Florida’s Living Shorelines
Training for Marine Contractors

Fara Ilami
Florida Fish and Wildlife Conservation Commission
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Outline
• Background
• Need for the project
• Partners
• Goals and objectives
• Progress
• Course outline
• Samples of course materials
• Future plans
Need for the project

- Storms, sea level rise, and erosion
- Failing seawalls
- Property owners requesting living shorelines
Need for the project

- Lack of contractors with living shorelines expertise—based on contractor needs assessment
- No contractor-specific training yet available for Florida
- State agencies and partners willing to develop training
Project Goal and Objectives

• Overall goal: Increase the number of marine contractors who can assess dynamic eroding shorelines and provide solutions featuring living shorelines where feasible.

• Objectives:
  • Create interactive, 2-day training course
  • Deliver course in high-need areas
  • Offer certification and/or CEU incentive
  • Develop mentorship program
Progress

- Needs assessment conducted
- Working group assembled
- Course outline completed
- Resources compiled
- Delivery materials completed
- Instructor list compiled
- Licensed to offer 6 hours of CEUs
- Previewed course at FMCA Expo
- Target cities determined
- Practice run completed
- Contractors invited
Course Outcomes: Contractors will be able to...

- Communicate to homeowners about the benefits and relative costs of shoreline stabilization options.
- Confidently perform a site assessment, evaluate design options, and navigate the permitting process.
- Implement a living shoreline with vegetation and/or breakwater materials.
- Evaluate and maintain living shoreline project success.
# Course Outline

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Samples of course materials

Energy

Top view of typical oyster reef layout

16x4x2.5 ft ~ 250 bags

High Marsh
Upland plants can be spaced out to make them look aesthetically pleasing and give them room to grow.

Mid Marsh
Plant succulents close to the waters edge every 3 ft. Plant grasses, shrubs, and other plants every 3 ft.

Low Marsh
Plant grasses and mangroves every 3 ft. The grasses will grow together and the shrubs need room.

Only plant submerged aquatic vegetation below the tidal line.
Samples of course materials

Breakwater & Planting Stipulations

A breakwater may be used if permanent wave attenuation is necessary to maintain the shoreline vegetation and:

- The wave-ravel line must extend more than 0.5 times the mean high water line or ordinary high water line with a top height of no more than the mean or ordinary high water elevation.

- Must be composed predominantly of natural system shell (no muddy bottom having an organic content of more than 6% by weight) and include stable, non-degradable material.

- Must not be placed within 1 feet of one another or grass marsh vegetation.

- Must have gaps at least 6 feet wide located at least 5 feet along the breakwater so as to allow the flow of water and passage of fish and aquatic wildlife. There must be at least one gap.

- More Green, More Green - Should Your Shoreline be Solution B?

Living shorelines use plants or other natural elements—often 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.

Living shorelines:

- Improve water quality, provide fisheries habitat, increase biodiversity, and promote recreation.
- Marshes trap sediments from tidal waters, allowing them to grow in elevation as sea level rises.
- Marshes and oyster reefs act as natural barriers to waves. 13 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 $1B, decreasing fisheries habitat and biodiversity.

Hard shoreline structures like bulkheads prevent natural marsh migration and create seaward erosion.
Future plans

• Pilot course in Tampa Bay area (Oct 2019)
• Secure funding for coordinator/instructor & materials
• Develop state certification procedure
• Deliver course in target cities throughout Florida
• Implement mentoring program for course graduates
• Provide list of trained contractors to property owners
Questions?

For additional information, contact:

Fara Ilami
FL Fish and Wildlife Conservation Commission
Fara.Ilami@MyFWC.com
386-754-1668