

ReadyReef Inc. Shoreline Products and Installs

- Oyster Reefs as Sills, replacing riprap, for shoreline erosion control
- Classic Living Shorelines: 10/1 slopes (5.6°), sand backfill, marsh grass plants
- Steeper shoreline slope treatments, currently not addressed in SB 776, or elsewhere in VIMS, USACE work in VA, VCAP or in any BMP distributed in the state:
 - Flexamat (3:1 or 18° slope with marsh grass vegetation in mid to high wave energy)
 - Envirolok Bags (80° with vegetation in low wave energy)
 - TenCate Geo-Tube (breakwaters in high energy environments)
- Combinations of treatments....eligible for VCAP grants (except Tidewater SWCD)

Flexamat Job

Before



After



Envirolok and Flexamat Job

Before



After



Envirolok and Flexamat Job

Before



After



Combination Envirolok, Flexamat Job, Living Shoreline, Reefs
Before After



Combination Reef, Living Shoreline and Flexamat Job

Before



After



Replacement of decaying creosote bulkhead with Living Shoreline in medium energy environment

Before



After



Policy issues

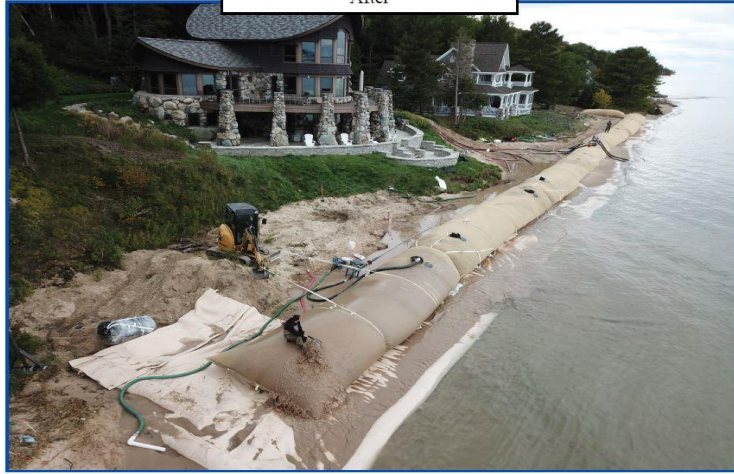
- SB 776 still not implemented: Guidelines not issued
 - Still having 2/3rds of permits for riprap revetment and bulkheads (Aug-20)
- Appears to rely on Wetlands Boards to implement
 - Current Wetland Process not conducive to change. Approval moment too late in the process and based on too little information of alternative approaches that comply with SB 776
 - ReadyReef is able to comply with SB 776. Why not all Wetland Boards and others?
- No path to new BMPs for new products in place that can be determined. In contrast, VDOT has “Roadside Development Subcommittee of New Products” under Maintenance Dept that issues review and acceptance reports for new products.
 - Flexamat is VDOT approved in 2016 for shoreline erosion control
 - <http://www.virginiadot.org/business/bu-materials-new-products.asp>

TenCate Geotubes

TENCATE
Geotube

Typical Shoreline Without Sand Dune
Geotube®
Shoreline Erosion Project
After

TENCATE
materials that make a difference



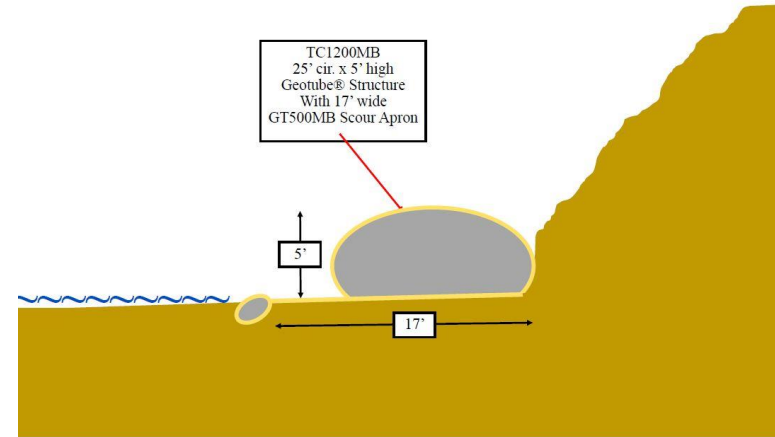
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TENCATE
Geotube

Typical Design
Geotube® Toe of Bluff
Shoreline Protection

TENCATE
materials that make a difference



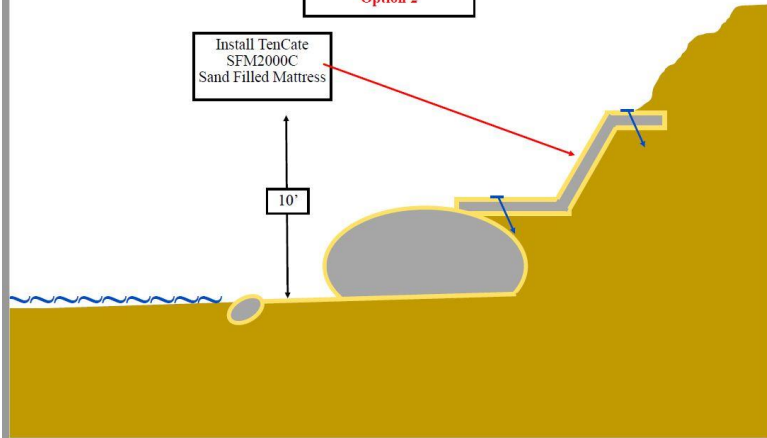
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TENCATE
Geotube

Typical Design
Geotube® Toe of Bluff
Shoreline Protection
Above Geotube® Layer
Option 2

TENCATE
materials that make a difference



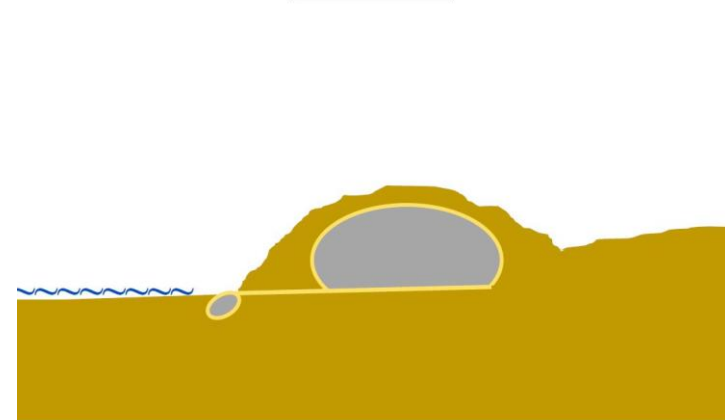
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TENCATE
Geotube

Typical Geotube® Design
For
Sand Dune Core

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