

shoreline erosion

WHAT ARE MY OPTIONS?

BALTIMORE COUNTY & CITY

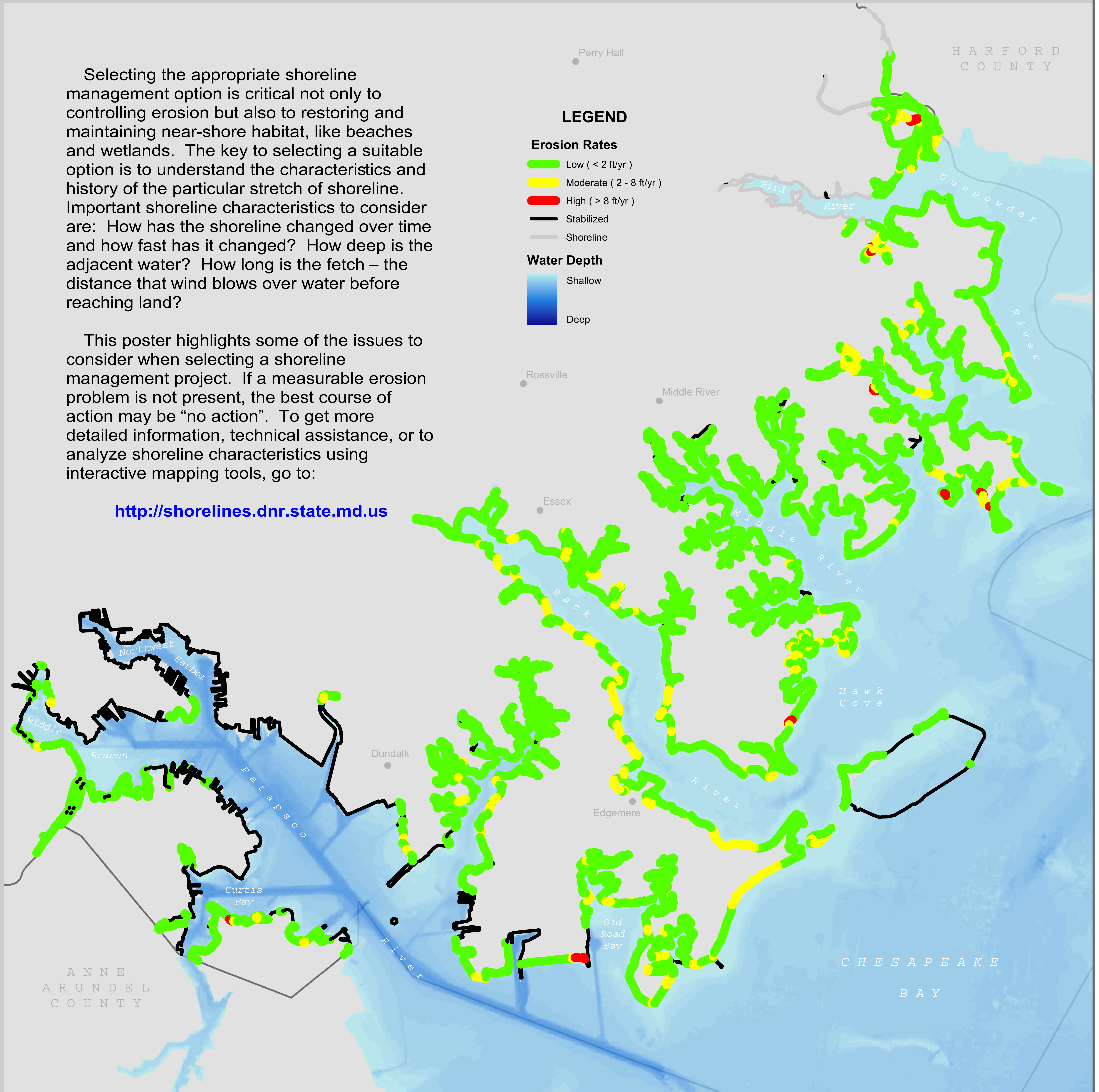
Selecting the appropriate shoreline management option is critical not only to controlling erosion but also to restoring erosion but also to restoring and maintaining near-shore habitat, like beaches and wetlands. The key to selecting a suitable option is to understand the characteristics and history of the particular stretch of shoreline. Important shoreline characteristics to consider are: How has the shoreline changed over time and how fast has it changed? How deep is the adjacent water? How long is the fetch – the distance that wind blows over water before reaching land?

This poster highlights some of the issues to consider when selecting a shoreline management project. If a measurable erosion problem is not present, the best course of action may be “no action”. To get more detailed information, technical assistance, or to analyze shoreline characteristics using interactive mapping tools, go to:

<http://shorelines.dnr.state.md.us>

LEGEND

- Erosion Rates**
- Low (< 2 ft/yr)
 - Moderate (2 - 8 ft/yr)
 - High (> 8 ft/yr)
- Water Depth**
- Shallow
 - Deep



low erosion
best option

NON-STRUCTURAL EROSION CONTROL utilizes bioengineering to create protective vegetative buffers that provide near-shore habitat for aquatic species and waterfowl.



- | | |
|---|-------------------------------|
| Site Characteristics | Examples |
| Location: Creeks and coves | • Marsh creation |
| Water depth: Less than 1 foot | • Beach replenishment |
| Fetch: 0.5 miles | • Marsh creation with Biologs |
| Erosion rate: Less than 2 feet per year | |

moderate erosion
best option

HYBRID EROSION CONTROL integrates traditional stone armoring and bioengineering to provide more protection than non-structural options. Hybrid options also provide habitat and water quality benefits.



- | | |
|---|--|
| Site Characteristics | Examples |
| Location: Minor rivers to major tributaries | • Marsh creation with stone groins |
| Water depth: 1-4 feet | • Marsh creation with segmented sills |
| Fetch: 1-2 miles | • Marsh creation with breakwaters |
| Erosion rate: 2-8 feet per year | • Beach replenishment with breakwaters |

high erosion
best option

STRUCTURAL EROSION CONTROL employs traditional methods of shoreline stabilization, usually barrier-type structures, that “harden” the shoreline.



- | | |
|---|------------------------|
| Site Characteristics | Examples |
| Location: Main stem of bay | • Bulkheads |
| Water depth: 4-15 feet | • Revetments |
| Fetch: More than 2 miles | • Stone reinforcements |
| Erosion rate: More than 8 feet per year | • Groins and jetties |