LIVING SHORELINES

A GUIDE FOR PROJECT SELECTION

CONTACT INFORMATION

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Photos courtesy of MD DNR and Eastern Shore RC&D Council.

Maryland Chesapeake & Coastal Program
Tawes State Office Building
580 Taylor Avenue, E-2
Annapolis, MD 21401

Place
Stamp
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WHY ARE SHORELINES IMPORTANT?

A shoreline is the interface between the land and the water. Nutrient/sediment runoff and habitat for fish/wildlife are affected by the characteristics of a shoreline. Many studies have shown that the coastal areas are declining in both water quality and habitat. One way to reverse the trend is to change the way we control shoreline erosion.
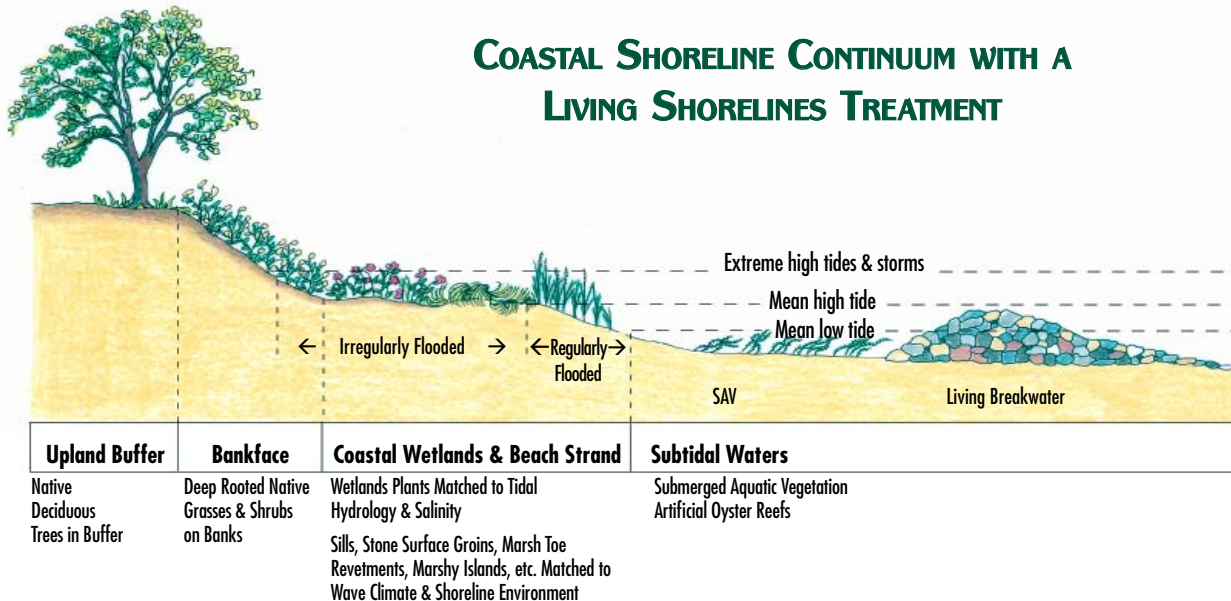
WHAT IS A LIVING SHORELINES APPROACH?

It is a shoreline management practice that provides erosion control by protecting, restoring or enhancing natural shoreline habitat. Standard erosion control practices generally uses rock or concrete to "harden" the shoreline. This approach is often effective at controlling erosion, but can increase nutrient and sediment run-off, and reduce habitat for fish and wildlife. The *Living Shorelines* approach controls erosion and maintains natural coastal characteristics through the strategic placement of plants, stone, sand fill and other materials.

ARE LIVING SHORELINES EFFECTIVE AT EROSION CONTROL?

Yes, *Living Shorelines* can be very effective, especially if designed and built to address site specific issues and dynamics. To receive a copy of *Assessing the Effectiveness of Non-structural and Hybrid Erosion Control Measures* contact the Maryland Chesapeake & Coastal Program. *Living Shorelines* can be implemented on virtually any shoreline property. There are some instances however, where erosion control is best achieved with standard methods. The "energy environment" (strength of waves and exposure to storms) plays a large role in determining what method is most appropriate. The three categories of shore erosion control are outlined below.

NON-STRUCTURAL	HYBRID	STRUCTURAL
Energy Environment: Low	**Energy Environment:** Medium	**Energy Environment:** High
Project Types: Marsh plantings on existing substrate or fill, beach nourishment	**Project Types:** Continuous sills, low profile & segmented sills, marshy islands, coir fiber log or stone edging, and groins with planting	**Project Types:** Headland control and breakwaters with sand fill and/or plantings.
Project Aspects: Habitat restoration/creation achieved without structures; limited erosion control.	**Project Aspects:** Habitat restoration/creation assisted with structures; erosion control & habitat benefits variable depending on project selected.	**Project Aspects:** Primarily address erosion control concerns; habitat enhancements are limited, but can be achieved through careful design.

COASTAL SHORELINE CONTINUUM WITH A LIVING SHORELINES TREATMENT

Extreme high tides & storms
Mean high tide
Mean low tide

← Irregularly Flooded → ←Regularly→ Flooded

SAV
Living Breakwater

Burke Environmental Associates

Upland Buffer	Bankface	Coastal Wetlands & Beach Strand	Subtidal Waters
Native Deciduous Trees in Buffer	Deep Rooted Native Grasses & Shrubs on Banks	Wetlands Plants Matched to Tidal Hydrology & Salinity / Sills, Stone Surface Groins, Marsh Toe Revetments, Marshy Islands, etc. Matched to Wave Climate & Shoreline Environment	Submerged Aquatic Vegetation Artificial Oyster Reefs

REQUEST MORE INFORMATION

❏ I would like to know if my shoreline is suitable for a *Living Shoreline* project.

❏ I would like to know about assistance available to explore a Living Shoreline project on my property.

❏ I am interested in speaking with someone about specific living shorelines questions or other resources (publications, mapping tools, etc.)

Comments: _____
_____
_____
_____
_____
_____

Name: _____

Address: _____
_____

Telephone: _____

Email: _____

Typical Project Costs
Per Linear Foot

Low Energy	**$150 - $250**
Medium Energy	
Minor Tributary	$250 - $400
Major Tributary	$450 - $600
High Energy	**$750 - $1,500**