Cooks Point Reef Ball Project

If you build it, they will grow.

**BUILDING**

Volunteers pour concrete into Reef Ball molds.

**PARTNERING**

Cooks Point Reef Ball Project was a joint partnership with:
- The Chesapeake Bay Foundation
- National Oceanic Atmospheric Administration
- Western American Dunes
- Maryland Artificial Reef Initiative
- Maryland Saltwater Sports Fisherman’s Association,
  and hundreds of volunteers.

**VOLUNTEERING**

Volunteers invested 12,182 hours building Reef Balls, growing spat on Reef Balls, and deploying on Cooks Point Reef from 2008 – 2011.

**EDUCATING**

Through volunteering people learn about the problems and solutions affecting the Chesapeake Bay. Our volunteers are more likely to do more for the Bay, like write to their Congressmen about polluted runoff that can harm our oyster reefs.

**GROWING**

Millions of oyster larvae are broadcasted over the Reef Balls.

**DEPLOYING**

Volunteers invested 9,218 hours building Reef Balls, growing spat on Reef Balls, and deploying on Cooks Point Reef from 2008 – 2011.

In 2008, CBF set out on an underwater reef building adventure at Cooks Point Reef in the Choptank River. This reef covers eight acres of prime Chesapeake Bay oyster habitat just south of Tilghman Island in Maryland. The Cooks Point Reef Ball project deployed 1,213 oyster-covered Reef Balls on four, two-acre sections (one per year). Each Reef Ball was set with ~1,700 spat oysters and deployed in ~22’ of water with the R/V Patricia Campbell then seeded with 28.5 million spat on shell. Now it’s time to look at how 3D oyster reefs perform with its local fauna and if 3D reefs help save the Bay.

### Why Build 3D Reefs in the Chesapeake?

Reef structure promotes oyster populations and enhances reef-associated fauna.

### Was Cooks Point Reef a success?

- Oysters were more abundant on the Reef Balls than on surrounding bottom. Higher abundances may be due to the three-dimensional structure of the Reef Ball or other factors.
- Smaller size classes of oysters and mussels indicate that natural bivalve recruitment occurred on reef balls.
- Reef-associated fauna were found in higher abundances on Reef Balls than on spot-on-shell.
- No difference in shell height or disease intensity (P. marinus) between treatments.
- Evidence suggests that Reef Balls could promote oyster populations and enhance reef-associated fauna.

### Monitoring study on Cooks Point Reef Balls

- Investigating the abundance of eastern oyster (Crassostrea virginica) populations and reef-associated fauna on reef balls.

**Background**

- The Chesapeake Bay Foundation
- National Oceanic Atmospheric Administration, Western American Dunes, Maryland Artificial Reef Initiative, Maryland Saltwater Sports Fisherman’s Association, and hundreds of volunteers.

**Objectives**

1. To determine the abundance of eastern oyster populations on Reef Balls
2. To quantify the abundance of reef-associated fauna on Reef Balls

**Site and sampling**

- Site: Cooks Point Reef, Choptank River, Maryland
- Sampling methods: Spat-on-shell, Reef Balls

**Results**

- Oysters were more abundant on Reef Balls than on shell.
- Reef Balls were more abundant in 41% of cases than on shell.

**Conclusions**

- Reef structure promotes oyster populations and enhances reef-associated fauna.
- No significant differences in shell height or disease intensity (P. marinus) between treatments.
- Evidence suggests that Reef Balls could promote oyster populations and enhance reef-associated fauna.

**In 2008, CBF set out on an underwater reef building adventure at Cooks Point Reef in the Choptank River. This reef covers eight acres of prime Chesapeake Bay oyster habitat just south of Tilghman Island in Maryland. The Cooks Point Reef Ball project deployed 1,213 oyster-covered Reef Balls on four, two-acre sections (one per year). Each Reef Ball was set with ~1,700 spat oysters and deployed in ~22’ of water with the R/V Patricia Campbell then seeded with 28.5 million spat on shell. Now it’s time to look at how 3D oyster reefs perform with its local fauna and if 3D reefs help save the Bay.

**Photo Credit:** Walkabout Productions