A photograph of a living shoreline in Tampa Bay. The foreground is dominated by a dense patch of green plants with long, narrow leaves and small purple flowers, growing along a rocky shoreline. The rocks are dark and jagged, extending into the water on the left. The water is calm and blue. In the background, more greenery and a path are visible.

# Living Shoreline- Tampa Bay

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**Florida Fish & Wildlife Research Institute**

# A Gulf of Mexico Alliance (GOMA) Project

- Initiative identified by the GOMA Habitat Priority Issue Team
- Living Shoreline Suitability Model (LSSM) was developed by Virginia Institute of Marine Science (VIMS) for use in Chesapeake Bay.
- Tampa Bay selected as focus area due to recent Environmental Sensitivity Index (ESI) mapping.

Shorelines are Coded According to Their Sensitivity to Oiling  
From 1 to 10, with 10 Being Most Sensitive

-  **1 EXPOSED VERTICAL ROCKY SHORES  
EXPOSED SEAWALLS**
-  **2 EXPOSED ROCKY PLATFORMS**
-  **3 FINE-GRAINED SAND BEACHES**
-  **4 COARSE-GRAINED SAND BEACHES**
-  **5 MIXED SAND AND GRAVEL (SHELL) BEACHES/FILL**
-  **6 GRAVEL BEACHES/RIPRAP**
-  **7 EXPOSED TIDAL FLATS**
-  **8 SHELTERED ROCKY SHORES/SEAWALLS/  
VEGETATED BANKS, SOLID MAN-MADE STRUCTURES**
-  **9 SHELTERED TIDAL FLATS**
-  **10A EXPOSED MARSHES AND/OR MANGROVES**
-  **10E SHELTERED MARSHES AND/OR MANGROVES**

# A Gulf of Mexico Alliance (GOMA) Project

- **The Tampa Bay LSSM results are being shared with stakeholders including state and non-profit entities; as well as homeowner associations and private businesses on the Bay.**
- **NOAA RESTORE Council has funded a larger effort for 4 estuaries in the Gulf following this example.**
- **A Decision Support Tool is being developed by VIMS as part of the RESTORE project and will suggest specific shoreline solutions for specific targeted areas**

# VIM DST Prototype

## Interactive Shoreline Management Model Application

Is the bank eroding?

- Yes  
 No

Submit



Is the riparian land use forested?

- Yes  
 No

Submit



What is the bank height?

- 0 - 60 feet  
 greater than 60 feet

Submit



Is there a permanent structure that limits bank grading?

- Yes  
 No

Submit



Are both marsh and beach present?

- Marsh and Beach present  
 No

Submit



### How to Use

#### What This Is:

The Interactive Shoreline Management Model Application is based on the Shoreline Management Model(SMM) (provide more info) presents the user with questions pertaining the conditions of the shoreline.

#### How To Use It:

Questions appear one at a time in the left panel. An unanswered question has a red background. An answered question has a white background. It might be necessary to scroll to see next question.

Click the question mark button to display helpful information pertaining to the question. Information will appear in the right panel.

Choose your answer then click the SUBMIT button.

Recommendations will appear in the bottom panel. Recommendations for the upland bank are displayed on the left side of the bottom panel, while shoreline recommendations are displayed on the right side. To see more of the recommendation, use the scroll bar on the right, or grab the splitter handle between the middle and bottom containers and pull up or down.

Modifying a previously answered question might result in other questions being reset.

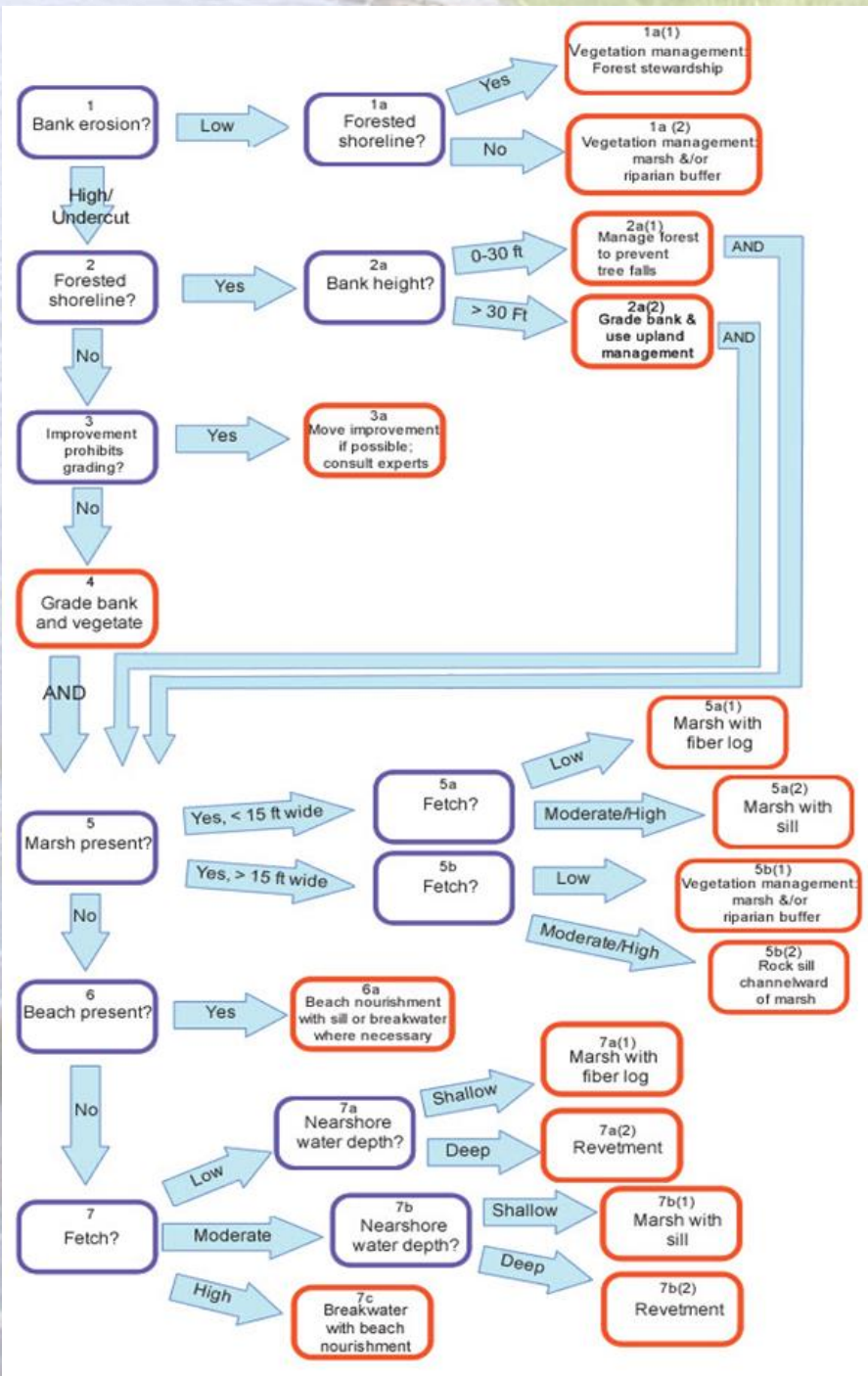
To close this help window, click on the symbol in the upper left corner of this panel.

**Land Use Management:** Where bank and/or shoreline approaches are extremely difficult to implement or limited in effectiveness due to existing land use conditions; reduce risk by modifying the upland land use. This may include relocating or elevating buildings, utilities, and other infrastructure and/or managing stormwater. All new construction should be located 100 feet or more from the top of bank. Actions may also include requesting zoning variances for relief from setback and other land use requirements or restrictions that may increase erosion risk.



A photograph of a rocky shoreline. On the left, a body of water is visible. A line of large, greyish-brown rocks runs along the water's edge. In the foreground and middle ground, there is a dense patch of green plants with long, narrow leaves and several tall, thin stems topped with clusters of small purple flowers. The background shows more greenery and a slightly hazy sky.

# Demonstration of Model



- VIMS published v4 of the Shoreline Management Model (SMM) Preferred Shoreline Best Management Practices on Nov. 28, 2016.
- Model based upon a decision tree which ingests shoreline classification attributes defined by the user.

- RiparianLU
- Marsh\_all
- Bathymetry
- Bnk\_height
- Canal
- Exposure
- Sandspit
- Defended
- Forstshl
- WideBeach
- PermStruc
- Roads
- Beach
- Structure
- Offshorest
- Tribs

- Results provide a suggested Best Management Practice for Upland land use planning and Shoreline protection