



SHORELINE MANAGEMENT IN THE CHESAPEAKE BAY



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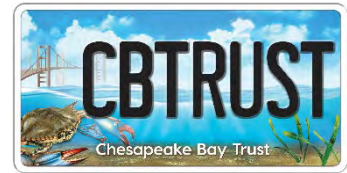
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LIVING SHORELINE TECHNOLOGY TRANSFER WORKSHOP
OCTOBER 8 AND 9, 2019

Chesapeake Bay Trust

award maker, barrier buster, capacity builder, and more!



The **MISSION** of the Chesapeake Bay Trust is to promote public awareness and public participation in the protection and restoration of the Chesapeake Bay and its rivers and streams.

Our **GOAL** is to increase stewardship through grant programs, special initiatives, and partnerships that support environmental education, demonstration-based restoration, and community engagement activities.

More online at <https://cbtrust.org/>



Where the Money Comes From:

Maryland's Treasure the Chesapeake license plate



Individual and private donations



Chesapeake Bay Fund Tax Check-off



Federal, state and corporate partnerships



Where the Money Goes:



Education

Ensuring that students are environmentally literate through K-12 curriculum development, field experiences, and green school development.

Restoration

Advancing the science and implementation of restoration best management practices that reduce pollution and improve habitat.

Community Outreach

Engaging citizens and communities to improve the health of local waterways through community clean-ups, tree plantings, and other stewardship practices and projects.



Shoreline Management Panel Charge

- Panel charge: Review science and develop protocols to estimate the nutrient and sediment load reductions
- 14 panelists met over ~ 1 year to:
 - Review literature
 - Define the practice, geographic boundary, and qualifying conditions for “credit”
 - Evaluate existing “credit”
 - Recommend reporting, tracking, and verification procedures
 - Analyze unintended consequences

Shoreline Management Defined

- A continuum of shoreline management practices that is based on the amount of hard shore armor structure used.



Shoreline Management Panel Report

- Developed load reductions for prevented sediment, denitrification, sedimentation, redfield ratio and default value
- Qualifying conditions
- Credits conservative based on science available
- Sediment reduction credit tied to tidal erosion rate and can be quite high
- Credits limited to 5 years; need re-inspection
- Panel report update every 2 years
- Minority dissenting view for prevented sediment – coarse sand is good for SAV and habitat

Shoreline Management

Table 1. Summary of shoreline management pollutant load reduction for individual projects.

| Protocol | Submitted Unit | Total Nitrogen (lbs per unit) | Total Phosphorus (lbs per unit) | Total Suspended Sediment (lbs per unit) |
|--|------------------------|-------------------------------|---------------------------------|---|
| Protocol 1 - Prevented Sediment | Linear Feet | Project-Specific* | Project-Specific* | Project-Specific |
| Protocol 2 – Denitrification | Acres of re-vegetation | 85 | NA | NA |
| Protocol 3 - Sedimentation | Acres of re-vegetation | NA | 5.289 | 6,959 |
| Protocol 4 – Marsh Redfield Ratio | Acres of re-vegetation | 6.83 | 0.3 | NA |
| Non-conforming/Existing Practices * | Linear Feet | MD = 0.04756 VA = 0.01218 | MD = 0.03362 VA = 0.00861 | MD = 164 VA = 42 |

Report is online at:

https://www.chesapeakebay.net/documents/LONG_SHORELINE_MGMT_EPR_05152018.pdf

Source of this link is here: https://www.chesapeakebay.net/who/group/bmp_expert_panels

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Future Work in Maryland



- Maryland agreed to do living shorelines first
 - HB973 – Living Shoreline Protection Act of 2008
- Four barriers:
 - Landowner willingness
 - Contractor knowledge
 - Federal and state regulatory debates
 - Decision criteria debates
- Solutions:
 - Living Shoreline Committee just formed to address barriers to living shoreline implementation

Pooled Monitoring Initiative – Science to answer key restoration questions



- Pool resources to answer restoration questions
- Increase power, objectiveness, and ability to know what works
- Bring science back to those that can use it
- Restoration Research award program
 - Pooling resources to research “big” questions
 - Supported 25 projects at \$4.1M since FY 15
 - <https://cbtrust.org/grants/restoration-research/>





Chesapeake Bay Trust is helping meet the Bay's restoration goals through awards that fund citizen engagement and restoration efforts

Visit cbtrust.org for more information.

We look forward to learning together at this conference

