Living Shorelines & Habitat Restoration
Living Shorelines are About … “Process”
Yantz Cove - 1994

Yantz Cove - 2007

Littoral Drift
“Water Quality”
And

“HABITAT”
Habitat = Natural Components

On Land

Or

In the Water
And At the Land – Water Interface

Living shorelines are an attempt to *restore*, *enhance* and *protect* living resources while providing SOME degree of erosion control.
Typical Armoring Applications

- Revetment (Rip-Rap)
- Sills
- Bulkheads/Seawalls
Some of the Best Shorelines are Those That Provide for a Diversity of Habitat
Offshore Considerations
Chesapeake & Coastal Watershed Service

**Biological habitat and food availability**
The surrounding biota (riparian forests, marshes, submerged aquatic vegetation beds, oyster reefs) provide refuge and food sources.

**Water quality**
Sediment and nutrient loads have a strong relationship with dissolved oxygen and phytoplankton (food) levels. Issues of concern also include toxicants and harmful algal blooms.

**Substrate (structure)**
Depending on the species, a specific substrate may be preferred for spawning or finding food (e.g., muddy bottom indicates filter feeders). Rocky or reef habitats may provide additional refuge or protection from predators.

Life history/species preferences*
Depending on the life stage of a species, its environmental preferences may vary greatly. The pairing of these biological, physical, and chemical preferences with knowledge about available habitat will foster greater understanding of population dynamics.

Symbols courtesy of the Integration and Application Network (www.ian.umces.edu/symbols/), University of Maryland Center for Environmental Science.
Oyster Bottom Survey Completed in the Early 1900’s

Chester River Area

Oyster Reef in Virginia
Submerged Oyster Reef

Eastern Bay
Offshore Structures Colonized By:

Mussels, Clams, Oysters, Barnacles…
REEF BALLS
Reef Ball Placement in the Choptank River

Toad Fish Peering out of Reef Ball
Vegetation
Woody Debris
This is Great Rock Work.

But is it Great Habitat?
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