NOAA/RAE
Barnegat Bay Good Luck Point Oyster Reef Restoration Project

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The Project

- Restore a 1-acre oyster reef to Barnegat Bay at Good Luck Point
- Baseline and post reef restoration monitoring with MAST Mentorship
- Seeding new oysters: spat tank and tankless setting
- Education and outreach
- Oyster shell recycling
Good Luck Point Project Sites
Previous Efforts for Restoration

- In 2008, 8 thousand bushels of shell were planted over 1 acre off Good Luck Point and seeded with oysters.

- In 2012, the Society planted 12,000 bushels of shell on a second acre.

- Hurricane Sandy hit right after 2012 planting.
2013/2014 Reef Monitoring

Oyster Abundance

- 2013 found two live oysters and a lot of spat-on-shell (71)

- 2014 found no live adult oysters and only two shells with spat (22)

- Survival over winter 2013-14 was low
2014 Reef Monitoring – Habitat Quality

- Average number of species found was higher on the reef sites. Traps found mostly blue crabs and a few sea bass.

R1 = seeded reef
R2 = shell only
CT = outside reef

Tong samples: clockwise from top left: summer flounder, juvenile razor clam, *Mulinia lateralis* (coot clam), and toadfish.
Sidescan sonar did not show much 3D structure to the reef. Mostly broken shell pieces and sand.

Clip from video survey on R2
2014 Tankless Setting

- Goal: a way to set oyster larvae to a reef without the need for a separate tank to grow them in

- Challenges: attempting to do it in a dynamic environment like Good Luck Point

   Step 1: deploy curtain from boat and anchor/stake down

   Step 2: add substrate to curtain (whelk shell)

   Step 3: add larvae to the middle
Tankless setting: controls and recovery

Outside tank control

Bags inside tank

Curtain held in place for 3 days, then removed. Larvae allowed to grow out for 28 days.

Day of recovery

Shoreside control tank: placed out in bay after three days
Tankless Setting: Results

- Six bags recovered
- Controls were lost 😞
- 281 shells counted, 12 spat were found
- All similar in size suggesting they were from the same set and from the experiment
- Blenny, skilletfish, goby, toadfish, eels also found among the shells
So let’s build something

- Placed 120 cy of whelk shell on ½ acre
- Natural set
- Innovative Partnering = Cost savings
Purchased a tank in 2014 and set out at pier in Ocean Gate spring 2015

1.5M larvae introduced to be grown out on shell in the tank and then placed out on the reef in a “Parade of Boats”

Collecting whole shell since summer 2014 (whelk and clam)

Created New Partnerships to continue restoration
It is not just about the shell
It’s about the babies
It’s about the Children
It’s about the science
It’s about the community

Bags on the Bay
So Let have a Parade of Boats
From Plate to Reef to Plate..............
It is about the Shell
What have we done since?

- 2016 – set 2.8 million larvae
- Placed 163,200 oyster spat on the reef site (quadrupled results ands 7x more oysters)
- Continued monitoring
- Added 12 restaurants to recycling program
- Continued Bags on the Bay, Spat Tank events, and Parade of Boats

- And preliminary results show?
Substrate Quality: ROV video

July 2014: Crushed Shell

April 2015: Whelk Shell

June 2016: Whelk Shell

Credit: Jim Nickels, Monmouth U
Thank You

For More Info
www.LittoralSociety.org

Other Project Websites
www.RestoreNJBayshore.org
www.WreckPond.org

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Interested in learning more about us?
Check out our “Hidden Coast” series
Wednesday 1:30-3:00 Newberry Room (3rd floor)
Or stop by Booth #700