

## Did you know: there are alternatives to bulkheads that can protect your waterfront property?



Oyster Bay soft-shore/restoration project. Fifty feet of wooden bulkhead were removed, and a log and plants were installed for soft-shore protection.

On many beaches hard bulkheads are not necessary and can be removed completely. However, when protection is needed, bulkheads can often be replaced by alternatives that are functional, attractive and better for the environment.

These alternative, soft-shore methods are designed to protect your waterfront property, and carefully consider your site's specific conditions. Many factors affect the most appropriate design technique for your site like:

- · Geology and soil types
- · Wave energy and coastal dynamics
- Upland drainage

One size doesn't fit all! The simpler design, the better!

You'll find below a description of various soft-shore design techniques, and their benefits.

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Soft-shore method	Example	Benefit	Cost
Vegetation		Holds soils together, stabilizes slopes, filters and absorbs rainwater	Low
Log Placement		Provides natural erosion protection for uplands, traps and builds up sand, improves habitat	Medium
Beach Nourishment		Slows beach erosion, provides protection from wind and waves, provides space for recreation	Low
Reslope and revegetation		Stabilizes bluffs and banks, (plantings) protect slope from erosion	Variable



To learn more about your marine waterfront and bulkhead alternatives click here!

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