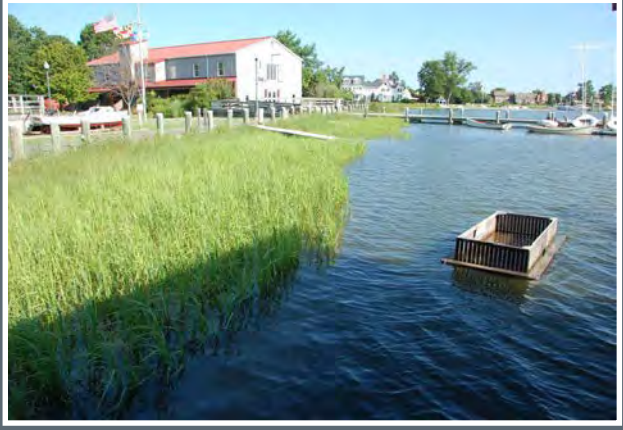
SHORELINE MANAGEMENT IN THE CHESAPEAKE BAY – OPEN TO OTHER IDEAS FOR HARD SUBSTRATE



Sadie Drescher, Director of Restoration Programs
Chesapeake Bay Trust
sdrescher@cbtrust.org, 410-974-2941 xt 105

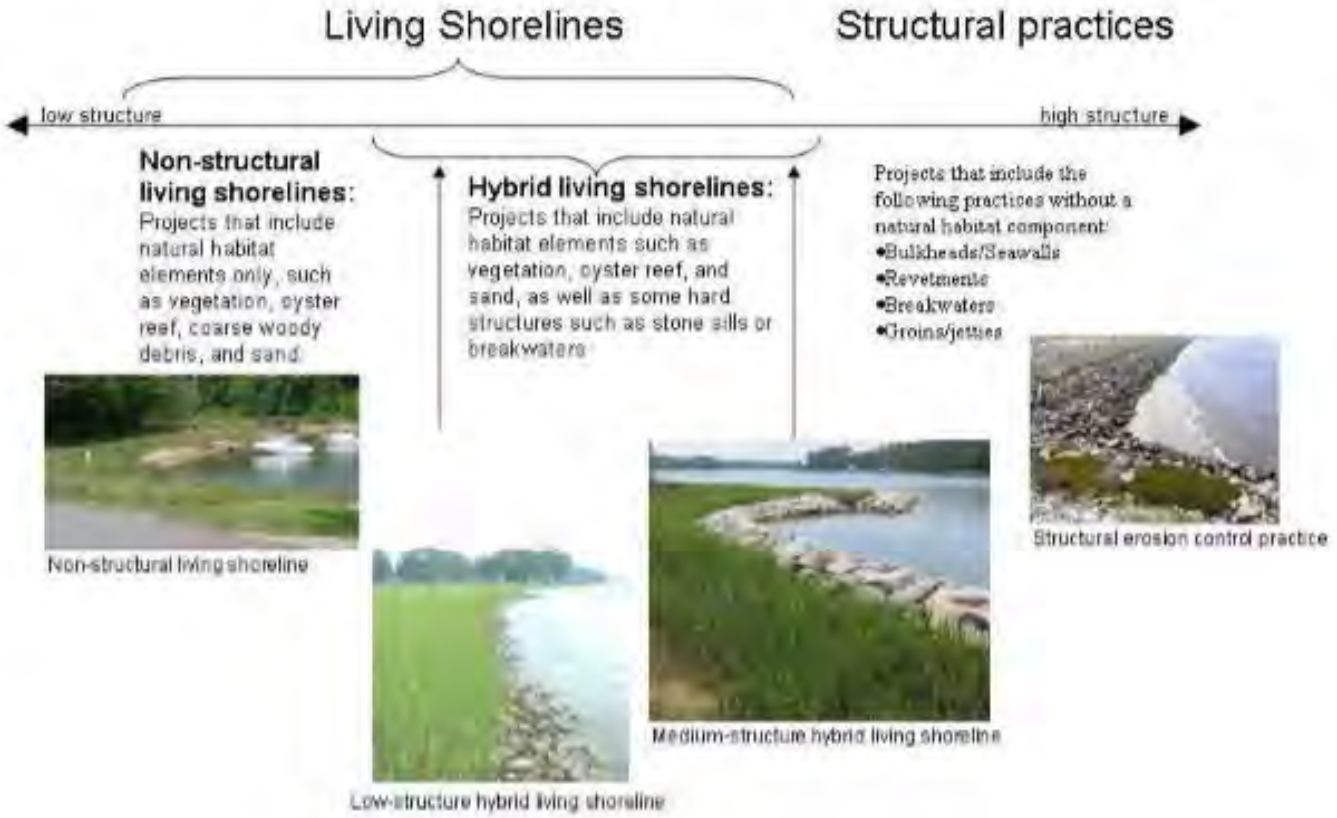
Chesapeake Bay Trust
108 SEVERN AVENUE
ANNAPOLIS, MD 21403

LIVING SHORELINE TECHNOLOGY TRANSFER WORKSHOP

OCTOBER 8 AND 9, 2019

Living Shorelines defined as "Shoreline Management"

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



Shoreline Management has TN, TP, and TSS load reduction credits in the Chesapeake Bay

- Shoreline Management expert panel developed load reductions for prevented sediment, denitrification, sedimentation, redfield ratio, and default values
- Sediment reduction credit tied to tidal erosion rate and can be quite high
- Minority dissenting view for prevented sediment – coarse sand is good for SAV and habitat
- Qualifying conditions to attain “credits”
- Credits conservative based on science available
- Credits limited to 5 years; need re-inspection
- Panel report should update every 2 years – <u>but has not been done yet</u>

Shoreline Management

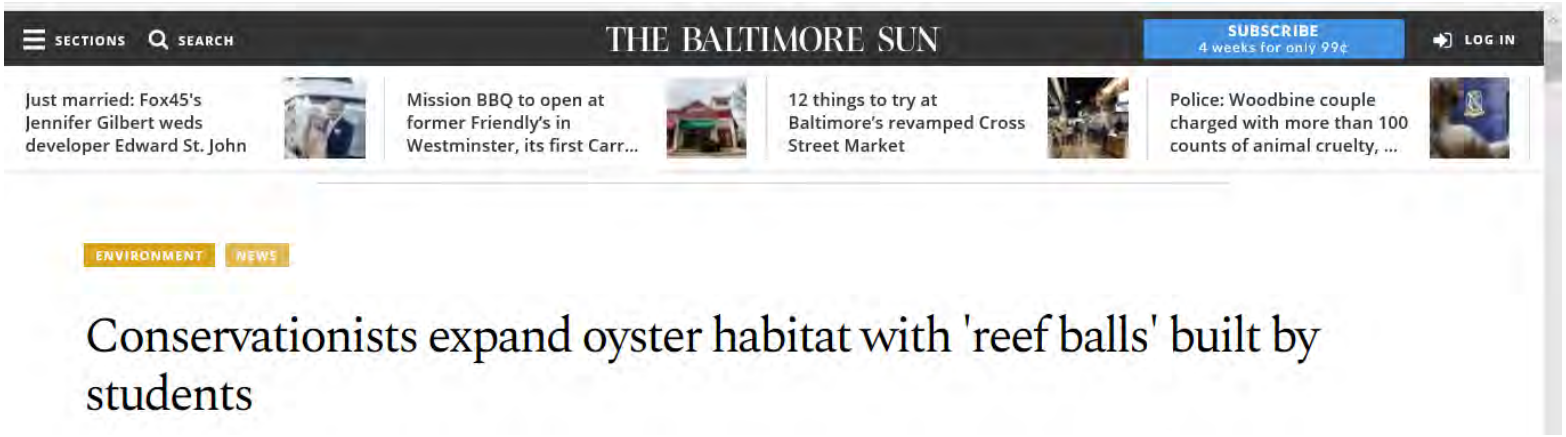
Table 1. Summary of shoreline management pollutant load reduction for individual projects.

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

Oysters in Shoreline Practices – slim to none in Maryland

- MD DNR reports 3 practices with oysters
- Maryland is “oyster poor”
- Perception or real obstacles to get a permit for living shorelines with oysters
- Oyster laden “reef balls” are an emerging idea/technology

One example of “reef balls”



The project united the anglers with environmentalists, business sponsors and students for a common objective: cleaning the Chesapeake for the sake of its ecology and for its economic power.

Oysters growing on concrete balls

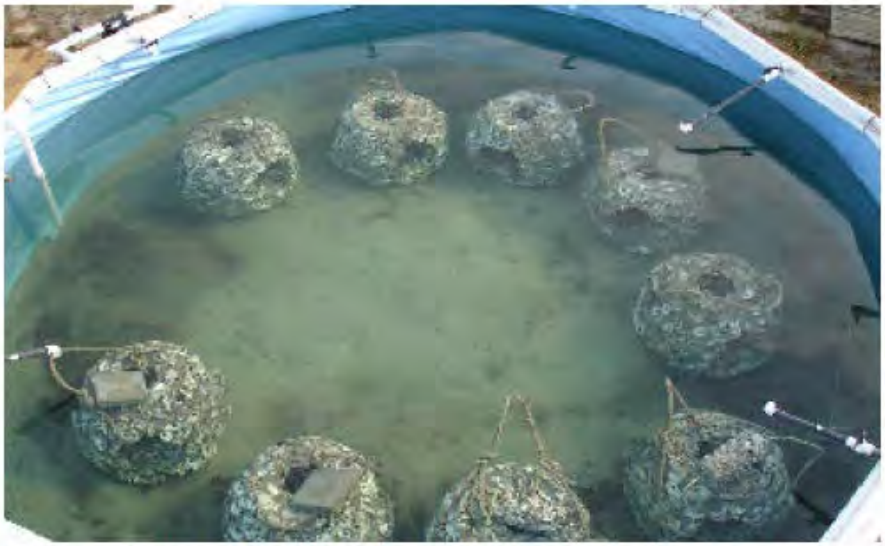
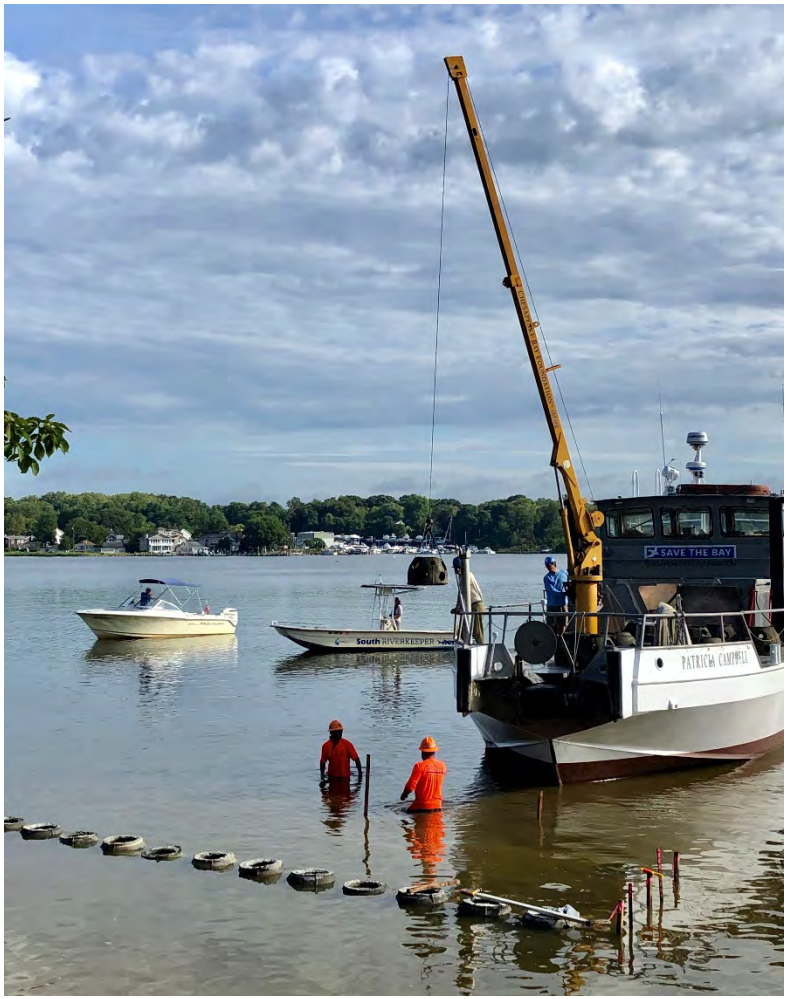
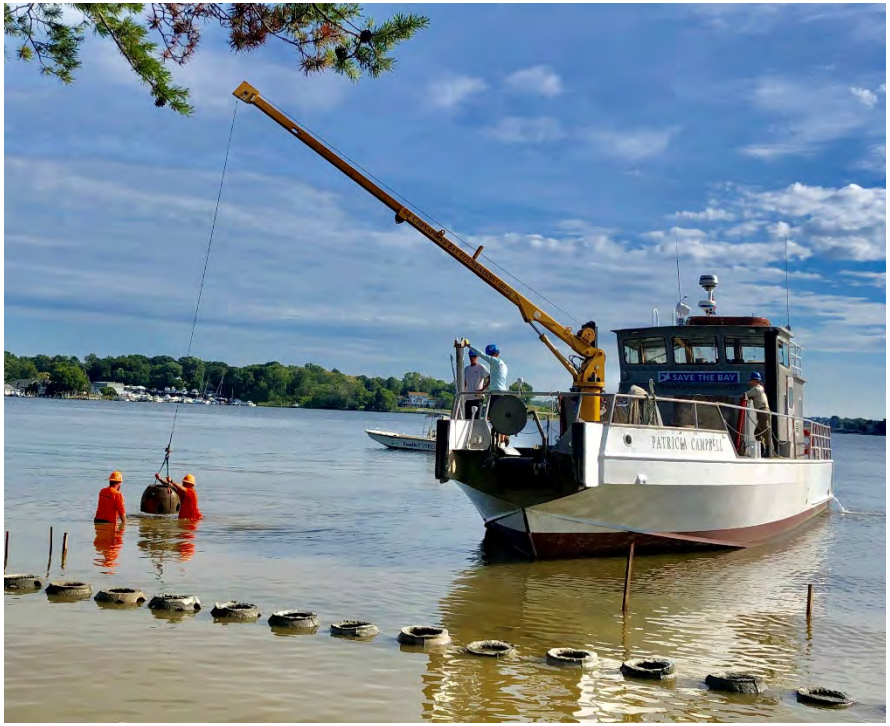


Figure 0 Bay Balls with embedded shell at oyster hatchery. Photo: *Sea Search of Virginia*.

Placing Oyster “Reef Balls” on the Shoreline





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/

Where the Money Comes From:

Maryland's Treasure the Chesapeake license plate

Federal, state and corporate partnerships

Chesapeake Conservation Corps

Upgrade your plate only $20 Maryland

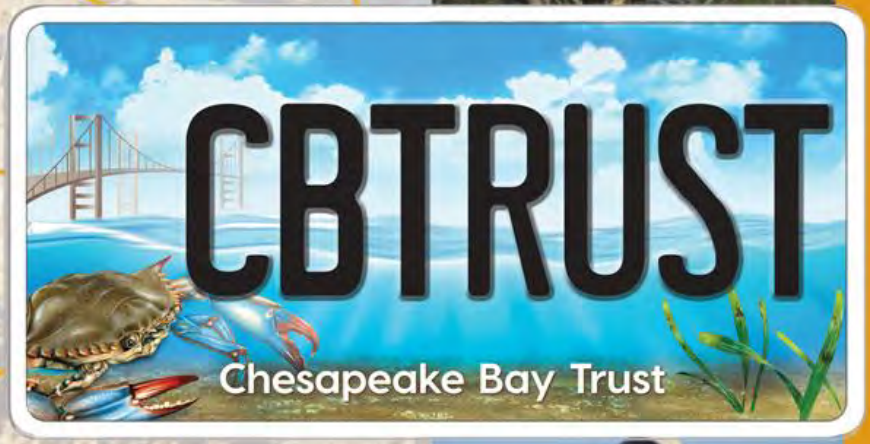
Individual and private donations

Chesapeake Bay Trust — Protect the Chesapeake

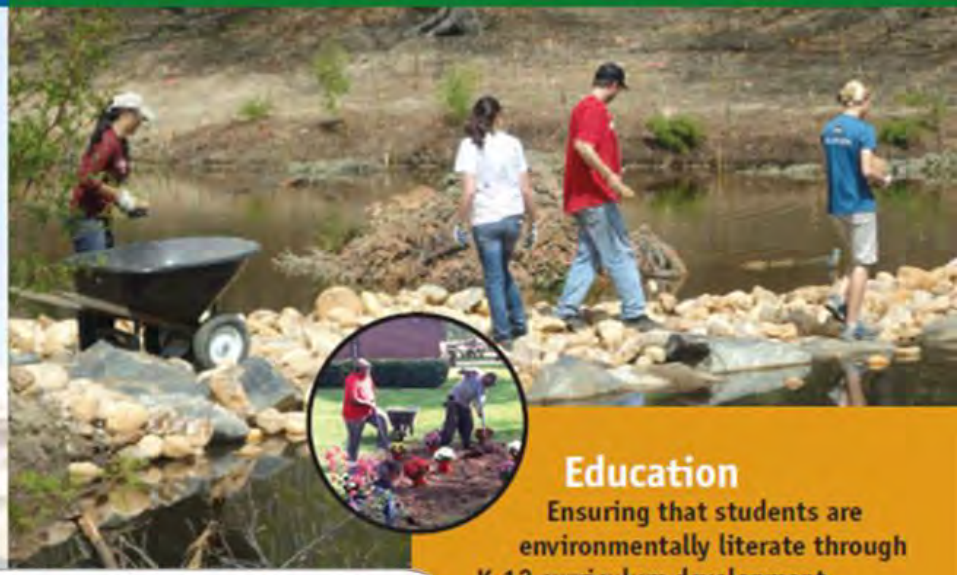
Chesapeake Bay Fund Tax Check-off

Donate to the Bay Fund on your State Tax Form

Chesapeake Bay Trust — CPAs for a Healthy Bay



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.

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