

The Building Conservation Trust

The national marine habitat program of
Coastal Conservation Association



CCA's National Habitat Program



New CCA Maryland Habitat Committee

- Formed in February 2016
- Providing a forum to develop project ideas & encourage chapter participation in habitat projects
- Fundraising with BCT to support state habitat projects
- Raising awareness within recreational anglers on the need for habitat restoration and the issues surrounding oysters
- Focusing on building BCT partnerships. ex: CBF, MARI, Lehigh, Cemex
- Provide Opportunities for CCA Chapters to Connect with Communities

www.CCAMDHABITAT.com



Habitat Creates Positive Exposure

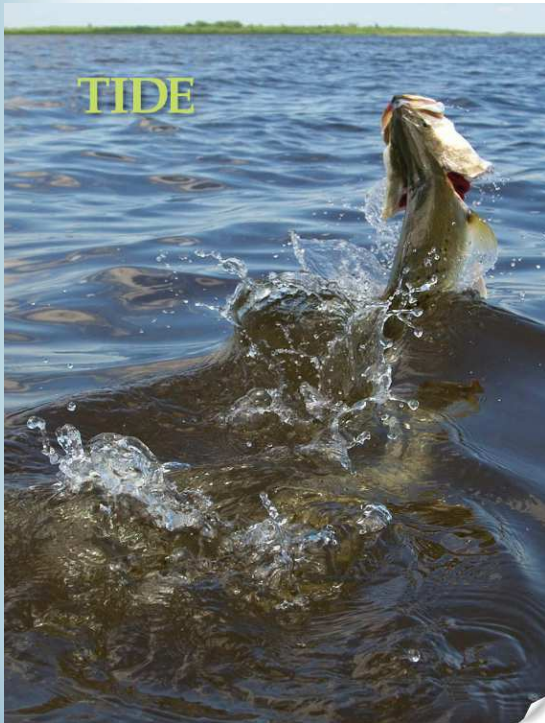
Appeals to More Than Just Fisherman!

- Creates a Green Image for Partnering Members by Playing a Role in Improving Chesapeake Ecosystem
- Creates Press Coverage Opportunities
- Builds Relationships through Community Events
- Community Outreach taking place in Schools



Bringing Maryland Into National Spotlight

TIDE is the award-winning National magazine of Coastal Conservation Association



CCA Maryland and BCT partner on COMMUNITY REEF BALL Deployment in the Chesapeake.

FEET WET AND HANDS DIRTY

CCA Maryland's innovative Living Reef Action Campaign lets kids get a hands-on experience restoring Chesapeake Bay oysters.

A DEVASTATING. BOUT with disease in the late 1980s combined with decades of over-harvesting, habitat destruction and water pollution have left Maryland's Chesapeake Bay oysters greatly threatened. Out of a concern for these issues, the Living Reef Action Campaign was created by CCA Maryland with the goal of increasing awareness of the need to restore oyster populations and their reef habitat.

"This is a wonderful project that exemplifies our five key objectives," said Sean Stone, executive director of the Building Conservation Trust, Coastal Conservation Association's national habitat program. "It will restore degraded habitat, create new habitat, advance the science of habitat restoration and conservation, foster habitat stewardship and educate coastal communities on the value of conservation."

One facet of the Living Reef Action Campaign focuses on rebuilding the Chesapeake's oyster populations by encouraging hundreds of school-age students to get their feet wet and hands dirty actually building the concrete reef structures that form the foundation of restoration efforts. Through restoration-based STEM educational programs, school kids across Maryland are learning how to make concrete reef balls — each weighing between 250-300 pounds — on which baby oysters can latch onto and form a new living reef.

"Enlightening the help of students to create these structures and learn more about the importance of the bay and artificial reefing is a huge part of what makes this project so multifaceted and important," said Rick Elyar, CCA Maryland Habitat Committee Chairman. "The process has proven to be a unique and impactful way to connect the community to the Chesapeake."

July 28, 2016 was an exciting day for CCA Maryland and BCT, as 72 student-made reef balls seeded with oyster spat were deployed into the Chesapeake. Enthusiastic volunteers and local news camera crews were in attendance to take part in the action, located near Tilghman Island.

Once the project reaches completion, more than 200 reef balls and nearly 200,000 oyster shells will have been placed in the Chesapeake. By the end of 2017, it is estimated that 3 million oysters will have been generated in the Bay as a result of the initiatives of the Living Reef Action Campaign. Numerous scientific studies have shown that oyster reefs are critical components within the Chesapeake's ecosystem, as they provide water filtering and cleaning, which help control nuisance algae blooms and excess nitrogen runoff from agricultural communities. The implementation of the reef balls will result in a structure that is similar to that of a coral reef, attracting a whole slew of new marine life.

"A large variety of marine organisms with different purposes will be drawn to the reef," said Elyar. "Not only will this enhance oyster populations and recreational angling over those structures, it will unleash a positive chain reaction of growth and variety onto the Chesapeake's habitat and ecosystem."

Thanks to the unique partnership forged by BCT, CCA Maryland, Chesapeake Bay Foundation, Carroll County Public Schools, Stevenson University and Lehigh Cement, the Living Reef Action Campaign is an ongoing program that will continue to engage the kids of today to build a better future for the Chesapeake Bay. 🐚



Building Lasting Relationships!



Recognized Lehigh Cement's Commitment to Habitat Providing Cement to Schools in support of Living Reef Action Campaign

The Carroll County Public School Administration and Building Conservation Trust recently recognized Lehigh's commitment to Oyster Reef Restoration by presenting a student built Monument displaying the very first Reef Ball built in March 2015. The base holding the reef ball contained oyster shells that had been recycled from within the community.



The Chesapeake Initiative

By helping CCA Maryland's Habitat Committee build new funding opportunities, you are helping **BCT** tackle marine conservation and restoration projects here in our Chesapeake Bay! By networking us into new partnerships for Habitat work, you will be supporting BCT's **Chesapeake Initiative** where those new relationships and funds achieve lasting results right here in Maryland.

But we need your help!



CCA Expands Living Reef Action Campaign

New Habitat Trailer Promoting Stewardship



Living Reef Action Campaign Update

Tangier Island Site Update

- Stevenson University & Kent Island Scuba Dive on Sight 10.12.16
Collected Video & Pictures for Creating an Awareness Promotion Video to be in participating schools across the state.
- Data collected is being applied to Stevenson's 3 year Study comparing the effect of Spat Seeded Reef Balls on water clarity and habitat development
- CCA continues to build reef balls at public and private schools across the state.
- Want the habitat trailer to come to a school near you? Contact us today!

To Date: 72 Reef Balls Deployed 7/28/16, All Seeded with Oysters
218 Reef Balls in Inventory as of 11.27.16
Touched nearly 1000 Students Since Beginning
Restored more than 4 Million Oysters to the Bay!

(Recycled Oyster Shell & Seeded Reef Balls)



Tilghman Reef Ball Growth

- **Successful Oyster Growth, Crabs & Fish already utilizing Habitat**

Stevenson estimated average Spat Set/Reef Ball on 7.28.16 to be:

Top Layer 18 Balls: 2032 Size Range: 4.65 – 7.70mm

Bottom Layer 18 Balls: 1168

Approximately 115,200 Oysters Planted at Deployment



Tilghman Reef - Spat Growth

Oysters Estimated to Average 13.5mm in size after 75 days

Averaged 6.175mm at deployment



 Click Picture for
Dive Video



What's Next



Tangier Sound Reef 324 Tons of Reef Material

37° 55.25' N, 75° 56.58' W



CCA's National Habitat Program



Donated Pipe & Hauling



Rinker Materials, a division of CEMEX Corp in Frederick, Maryland, has agreed to donate defective pipe including truck transportation to Baltimore/Curtis Bay harbor beginning in December 2016

- Pipe is new manufactured pipe that was damaged, un-sellable
- Pipe comes in 8 Ft. Lengths
- Larger diameter pipes will have small diameters seated inside to create more habitat



Bill of Material

December 2016 Planned Deployment

MARI & BCT anticipate Awarding a Deployment Contract to Smith Brothers Marine in Early December 2016

Project Valued at: \$95k (*deployment ,material cost and trucking*)

(98) lengths of piping available, each 8 ft long
Total weight: 646,900 lbs (323.5 Tons)



Engel Cooler Promotional Campaign

Engel Cooler will be running a national social media give away centered around the Tangier Sound Reef Project promoting the work MARI, Building Conservation Trust, Cemex and Engel Coolers are doing to create more Chesapeake Habitat. *More Details Coming Soon!*



2017 Upcoming Projects



2017 Tilghman Reef Deployment

Chesapeake Bay Foundation Oyster Restoration Team

2nd Living Reef Action Campaign Deployment at Tangier Island Site

- Late Spring 2017
- Deploying 144 Reef Balls all Seeded with Oyster Spat
- More than 230,000 oysters will be restored



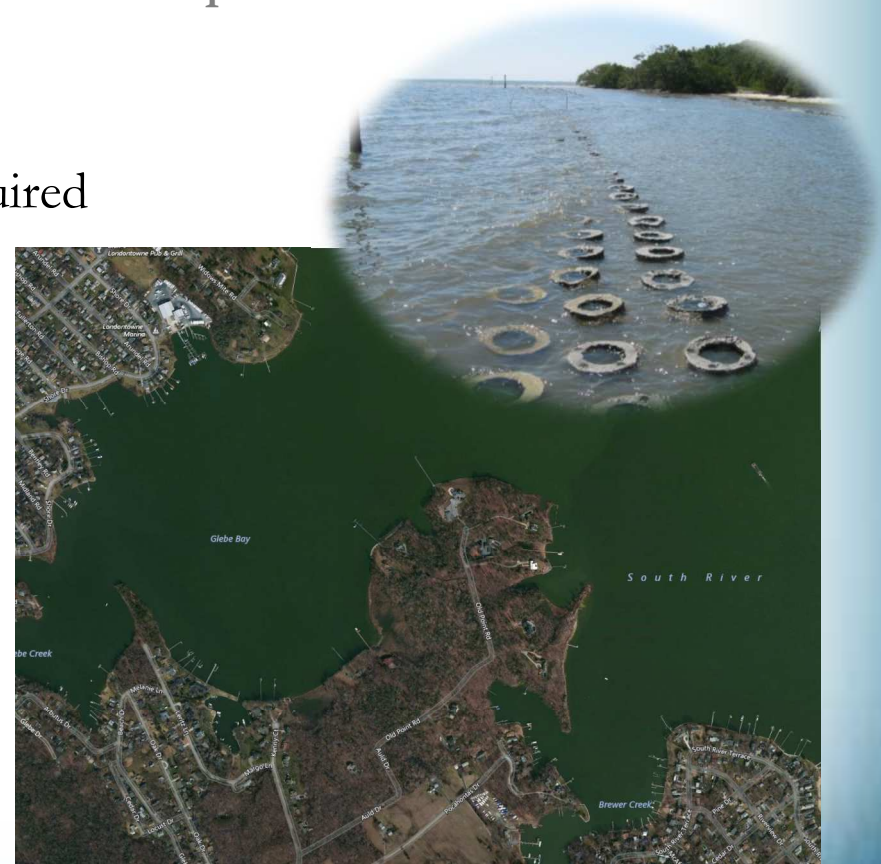
2017 Turnbull Point Living Shoreline

BCT & South River Federation Proposed Partnership

Phase: Scope Development & Planning

- 700 LF of Shoreline Protection Required
- 2-3 Rows of ~175 Reef Balls/Row
- Exploring design plans of planting native grasses inside Reef Balls
- Engaging 3 Private Schools
- Forecast 4Q2017 Project Start
- Positioning for Grant Partnership
BCT & South River Federation

Preliminary Construction Cost
Estimate - \$125K



The Chesapeake Initiative

How Can You Help?

Share Corporate & NGO Relationships to Create Funding Connections

Corporate Team Building Reef Ball Construction

Engaging More Schools

Get Involved by Volunteering to Help With Reef Balls

Contact Rick Elyar at relyar@ccamd.org or 410-977-3782

BUILDING THE **FUTURE** 

