



Natural & Nature-Based Features

Living Shorelines: Marsh Sills



Description

Hybrid living shorelines combine organic features with structures to support wide tidal marshes and beaches. Marsh sills combine natural and planted tidal marshes with low-elevation stone structures called sills that hold in sand fill and intercept wave energy to support tidal marshes. Marsh sills are suitable where existing marshes have eroding edges, or where minor upland bank erosion is present despite marsh vegetation. Research has shown that hybrid living shorelines and the habitats they support provide cleaner water, economic gains, and cultural traditions as ecosystem service benefits.

Multiple Benefits

- * Increase tidal habitat diversity
- * Dissipate energy of incoming waves
- * Flood storage
- * Nitrogen, phosphorus & sediment capture
- * Seafood production
- * Carbon storage

Marsh Sill Restoration Tips

- * Locate normal & extreme tide elevations on land, present & future scenarios
- * Make sure construction & future maintenance access is feasible
- * Choose wetland plants based on local salinity average
- * Plant low & high marsh, expect plant changes over time
- * Reserve adjacent land upslope for future tidal marsh location
- * Perform periodic inspections and maintenance, like removing trash
- * Add thin-layer fill over time to maintain marsh elevations

Resources

[Marsh Sills](#) & [Marsh Toe Revetments](#)

[VIMS Living Shoreline Design Guidelines 2017](#)



Water Quality BMPs

Urban or Ag Shoreline Management

Urban or Ag Shoreline Erosion Control:
Vegetated

Urban or Ag Shoreline Erosion Control:
Non-Vegetated



Community Rating System

Credit Potential

Marsh Sills in Special Flood Hazard Areas

Marsh sills will not receive credit in the CRS Program.

Vegetated tidal marsh areas landward of the sills can potentially earn **Open Space Preservation related** credit.

[Learn More www.vims.edu/ccrm/nbnf](http://www.vims.edu/ccrm/nbnf)

