

Shell recycling - Atlantic City program

A concept plan to increase sustainability and environmental stewardship of New Jersey's coastal bays



*Atlantic City Green Team Meeting
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Why recycle shell?

- Shell is a limited and expensive resource for oyster restoration programs
- Shell is a reusable by-product of food waste and New Jersey has a goal of reducing food waste 50% by 2030*
- Shell is heavy and costly to dispose of in the solid waste stream
- One bushel shell weighs ~ 50 lbs. and costs \$1.70 to dispose **

*Association of NJ Recyclers (2019)

** Atlantic County fees = \$67.50/ton



Why restore oyster reefs?

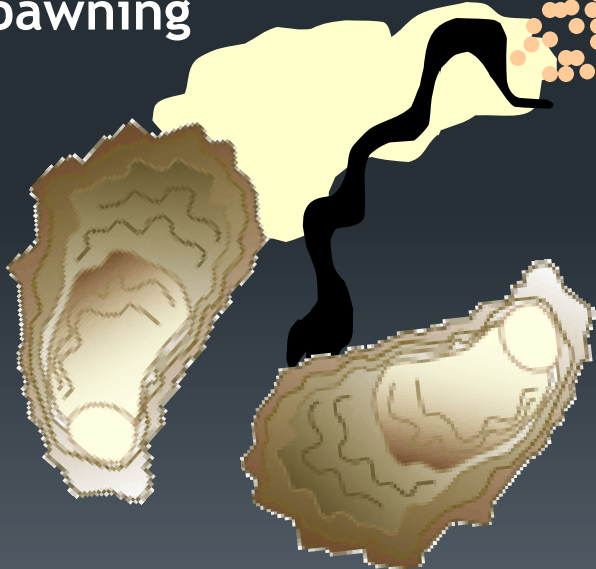
- Oysters reduce nutrients and sediment loading in coastal waters; one oyster can filter 50 gallons water per day
- Oyster reefs provide habitat for recreationally and commercially important finfish, crabs and other marine life
- Restored oyster reefs provide fishing and harvest opportunities
- Oyster reefs can be used for living shoreline and other protective structural solutions in coastal areas



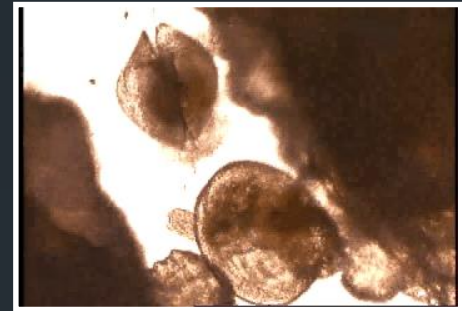
Why does restoration require shell?



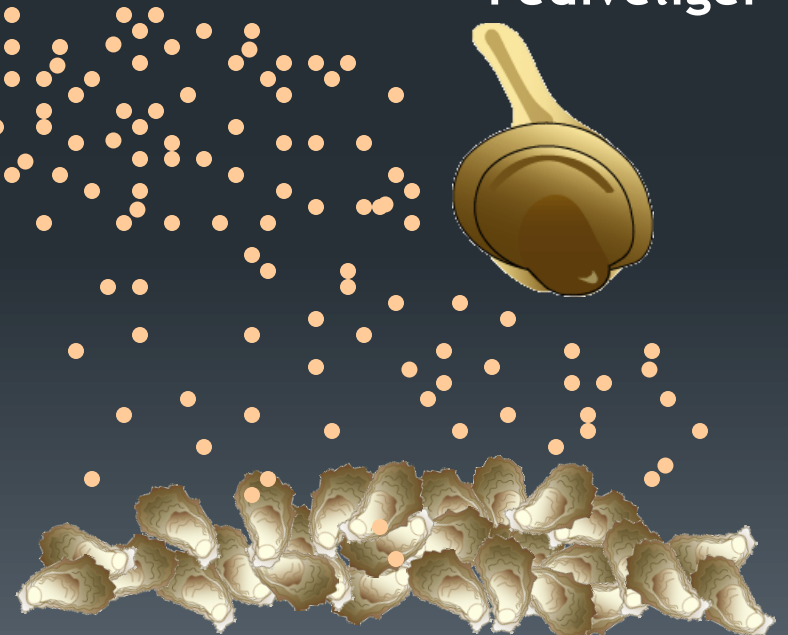
Spawning



Veliger



Pediveliger



Settlement

Restoration methods

Direct shell planting



Photo credit NJDEP



Remote-set aquaculture



Parsons Mariculture, Little Egg Harbor, NJ



Coast-wide program examples



Ocean County and LBI efforts



- Stockton University restoration projects* initiated a pilot shell program and gained interest in Ocean County
- Long Beach Township led the effort to expand the program by providing a dedicated truck, labor for pick-ups, restaurant coordination, etc.
- Jetty Rock Foundation, a 501c(3) focused on coastal issues, provides funding, marketing, and outreach services

*Barnegat Bay Partnership funding, 2015

Basics of a shell recycling program



Restaurant participation



Waste reduction



Pick-up support



Oyster reefs



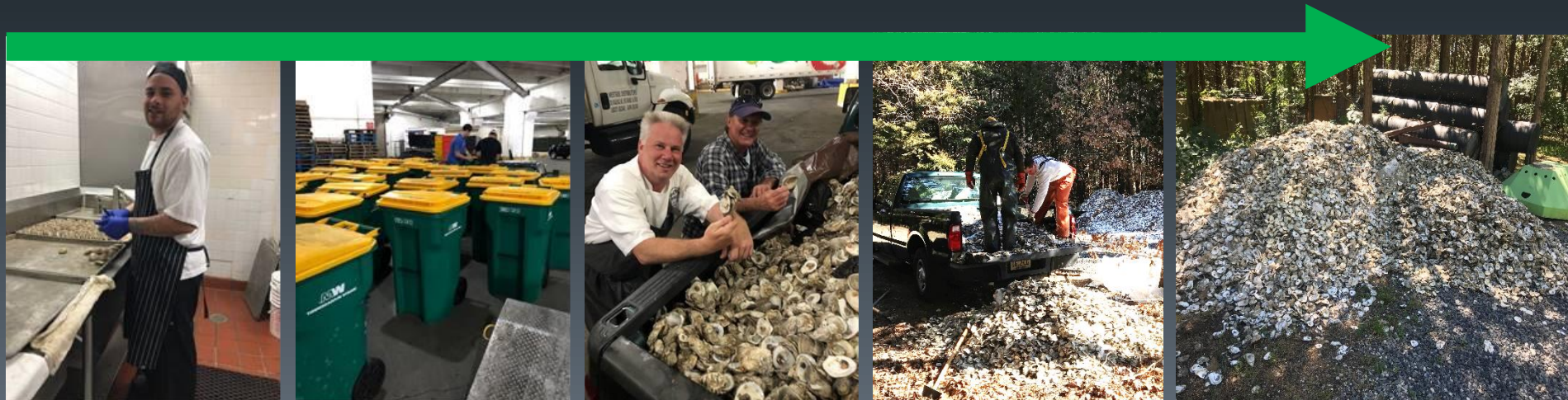
Planting & monitoring



Curing site

Bringing this effort to Atlantic City

- Hard Rock Hotel & Casino Atlantic City (HRHCAC) initiated discussion
- Stockton and Rutgers Cooperative Extension arranged initial meeting
- This small group is actively recycling shell but cannot sustain pick-up methods or storage and curing locations w/o added support
- The group recycled >8 tons of shell since March 2019. We anticipate HRHCAC to recycle 40-50 tons per year



Components in place for an AC program

Municipal model and guidance	<i>Long Beach Township</i>
501c(3) support	<i>Jetty Rock Foundation</i>
Marketing support	<i>Jetty company</i>
Applied science and monitoring	<i>Stockton University</i>
County extension services	<i>Rutgers University</i>
State permitting and shelling support	<i>NJDEP Bureau of Shellfisheries</i>
Restaurant participation	<i>HRHCAC active and others to join</i>



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Components in need for an AC program

Trucks and labor for pick-ups

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Appropriate curing site

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Financial and clerical support for; program management, plantings, aquaculture services, monitoring and internships

?????????



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OYSTER

RECYCLING PROGRAM



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