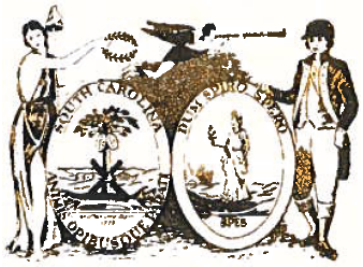
State of South Carolina

Governor Henry McMaster



Thomas S. Mullikin, Chairman

South Carolina Floodwater Commission

LIVING SHORELINE TASK FORCE

BACKGROUND

Living shorelines are nature-based approaches for shoreline protection. These stabilization techniques not only protect shorelines and infrastructure, they also conserve, create or restore natural shoreline habitats and ecosystem services. Living shoreline projects can be installed on tidal shorelines as well as freshwater ponds and lakes wherever erosion is a problem. Many shorelines are highly suitable for living shoreline practices depending on the location, land and water uses, erosion and flood risk, and other factors.

Living shoreline management practices protect and enhance natural shoreline habitat and coastal processes through the strategic placement of plants, stone, sand fill, and other structural and organic materials.

Both beautiful and practical, living shorelines add attractive, low-maintenance green space and focal points for people to gather. Their services to the environment (which also benefit people) include purifying water, buffering floods, reducing erosion, storing carbon, and attracting wildlife to habitat.

Evidence shows that during major storms, a living, natural shoreline performs better than a hardened shoreline. Installation and maintenance tend to be more cost efficient per linear foot annually than hard shoreline structures.

Typical Living Shoreline Treatments:

Vegetation Only – Provides a buffer to upland areas and breaks small waves. Suitable only for low wave energy environments.

Edging – Added structure holds the toe of existing or vegetated slope in place.

Sills – Parallel to existing or vegetated shoreline, reduces wave energy and prevents erosion. Suitable for most areas except high wave energy environments.

Breakwater – Offshore structures intended to break waves, reducing the force of wave action, and encourage sediment accretion. Suitable for most areas.

OBJECTIVES

Erosion Reduction
Impact Absorption
Improve Marine Habitat and Spawning Areas
Provide Attractive Natural Appearance
Improve Water Quality
Filter Storm water Runoff and Groundwater
Maintain Coastal Processes

DELIVERABLES

- Site analysis: Determine whether living shoreline stabilization is appropriate in a particular area. This analysis includes an evaluation of the bank erosion rate and elevation, wave energy, prevailing wind and wave direction, vegetation, and soil type. Design of restoration activity begins after the site analysis.

- Permit approval and legal compliance.

- Site preparation: The site is cleared of debris and unstable trees, and failing seawalls and bulkheads can be removed. Any runoff issues should also be identified and addressed prior to material installation.

- Installation: Typical living shoreline treatments include planting riparian, marsh, and submerged aquatic vegetation; installing organic materials such as bio-logs and organic fiber mats; and constructing oyster reefs or “living breakwaters” that dissipate wave energy before it reaches the shore.

- Post-construction monitoring and maintenance: This includes scientific monitoring of restored habitat to gather information on the success of the project. Maintenance activities include debris removal, replanting vegetation, adding additional sand fill, and ensuring that the organic and structural materials remain in place and continue to stabilize the shoreline.

TIME FRAME

2Q ’19 Recruitment of community volunteers to provide an informed review of living shoreline strategy and development

2Q ’19 Development of network systems and communication strategies throughout the state of South Carolina

3Q ’19 Completed analysis and assessment of shoreline zones suitable to sustain such viable remedy.

4Q ’19 State-wide living shoreline maintenance complete with recommendations for improvement.