

Potomac River Reef Ball Project 2015 – 2016

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Bass Reef Project



- Multi-Million Dollar industry in Maryland
- Potomac River largemouth bass fishery strongly affected by distribution of submerged aquatic vegetation (SAV)
- Declines in SAV have had negative effects on the fishery



Bass Reef Project



from *Tidal Bass Fishery Management Plan (2015)*

<http://dnr2.maryland.gov/fisheries/Pages/bass/index.aspx>

Table 8.6.2. A table of potential fishery problems and several possible management actions that can be taken to mitigate the problem. There are 6 potential management actions: A) change in creel limits; B) change or enforce size limit; C) no possession (seasonal or spatial); D) fishing closure (seasonal or spatial); E) stocking; F) habitat enhancement or protection; and G) angler awareness strategies to include multimedia campaigns and seminars. In response to management actions, the indices that are likely to be responsive within 3 years are given. Indices are explained in section 7.0. Abbreviations are: catch per unit effort (CPUE) for all Largemouth Bass and juveniles (Juv), proportional size distribution (PSD) for juveniles, 200-305 mm and 200-381 mm fish, proportional occurrence (OCC) of juveniles among sampled sites, relative weight (W_r), body condition (K_n), instantaneous mortality (Z), growth rates (GR) for exponential (EXP) and von Bertalanffy growth models (VBGF), the slope of the length-weight regression (LW), mortality at the weigh-in scale (IM) for small (Sm) and large (Lg) tournaments (TX), catch per angler hour (CPAH) for tournaments, and the habitat suitability index (HSI).

Problems



Problem	Action(s)	Indices
Poor Recruitment	E, F	PSD ₃₀₅ , Juv _{CPUE} , Juv%OCC, JUV _{PSD} , CPUE, Cor-CPUE, HSI
Overfishing	A, B, C, D, G	CPUE, Cor-CPUE, Z, NS and SP CPAH indices for TXs, NS and SP IM indices for Lg and Sm TXs, PSD ₃₈₁ , PSD ₃₀₅
Few Big Fish (overfished)	A, B, C, D, E, G	Z, PSD ₃₈₁ , CPUE, Cor-CPUE, Juv _{CPUE} , SP CPAH for TX
Too Few Fish	A, C, D, E, G	CPUE, Cor-CPUE, NS and SP CPAH indices for TXs
Few Fat Fish	F	W_r , K_n , GR-VBGF, GR-EXP, L-W slope
Poor Habitat	F, G	W_r , K_n , GR-VBGF, GR-EXP, L-W slope, Juv _{CPUE} , Juv _{PSD} , Juv%OCC, HSI



Possible Actions

- A) Change in Creel Limit
- C) No Possession
- D) Fishing Closure
- E) Stocking
- F) Enhance or Protect Habitat**
- G) Angler Awareness Strategies

Bass Reef Project



- Upper tidal freshwater Potomac River, Maryland
- An important area for reproduction
- Smoots Bay, owned by Peterson Group and Maryland National Capital Park and Planning Commission



Smoots Bay
38° 47.248' N, 77° 1.224' W



Bass Reef Project

- Habitat loss, Smoots Bay
- Add permanent habitat
- Proposed to JE in 2008 as groins

1985

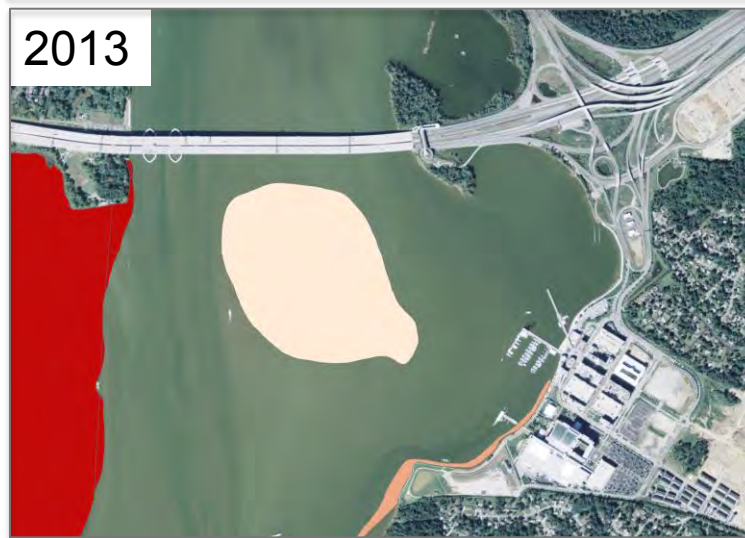
Red = High Density SAV



2002



2013



Bass Reef Project



- Mini-Bay Reef Ball Project
- 2.5 ft wide, 1.75 ft high, 200 pounds
- Made by volunteers at National Harbor

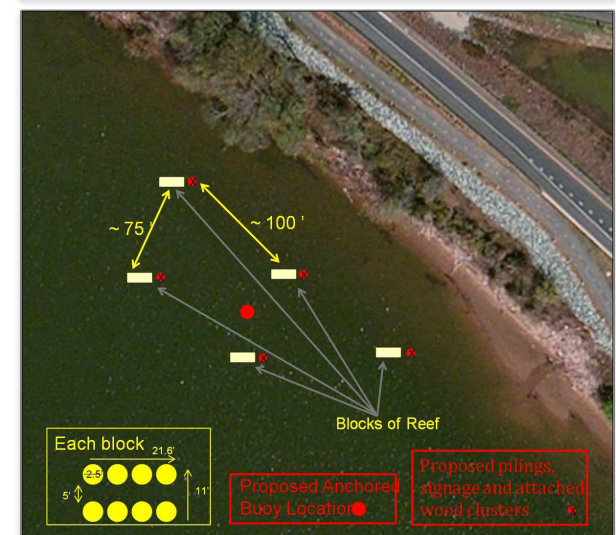
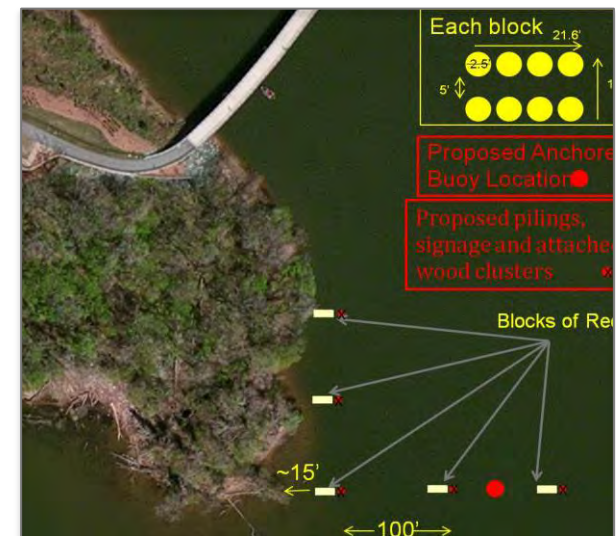
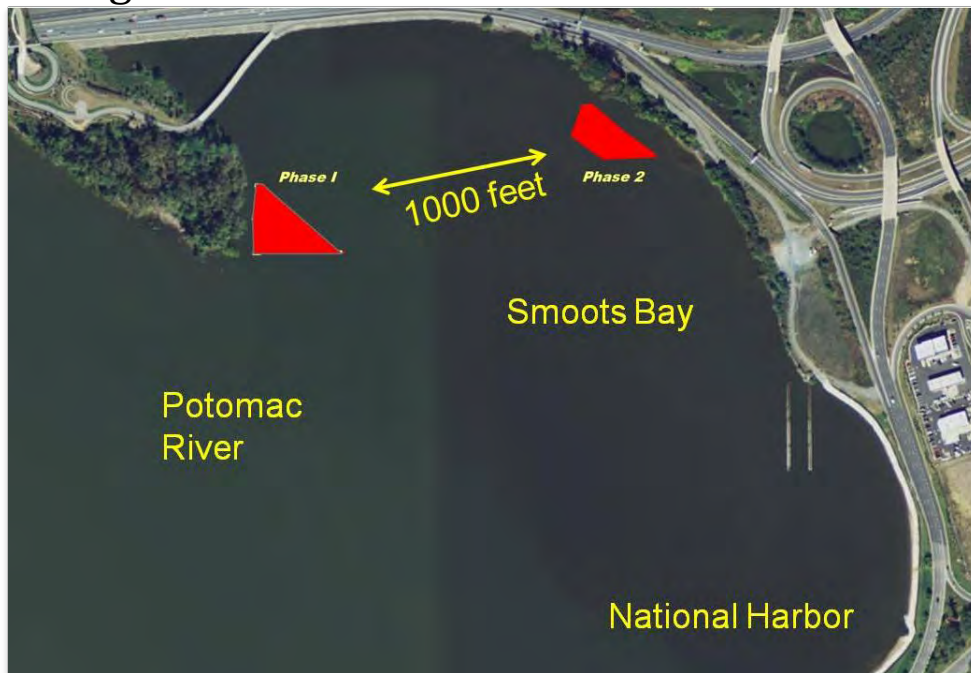


Chesapeake Bay Foundation



Bass Reef Project

- Two proposed locations in Smoots Bay
- 6 knot area
- Historical footprint of SAV
- Deployed in 5 clusters of 8 balls
- Deployed with 2 marker buoys, and posts with signs and tethered wood clusters



Bass Reef Project



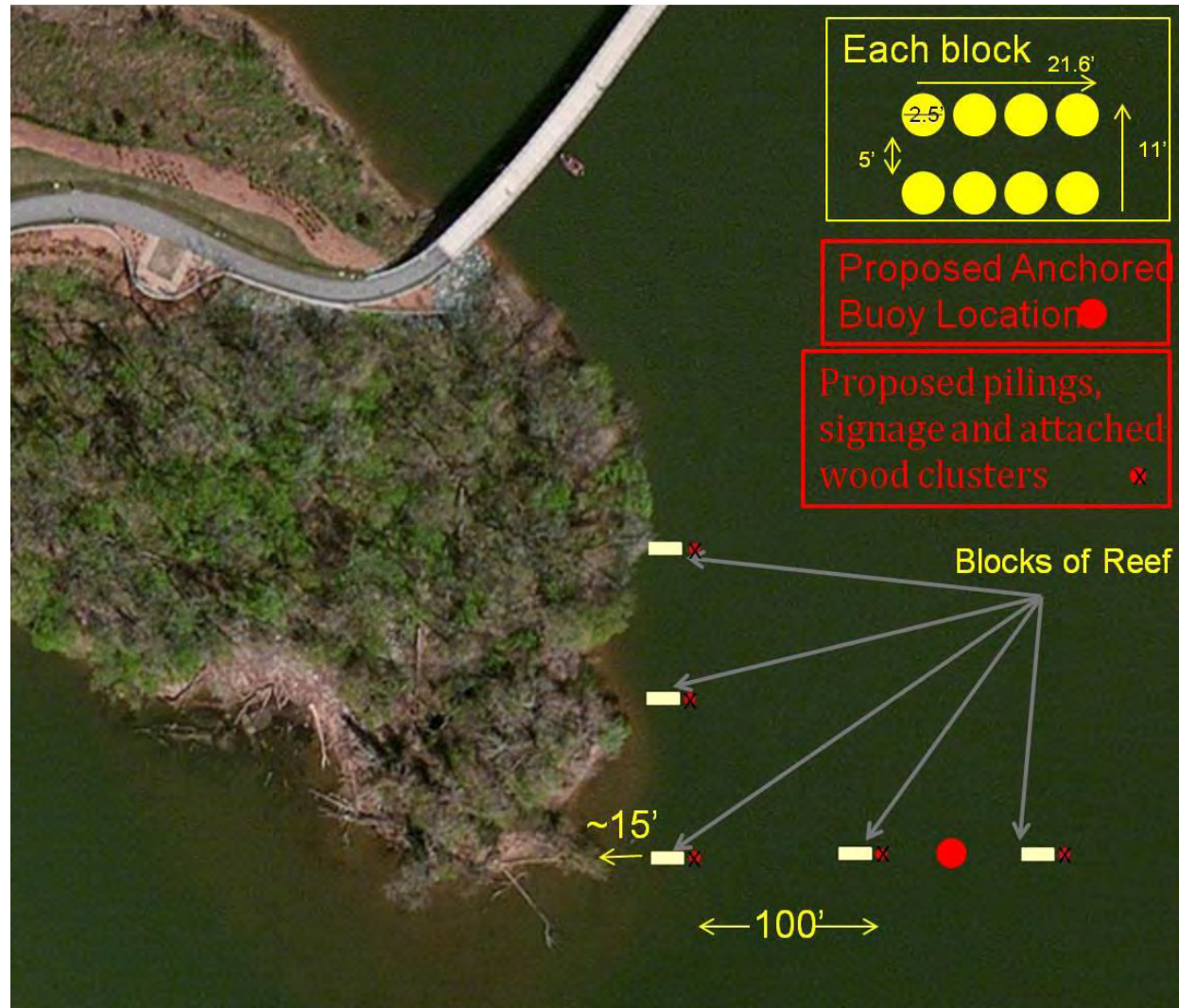
Block 1
38° 47.462' N, 77° 1.307' W

Block 2
38° 47.462' N, 77° 1.279' W

Block 3
38° 47.463' N, 77° 1.254' W

Block 4
38° 47.48' N, 77° 1.309' W

Block 5
38° 47.497' N, 77° 1.310' W



Bass Reef Project



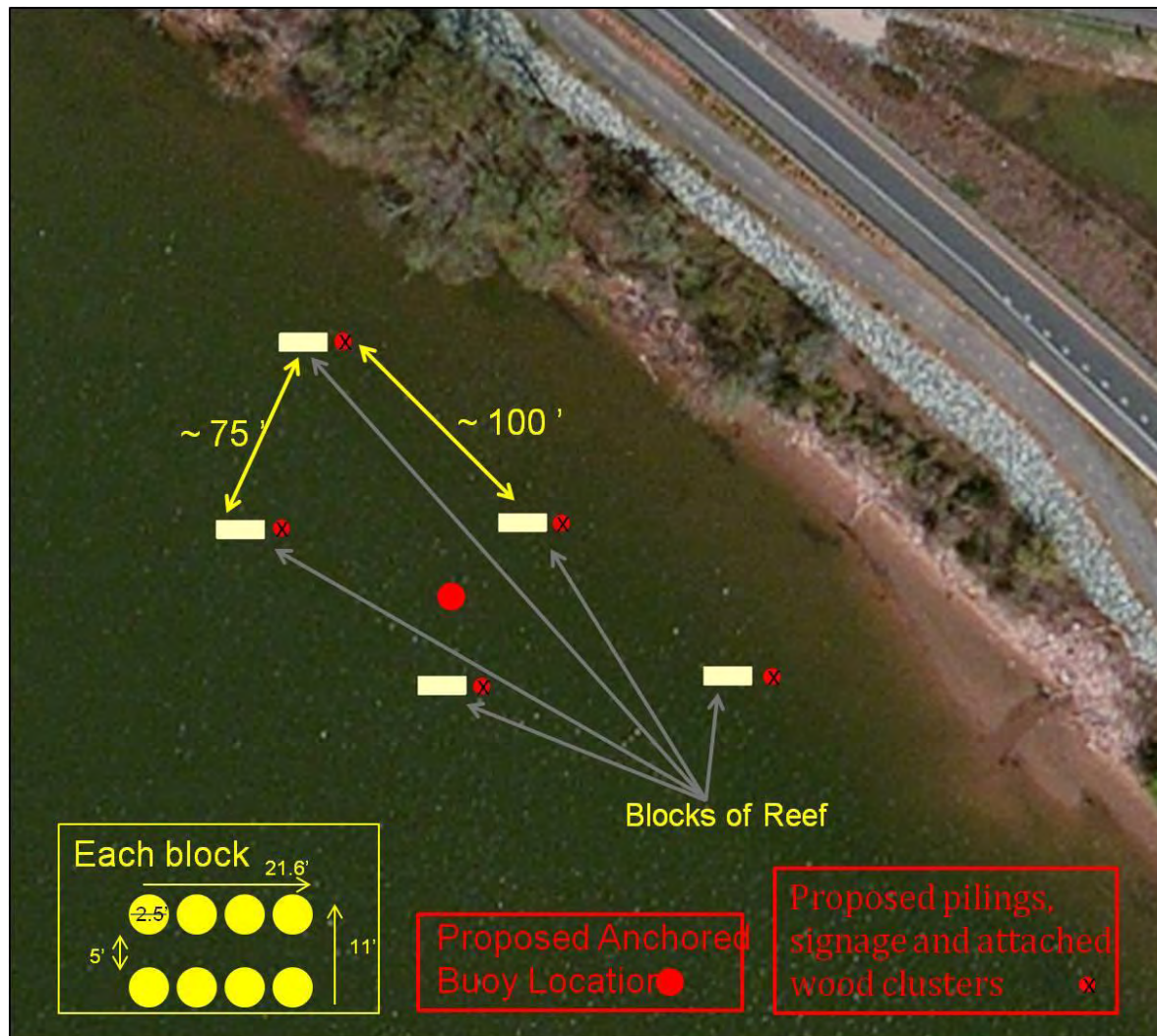
Block 1
38° 47.542' N, 77° 1.084' W

Block 2
38° 47.529' N, 77° 1.062' W

Block 3
38° 47.518' N, 77° 1.042' W

Block 4
38° 47.528' N, 77° 1.109' W

Block 5
38° 47.516' N, 77° 1.070' W



Bass Reef Project



Phase 1

- 40 reef balls
- Depth range: 5 – 10 feet
- Area of reef is 0.9 acres

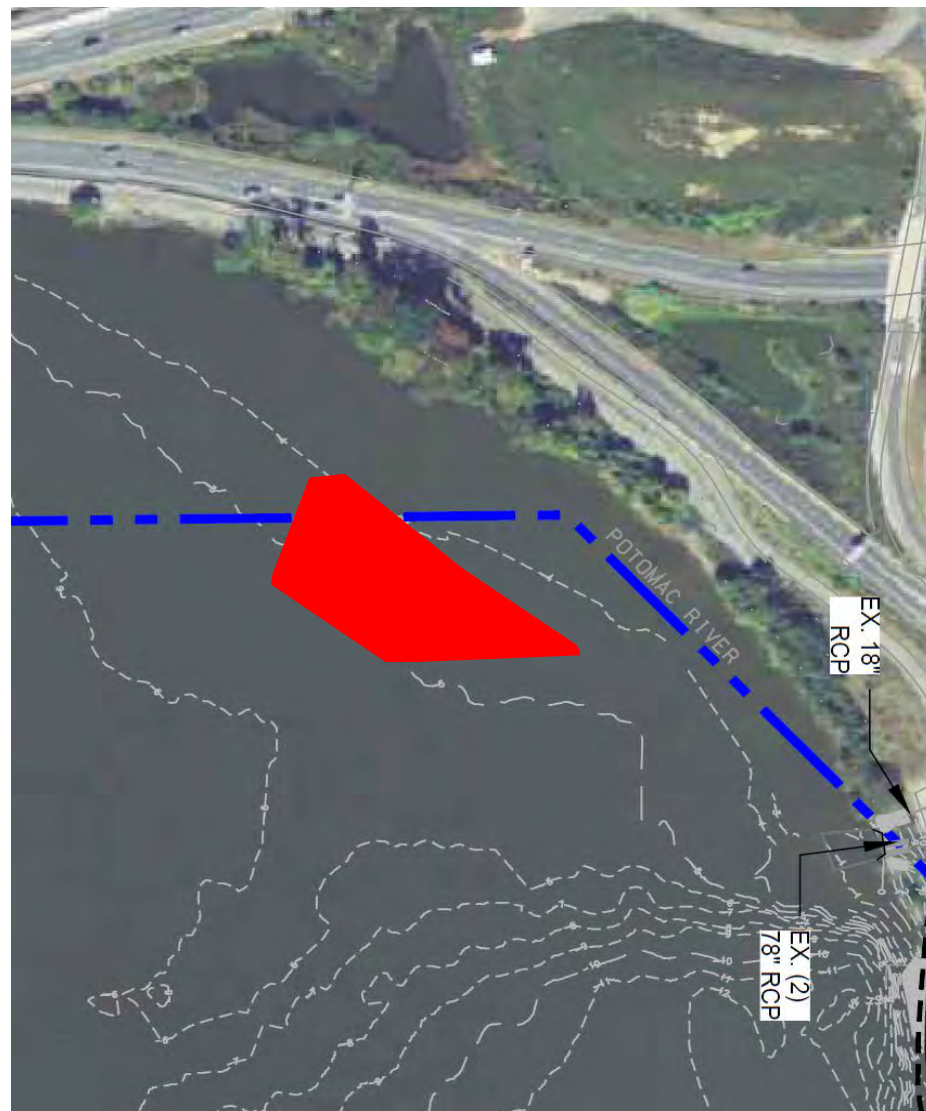


Bass Reef Project



Phase 2

- 40 reef balls
- Depth range: 4 – 5 feet
- Area of reef is 0.5 acres



Bass Reef Project



- Funding from National Harbor (\$10,000), MDDNR Fisheries (\$5,000), and an additional \$5,000 sought through grants and social media
- Chesapeake Bay Foundation providing molds, some equipment, and volunteers
- National Harbor providing some equipment



The screenshot shows the Maryland Department of Natural Resources website. The header includes the state logo, the department name, a search bar, and navigation links for Fishing Reports, Recreational, Commercial, Management, Programs, and Data. The main content area is titled 'Smoots Bay - National Harbor Reef Ball Initiative' and features a photo of a person on a boat handling a large, white, spherical reef ball. To the left of the main content is a sidebar with 'Fisheries Service' and 'More Resources' links. Below the main content is a 'Smoots Bay Links' section. On the right side of the page, there is a 'Funding Goal' section with a thermometer graphic showing a goal of \$20,000, and a 'Partners' section listing the National Harbor, Chesapeake Bay Foundation, BASS Nation, Maryland Department of Natural Resources, and MARI. The footer contains contact information and social media links.

Fisheries Service

- › Fisheries Home Page
- › Public Notices
- › Fisheries Regulations
- › Fishing Licenses
- › Join Our Mailing List

More Resources

- › Tide Finder
- › Water Contact Advisory
- › Legislative Updates
- › Fish Facts
- › Volunteer Angler Survey
- › Invasive Species
- › Youth Fishing Club
- › Charter Boats & Guides
- › Free Fishing
- › State Records
- › River Levels
- › Espanol/Spanish Language
- › Fisheries Forms
- › Non-Fishing Permits

Smoots Bay Links

- › Smoots Bay Home
- › Smoots Bay Timeline
- › Project Description

Smoots Bay - National Harbor Reef Ball Initiative

To improve population growth and the fishery for Largemouth Bass on tidal Potomac River, a reef ball initiative has been proposed for an historically important nursery habitat, Smoots Bay. Over time, this bay has become less productive for bass for a variety of reasons. Reefs in tidal freshwater may help improve the habitat for reproduction and ultimately, the fishery.

Maryland Department of Natural Resources will be seeking volunteers to assist with building reef balls in 2016. Check back periodically for updates!

Do you or your bass fishing club want to help sponsor a reef ball for \$100? Contact [Joe Love](#) for more information.

[Download Smoots Bay Project Description](#)

Funding Goal

\$20,000
\$10,000

Partners

- NATIONAL HARBOR
- CHESAPEAKE BAY FOUNDATION
Saving a National Treasure
- BASS Nation
- MARYLAND DEPARTMENT OF NATURAL RESOURCES
- MARI

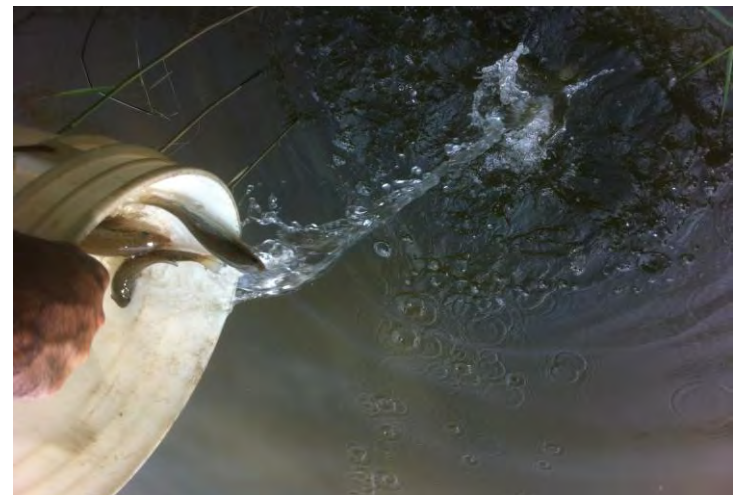
Contact Us | Privacy | Accessibility

580 Taylor Ave, Annapolis MD 21401
(877-620-8DNR (8367))

Bass Reef Project



- Funding sought by December 2015
- Permits acquired by Spring 2016
- Logistics and materials by Summer 2016
- Building reef balls September/October 2016
- Deploy Reef Balls by November 2016
- On-going monitoring thereafter by MDDNR Tidal Bass Program, Possible stocking area



Bass Reef Project



- Joseph Love, joseph.love@maryland.gov, 410-260-8257
- Mary Groves, Southern Region Manager, MDDNR Inland Fisheries
- Scott Sewell, Maryland Bass Nation Conservation Director
- Dick Berich, Maryland Bass Nation
- Steve Chaconas, National Bass Guide Service
- Erik Zlokovitz, MDDNR Maryland Reef Initiative
- Karl Willey, Chesapeake Bay Foundation
- Bill Goldsborough, Program Director, Chesapeake Bay Foundation
- Michael Rolband, Vice President of Operations, Wetland Studies and Solutions, Inc.
- Kent Digby, Senior Vice President, National Harbor Operations