to wave energy.
- Tidal elevation is important to marsh grass health and survival. The grass will not survive if its roots are not periodically above water.