City Council Meeting

July 30, 2025

DRAFT ORDINANCE 25-014

DISCUSSION OF PROPOSED AMENDMENTS TO THE *SANIBEL CODE*

LIVING SHORELINE STABILIZATION PROJECTS

REVISIONS

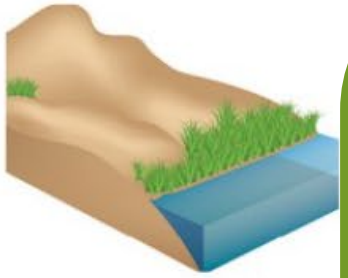
- Updated the title to Living Shoreline Stabilization Projects
- Modified existing Sanibel Code Sec. 126-99
  - Add language clarifying requirements
  - Remove redundant and no longer applicable language
  - Add example designs

REVISIONS

- **Updated the title to Living Shoreline Stabilization Projects**
- Modified existing Sanibel Code Sec. 126-99
  - Add language clarifying requirements
  - Remove redundant and no longer applicable language
  - Add example designs

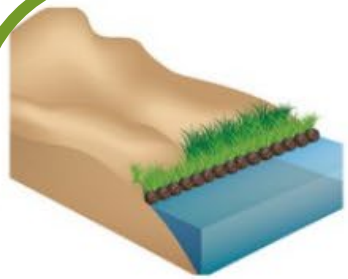
Living Shorelines

Coastal Structures



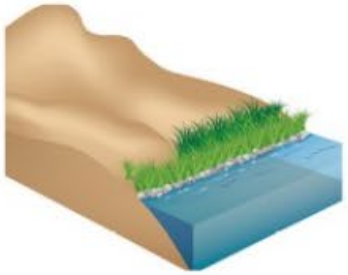
VEGETATION ONLY

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



EDGING

Added structure holds the toe of existing or vegetated slope in place. Suitable for most areas except high wave energy environments



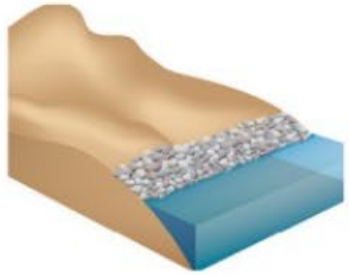
SILLS

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

BREAKWATER

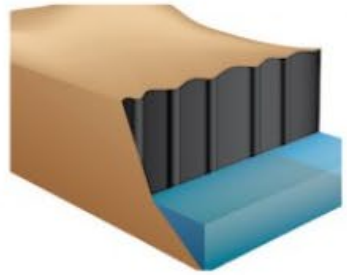
Parallel to vegetated shoreline, reduces wave energy, and prevents erosion. Suitable for most areas except high wave energy environments

Sec. 126-99. Living Shoreline Stabilization Project



REVETMENT

Lays over the slope of the shoreline and protects it from erosion and waves. Suitable for sites with existing hardened shoreline structures



BULKHEAD

Vertical wall parallel to the shoreline intended to hold soil in place. Suitable for high energy settings and sites with existing hard shoreline structures

Softer Techniques → Harder Techniques






Native vegetation is the primary component of a living shoreline stabilization project. The inclusion of rip-rap rock or other grey infrastructure must be designed in a manner that does not resist or redirect wave action or impede sediment accumulation.

REVISIONS

- Updated the title to Living Shoreline Stabilization Projects
- **Modified existing Sanibel Code Sec. 126-99**
  - Add language clarifying requirements
  - Remove redundant and no longer applicable language
  - Add example designs

REVISIONS

- Updated the title to Living Shoreline Stabilization Projects
- **Modified existing Sanibel Code Sec. 126-99**
  - **Add language clarifying requirements**
  - Remove redundant and no longer applicable language
  - Add example designs

Sec. 126-99 (2)

The application for conditional use approval under this section shall be prepared by a professional engineer registered in the state having experience in coastal engineering~~,~~ and with assistance from ~~an Ecological Society of America certified~~ a professional ecologist or State of Florida licensed landscape architect with knowledge of southwest Florida coastal systems, and shall include:

Sec. 126-99 (2)(c)

An assessment of the potential for harm to existing structures, both public and private, including roads, both on and off the subject parcel, if the proposed project is not installed and if the project is installed;

Sec. 126-99 (2)(d)

Evidence of active, ongoing, and/or progressive shoreline erosion is present on the subject lot which is not caused by runoff from the uplands~~. Within the bay beach zone the evidence of erosion must be documented to be other than~~ and is not due to the typical seasonal fluctuations in shoreline profile; and

Sec. 126-99 (7)(a)

Along natural bodies of water, ~~The slope of~~ the natural ~~beach~~ shoreline profile shall be maintained or restored to the extent feasible (if previously altered ~~by human made structures~~), but in no case shall the slope be steeper than three feet horizontal to one foot vertical. Within the bay beach zone, the preferred slope shall be no steeper than ten feet horizontal to one foot vertical. Along human-made bodies of water, the bank may be altered to include terraces or a graded slope no steeper than two feet horizontal to one foot vertical; a more gentle slope shall be required if indicated by site specific conditions.

Sec. 126-99 (7)(c)

Limerock rip-rap, ~~clean cement rip-rap, and/or~~ clean cement grids or pipes, reef balls, oyster bags, natural fiber rolls or mats, or similar material may be integrated into the design in a size and manner where they will not be dislodged, resist or redirect wave action, or impede sediment accumulation provided only the minimum necessary size and quantity is incorporated to create planting areas and stabilize the shoreline through encouraging natural sediment accretion. Refer to Figure A - Example Designs.

Sec. 126-99 (7)(e)

Native plants suitable for shoreline stabilization, provision of wildlife habitat, and water quality enhancement or protection, ~~and enhancement of on-site environmental conditions~~ shall be planted ~~within the project in sufficient density with minimum~~ three-foot on center~~s~~ in areas where no native vegetation exists~~, to create a natural appearing shoreline at maturity~~. A planting plan shall be incorporated into the design drawings.

Sec. 126-99 (11)

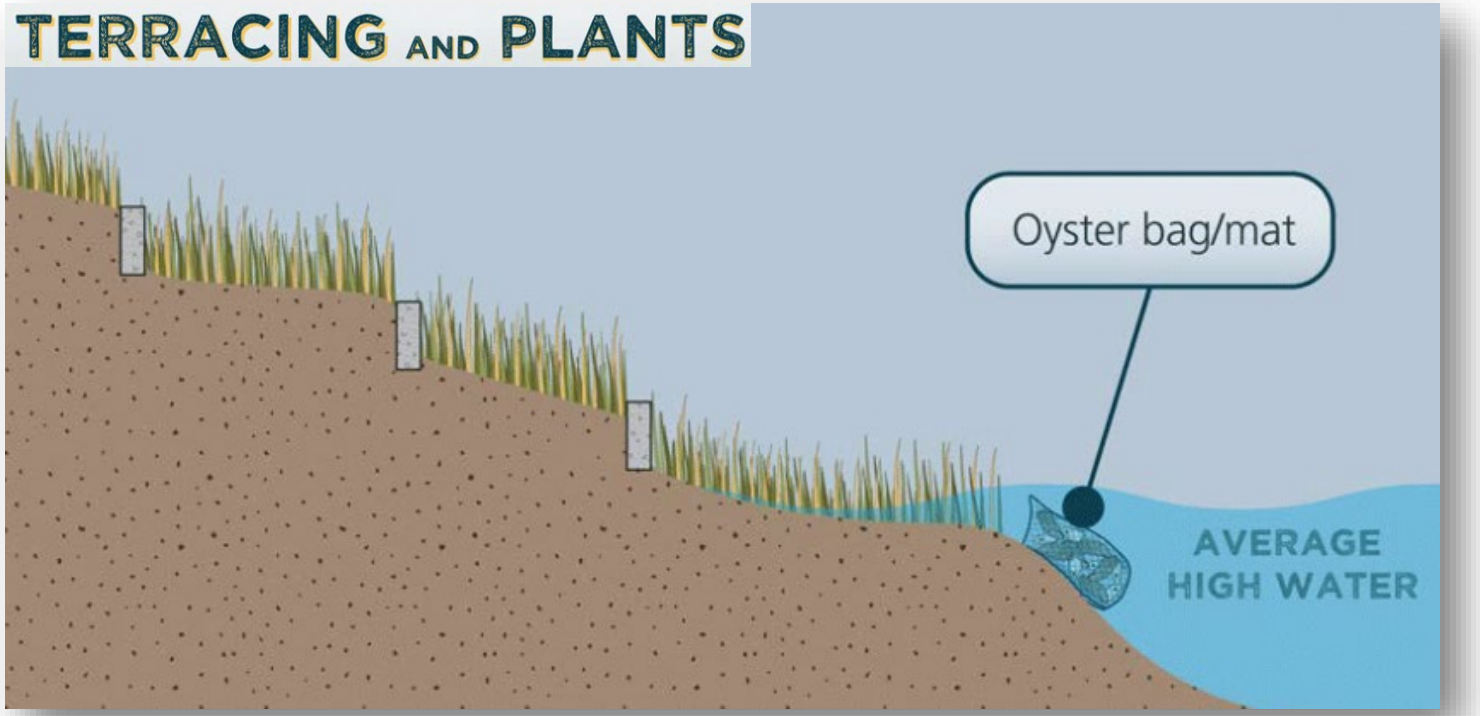
Revisions to previously permitted erosion control structures, revetments, or living shoreline stabilization projects due to changes in site conditions from storm events, king tides, or other sea level rise impacts may be applied for through a short-form development permit using the standards of this section.

REVISIONS

- Updated the title to Living Shoreline Stabilization Projects
- **Modified existing Sanibel Code Sec. 126-99**
  - Add language clarifying requirements
  - **Remove redundant and no longer applicable language**
  - Add example designs

Sec. 126-99 (2)(b)

~~A technical report examining alternatives to the proposed project, including, but not limited to, doing nothing, public or private (e.g., Sanibel Captiva Conservation Foundation) acquisition, beach renourishment where more than 200 lineal feet of structure are proposed, relocation or removal of existing structures, and transfer of development rights;~~



Sec. 126-99 (5)

Projects approved under this section shall be the minimum necessary to accomplish the intended purpose ~~as determined by the planning commission~~.

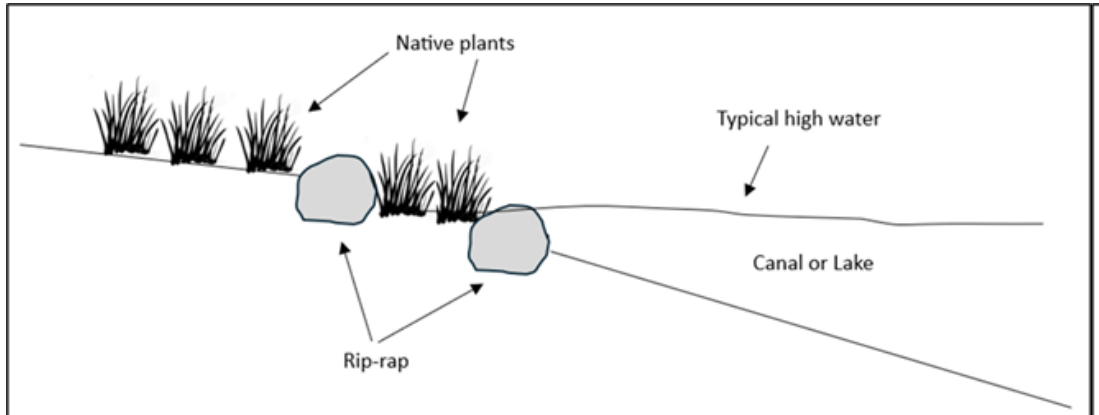
Sec. 126-99 (8)

The ~~planning commission shall place conditions on the~~ timing and sequence of construction to protect existing habitats or nesting, feeding or reproductive areas shall be based upon recommendations from the city's natural resources department.

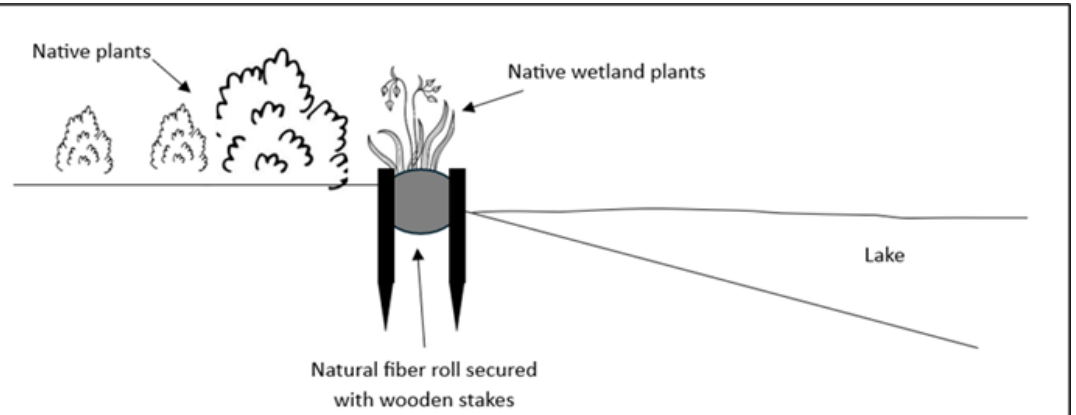
REVISIONS

- Updated the title to Living Shoreline Stabilization Projects
- **Modified existing Sanibel Code Sec. 126-99**
  - Add language clarifying requirements
  - Remove redundant and no longer applicable language
  - **Add example designs**

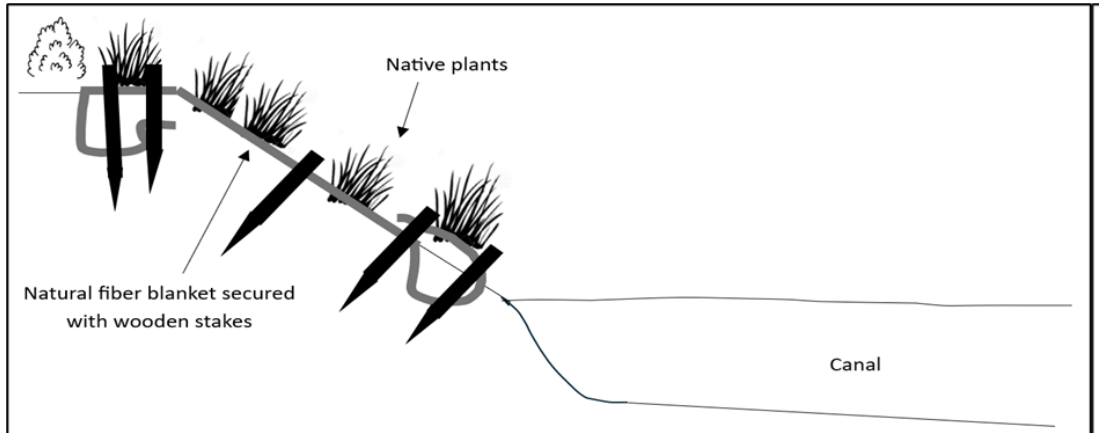
Figure A – Example Designs



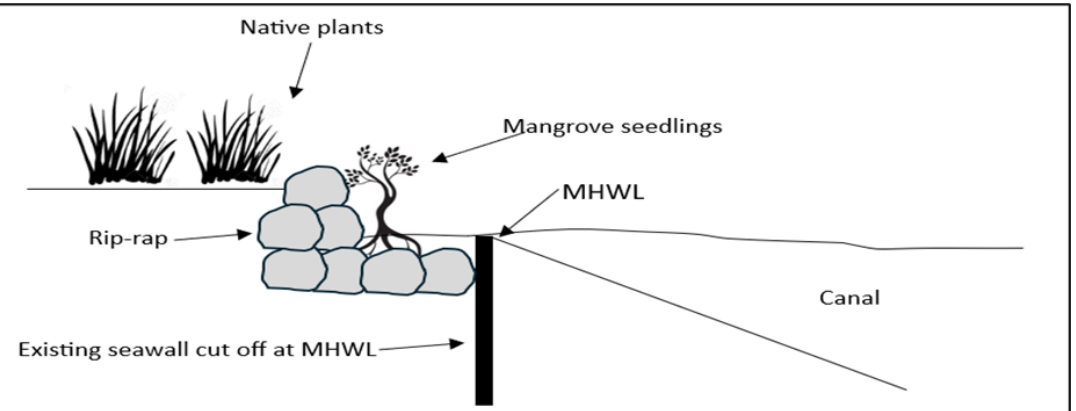
A-1. Tiered rip-rap with planting terrace



A-2. Natural fiber roll with native planting

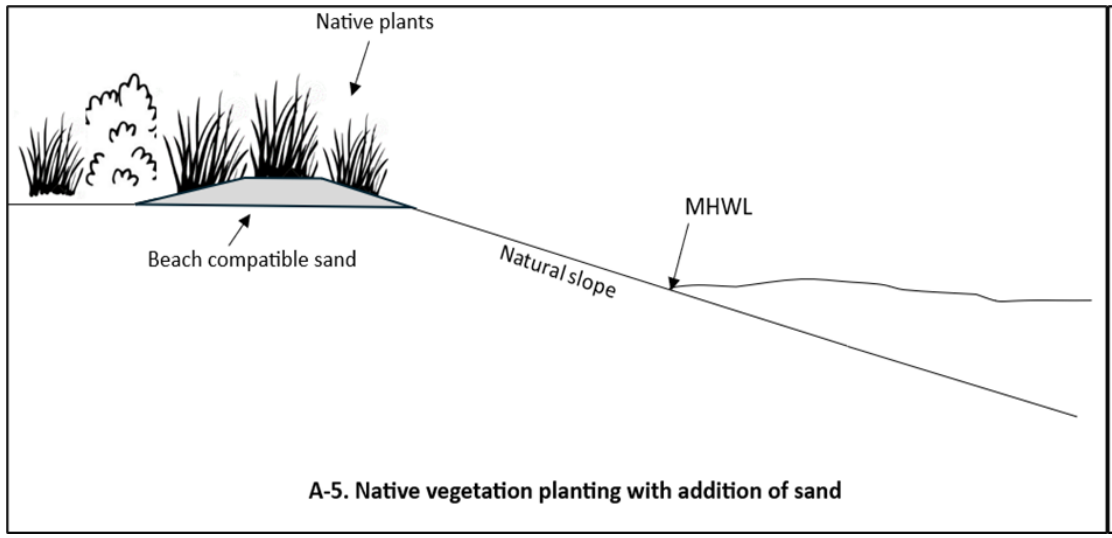


A-3. Native fiber blanket with native planting

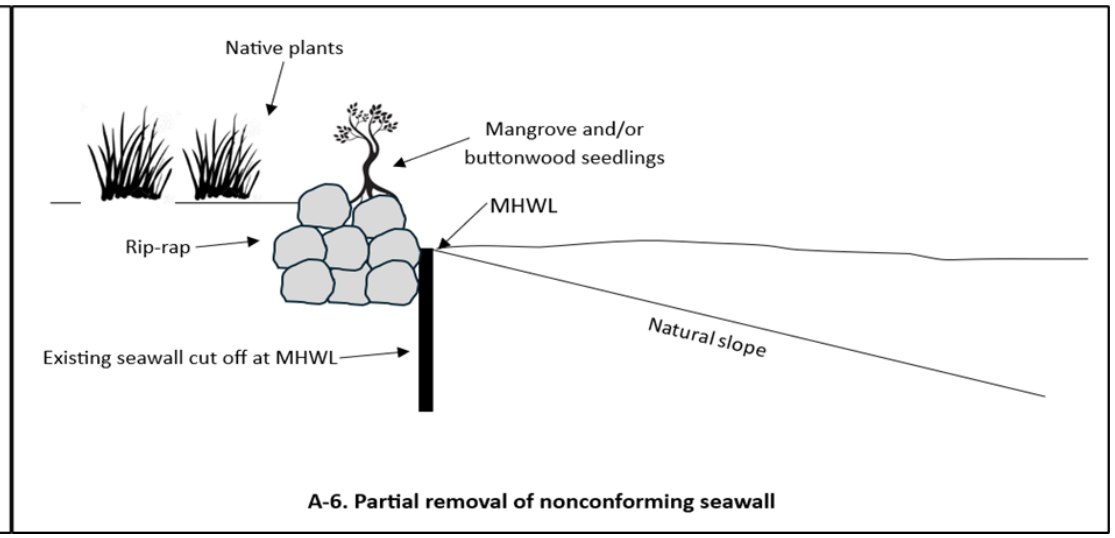


A-4. Partial removal of seawall

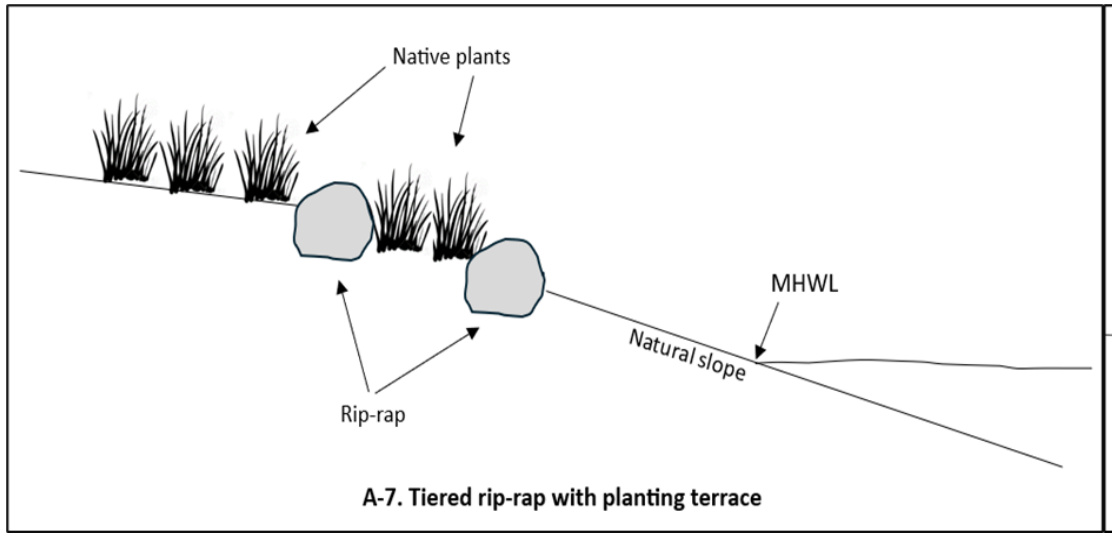
Figure A – Example Designs



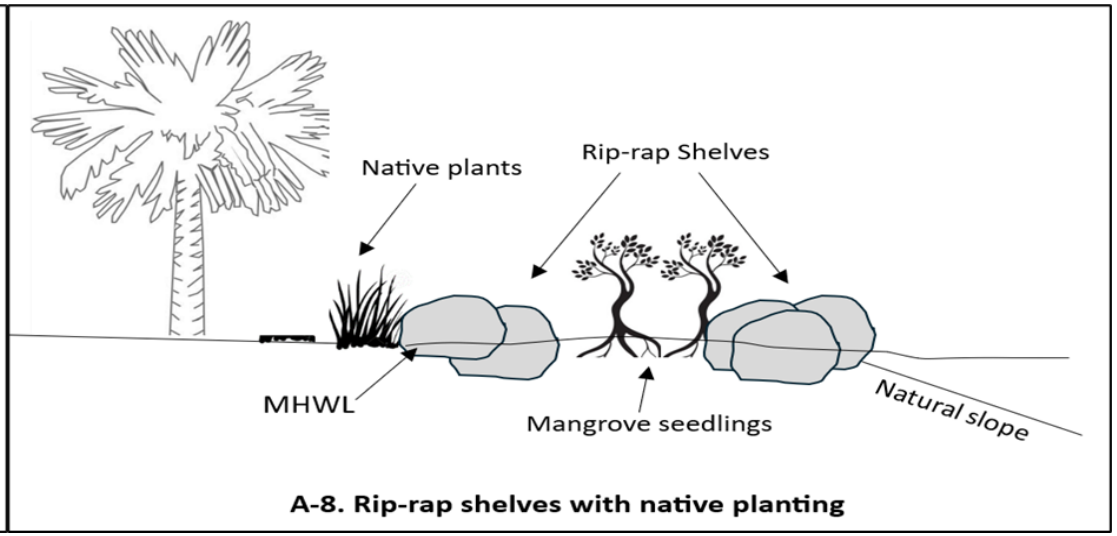
A-5. Native vegetation planting with addition of sand



A-6. Partial removal of nonconforming seawall



A-7. Tiered rip-rap with planting terrace



A-8. Rip-rap shelves with native planting

OBJECTIVES

- Improve resiliency with living shoreline stabilization projects
- Ensure appropriate design for the specific site conditions
- Allow adaptive management of permitted projects to provide long-term resiliency under changing site conditions


LIVING SHORELINES SUPPORT RESILIENT COMMUNITIES
Living shorelines use plants or other natural elements—sometimes in combination with harder shoreline structures—to stabilize estuarine coasts, bays, and tributaries.
One square mile of salt marsh stores the carbon equivalent of 76,000 gal of gas annually.
Marshes trap sediments from tidal waters, allowing them to grow in elevation as sea level rises.
Living shorelines improve water quality, provide fisheries habitat, increase biodiversity, and promote recreation.
Marshes and oyster reefs act as natural barriers to waves. 15 ft of marsh can absorb 50% of incoming wave energy.
Living shorelines are more resilient against storms than bulkheads.
33% of shorelines in the U.S. will be hardened by 2100, decreasing fisheries habitat and biodiversity.
Hard shoreline structures like bulkheads prevent natural marsh migration and may create seaward erosion.
The National Centers for Coastal Ocean Science | coastalscience.noaa.gov
Some graphics courtesy of the Integration and Application Network, University of Maryland Center for Environmental Science (ian.umces.edu/symbols/)

Questions?