Green Harbors Project and oyster restoration: Applying Nature’s Solutions

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Photo: A. Frankic
Oysters in Boston and Quincy Harbors?

http://www.oysterguide.com/maps/mass-and-ri/

Images: A. Frankic

Oyster shell from Town River 1956
Over 85% of oyster reefs have been lost globally

Data source:
Dr. Frankic with students at Roxbury Community College, during SPLASH! Festival, 2012. In front of them, an exhibit with two containers with water from the Boston Harbor demonstrating how shellfish can improve water quality: one with invasive species and no shellfish (left), and the other with native species of shellfish (hard clams, two oysters, two blue mussels, two soft-shell clams (right). Within several hours, the water in the right container became crystal clear.
Measuring Oysters’ Improvements on Water Quality

- Already 2-3 million additional oysters
- Goal: 8,800 pounds of nitrogen removed per year
- Likely increase in commercial shellfish value of $1 million/year
- Increased water filtration approximately 100 million gallons/day
- Erosion control
- Sediment reduction
- Increased turtle, eel, juvenile fish habitat

Overall project area with new cultch

Recycled OysterFest Shells

Oyster Spawning Study Area (2.04 acres)

New spat on seacalm cultch (small black patches)

Real Time Water Quality

www.capecodextension.org/Marine-Programs/YSI-Water-Quality-Monitoring.html

YSI Meter
May 24 2011
BEFORE
Project Site on October 16, 2013 @ 8 am
2 acres pilot project site changed in only 2 years, establishing about 4.5 mil oysters! (images by A. Frankic)

- **Green** - compact sediment with cultch from the oyster festival;
- **red** – send and mud sediment with little cultch along the fringing salt marsh;
- **purple** - variable sediment texture with high cultch and young oysters and spats;
- **blue** - established oyster reef with adult oysters ~ 3y/o.
Savin Hill Cove Biomimicry LivingLabs: Learning, teaching and doing sustainable projects with local community;

Students Promo video: http://youtu.be/loiR-Z03dow

Oysters in the Boston Harbors? shows us their dire plight and what are we hoping to accomplish with this innovative project. Click and see what we are doing to bring back the oysters and restore their habitat:
https://www.youtube.com/watch?v=KCe8tsi3rm4

Thank you, Ms. Wendy Schmidt!
UMass Boston-led team studies Savin Hill Cove
By Jeanette Origel, Special to the Reporter, Jun. 5, 2014

Savin Hill’s Mary Talalas, left, and Dr. Anamarija Frankic of UMass-Boston’s Green Harbors Project planted new cord grass on an artificial, non-tox island in Savin Hill Cove last Saturday. Shown at right: Graduate student Deniz Bertuna. Photo by Nancy Talalas

Native oysters in the Cove
Oyster reef and salt marsh = living shoreline

Born to be wild – oyster video
What can You do?

Oyster shells collection, recycling from restaurant hotels to help make our urban harbors healthy, wealthy and resilient.

www.umb.edu/ghp

http://www.massoyster.org/shell_recycling.html

“It is horrifying that we have to fight our own government to save the environment.”
Ansel Adams

Who is recycling now...
Langham Hotel
Renaissance Boston Waterfront Hotel
The North End Fish Market
The Annual Boston Seafood Festival
What can hotels do and how?

• Hotels or their waste hauler should Contact - Save that Stuff Inc.  
  http://www.savethatstuff.com/portfolio/oyster-shell-recycling/
• Or Contact - Massachusetts Oyster Project (MOP)  
  http://www.massoyster.org/shell_recycling.html  
  At massoyster@gmail.com.
• You will receive bins like this one on the right
• There is some cost related to oyster shells pick up
• But think big about oyster shells recycling benefits: more oysters and clean water...
• Thank you!