

Essential Elements for Successful Community Oyster Restoration

[Handout](#)

Len Zuza

Former President

Southern Maryland Oyster Cultivation Society



Goal: A clean and healthy Lynnhaven River

Reduce Pollutant Inputs:

- Bacteria
- Excess Nutrients
- Sediment
- Toxins

Restore Important Habitats:

- Oyster Reefs
- Wetland & Buffer Habitats
- Underwater Grasses

Community Education & Involvement

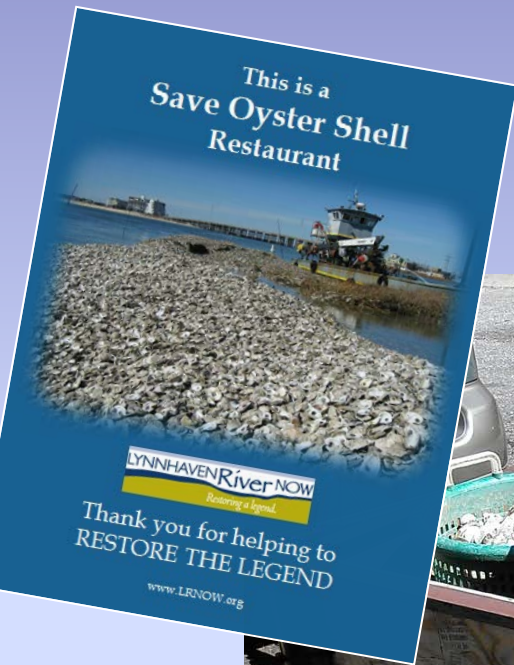
Presented by Laurie Carroll Sorabella

Oyster Restoration progress is thanks to synergy of many partners

- Allied Concrete
- Aquaculture Industry
- Army Corps of Engineers
- Chesapeake Bay Foundation
- Chesapeake Bay Restoration Fund
- Citizens
- City of Virginia Beach
- Dominion Power
- Fish America Foundation
- Lynnhaven River NOW
- National Fish & Wildlife Foundation
- National Oceanic & Atmospheric Administration
- Oyster Reef Keepers of Virginia
- Restaurants Saving Shell
- Schools & Teachers
- The Nature Conservancy
- Virginia Institute of Marine Science
- Virginia Marine Resources Commission

Habitat: Salvage Shell

Save Oyster Shell for the Lynnhaven



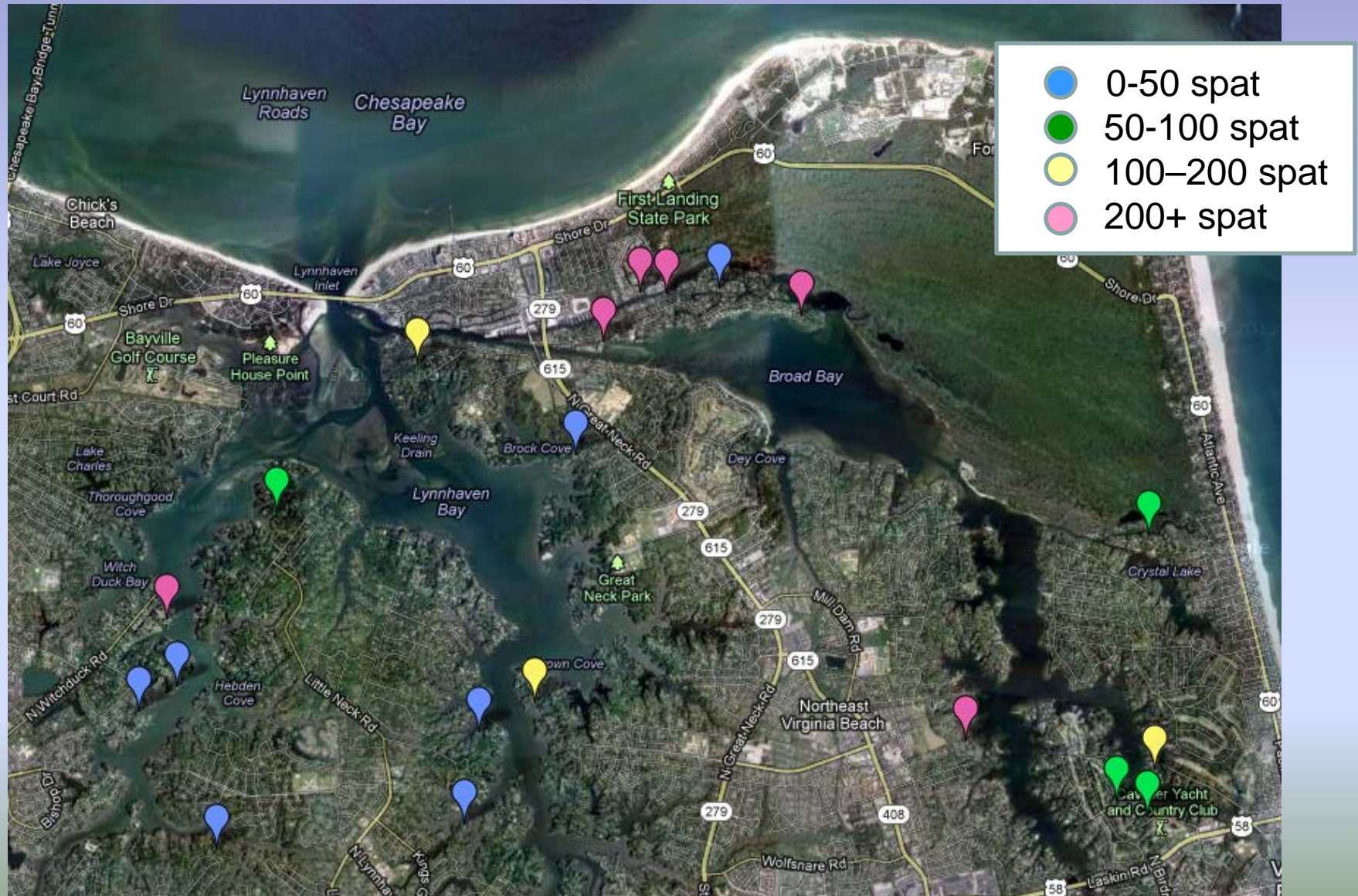
Habitat: Build Sanctuaries



Habitat: Oyster Castles



Citizen Science: Oyster Distribution & Substrate Trials



Oyster Broodstock Enhancement

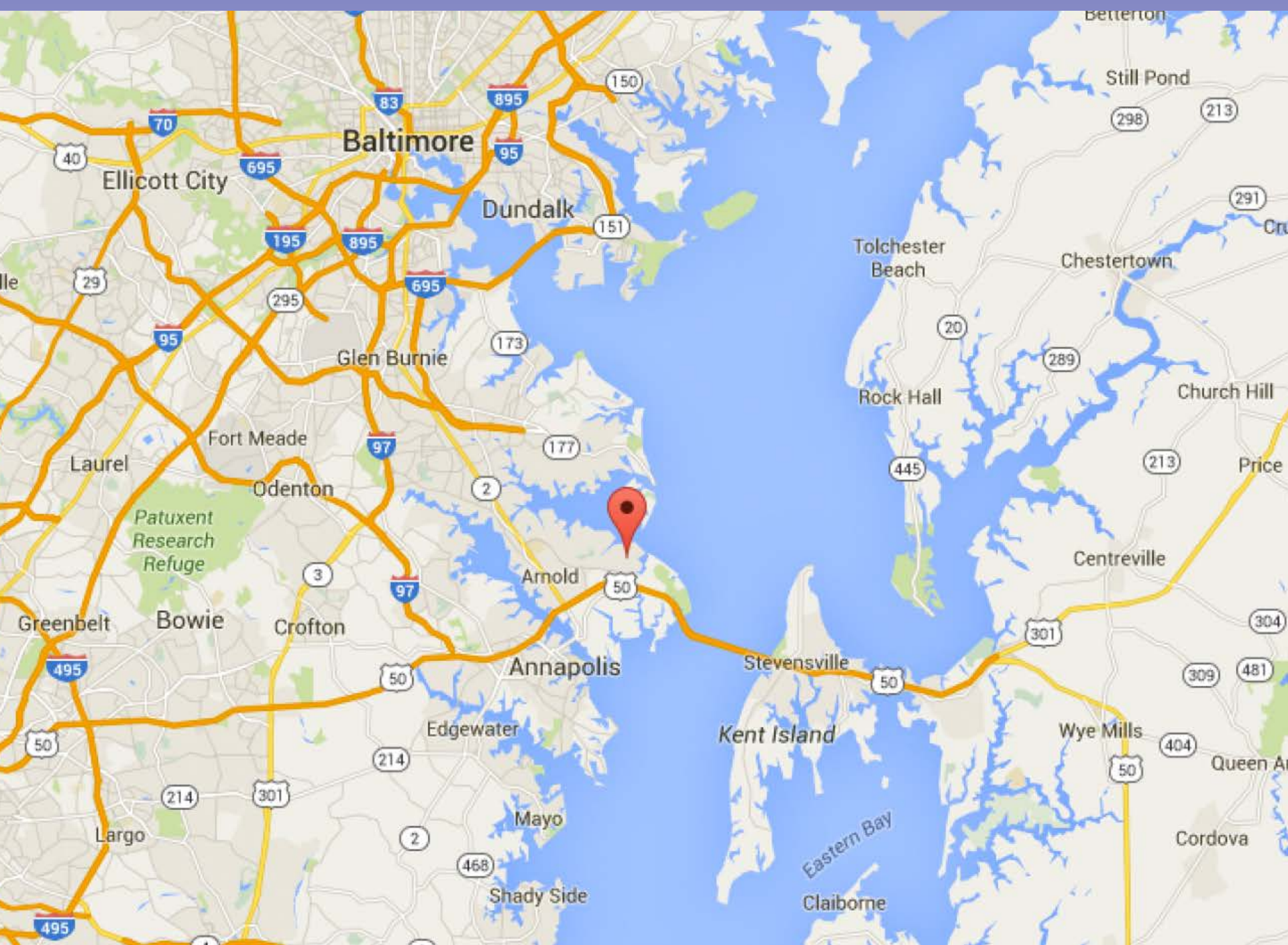


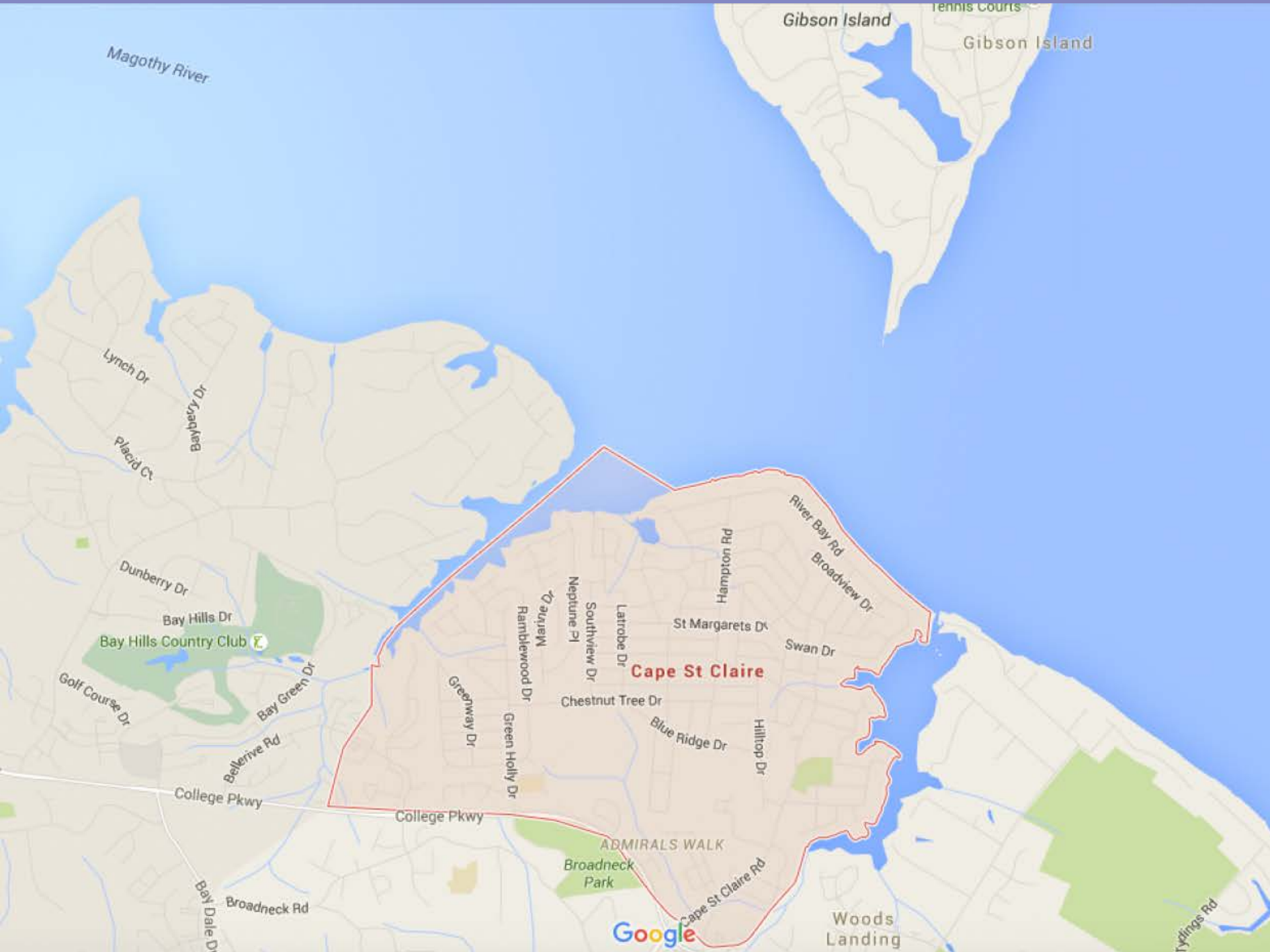
Coastal Conservation Association

Presented by Larry Jennings

Cape St. Claire, Maryland

- * 2300+ homes and almost 8,000 residents
- * SCBD collects annual dues
- * HOA owns the riparian rights for the community
- * Community owns 2 beaches, 3 marinas, crab and fishing dock, picnic areas, kayak storage and launch sites
- * Community formed Cape Conservation Corps, a non-profit focused on environmental restoration within the community





Gibson Island

Gibson Island

Tennis Courts

Magothy River

Lynch Dr

Bayberry Dr

Placid Ct

Dunberry Dr

Bay Hills Dr

Bay Hills Country Club

Golf Course Dr

Bay Green Dr

Bellerive Rd

College Pkwy

Bay Dale Dr

Broadneck Rd

College Pkwy

Greenway Dr

Green Holly Dr

Ramblewood Dr

Marine Dr

Neptune Pl

Southern Dr

Latrobe Dr

Chestnut Tree Dr

Cape St Claire

Blue Ridge Dr

Hilltop Dr

St Margarets Dr

Hampton Rd

River Bay Rd
Broadview Dr

Swan Dr

ADMIRALS WALK

Broadneck Park

Cape St Claire Rd

Woods Landing

Tydings Rd

Google

D e e p C r e e k

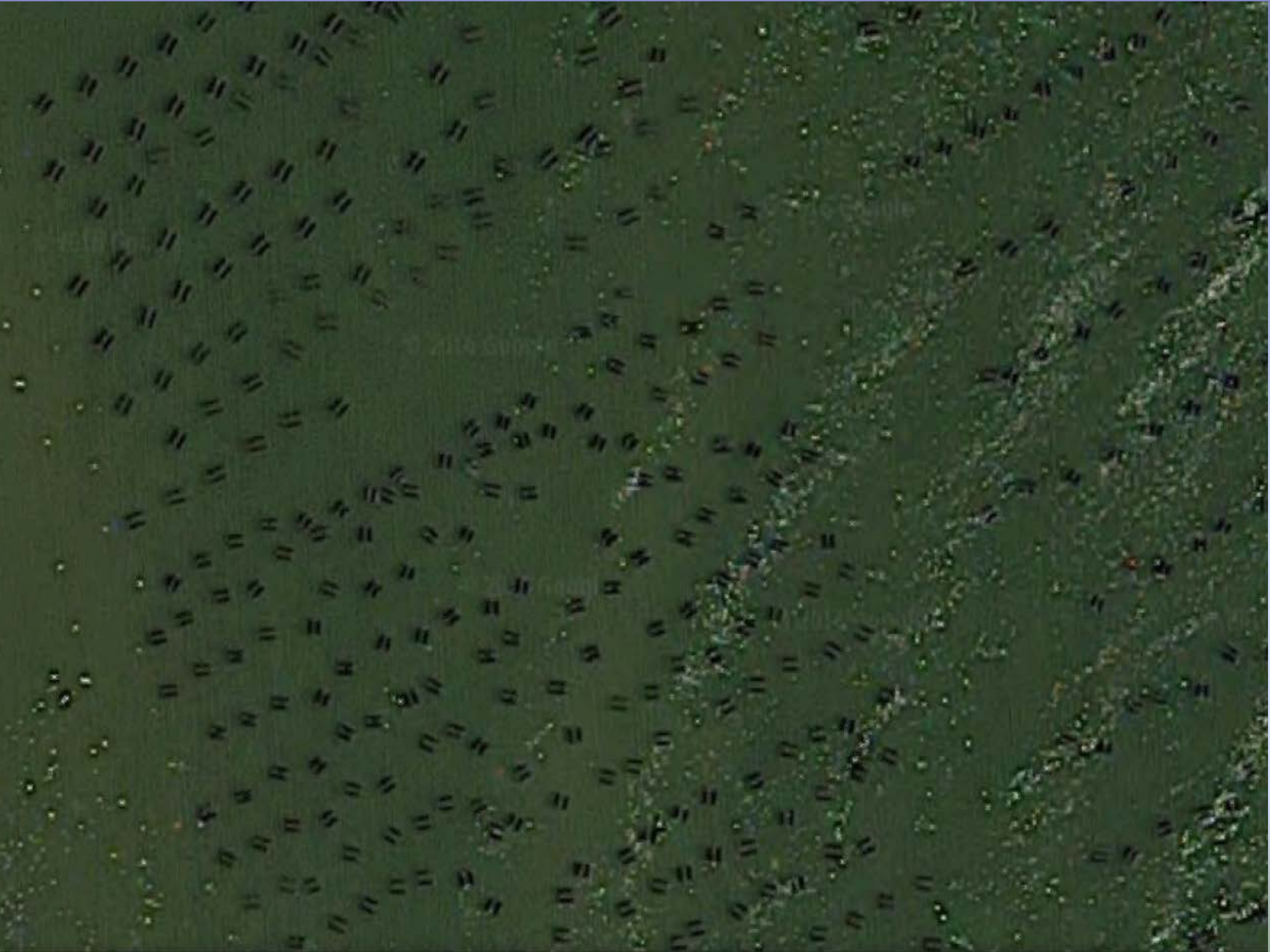
Neptune Pl

100 feet 25 m

Fairwinds Dr

Strobe Dr

Lake Claire Dr









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MARYLAND

Central Region Chapter

Video

Living Reef Action Campaign Engaging A Watershed Community in Oyster Restoration

Presented by Rick Elyar





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Diverse Community Partnerships Demonstrate the Power of Collaboration to Protect & Restore our Nature Resources





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Develop Opportunities for Outreach

- *Participating in Community Events to Raise Awareness*
- *Created a Feeling of Pride to Participate, Made it Cool!*
- *Focus is on Purpose of Habitat Project not Advocacy Issues*
- *Developed Ownership in Project within Community*





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Educating the Community about the Value of Oysters to the Bay

“The Power of Filtration”

- *A Watershed Community Can Make a Difference*
- *Used Festivals and Community Events to Promote Cause*
- *Hosted Oyster Happy Hours at Restaurants/Bars*
- *Asked Restaurants to Host Oyster Themed Benefit Dinners*
- *Inspired School Faculty to “Sell” to Administration for Us*



Empower the Students !



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- *Teach the Students to Lead and They Will Inspire*
- *Service Hour Requirements for H.S. Graduation*
- *College Applications – Examples of Leadership*
- *They Take the Culture into the Schools – CCA Clubs*
- *Reef Balls, Shells, Exhibits, Youth Fishing , Scout Camps*





Marylanders Grow Oysters Overview

Feb 2016

Christopher Judy
MD DNR
Shellfish Division

Marylanders Grow Oysters

STEWARDSHIP & EDUCATION

- Oysters
- Chesapeake Bay

(oysters are only part of what needs to be done)

SANCTUARY ENHANCEMENT

- Oysters enhance the ecology of the site

TRIBUTARY FOCUS

- Team of residents required for the program
- “Coordinator” is key!



Marylanders Grow Oysters



2008 - 2016

Tribs/Sites	31
Cages	7,800
Growers	2,000
(plus their "kin")	
Students	2,500

Marylanders Grow Oysters

PARTNERS Make It Happen:

- DNR Department of Natural Resources
- DPSCS Department of Public Safety and Correctional Services
- MCE Maryland Correctional Enterprises
- ORP Oyster Recovery Partnership
- UnMD University of Maryland Center for Environmental Science
- Local Government
- Waterfront Property Owners
- Tributary Coordinator (river group or individual)
- Volunteers



CAGE PRODUCTION

- Materials purchased by DNR
- Cages are made by Inmates
- Cages stockpiled at the Hatchery





SPAT PRODUCTION

- Shells from Shucking Houses (DNR)
- Shells are Bagged (ORP/DNR/MCE)
- Larvae from Horn Pt (UnMD)
- Spat are Produced (ORP/UnMD/DNR)



Marylanders Grow Oysters

DISTRIBUTION

- Spat arrive via ORP
- Spat are distributed immediately...or...
- Spat are placed in a “warehouse”
held for days or couple weeks
then distributed



MARYLAND DEPARTMENT OF NATURAL RESOURCES

Marylanders Grow Oysters

DISTRIBUTION



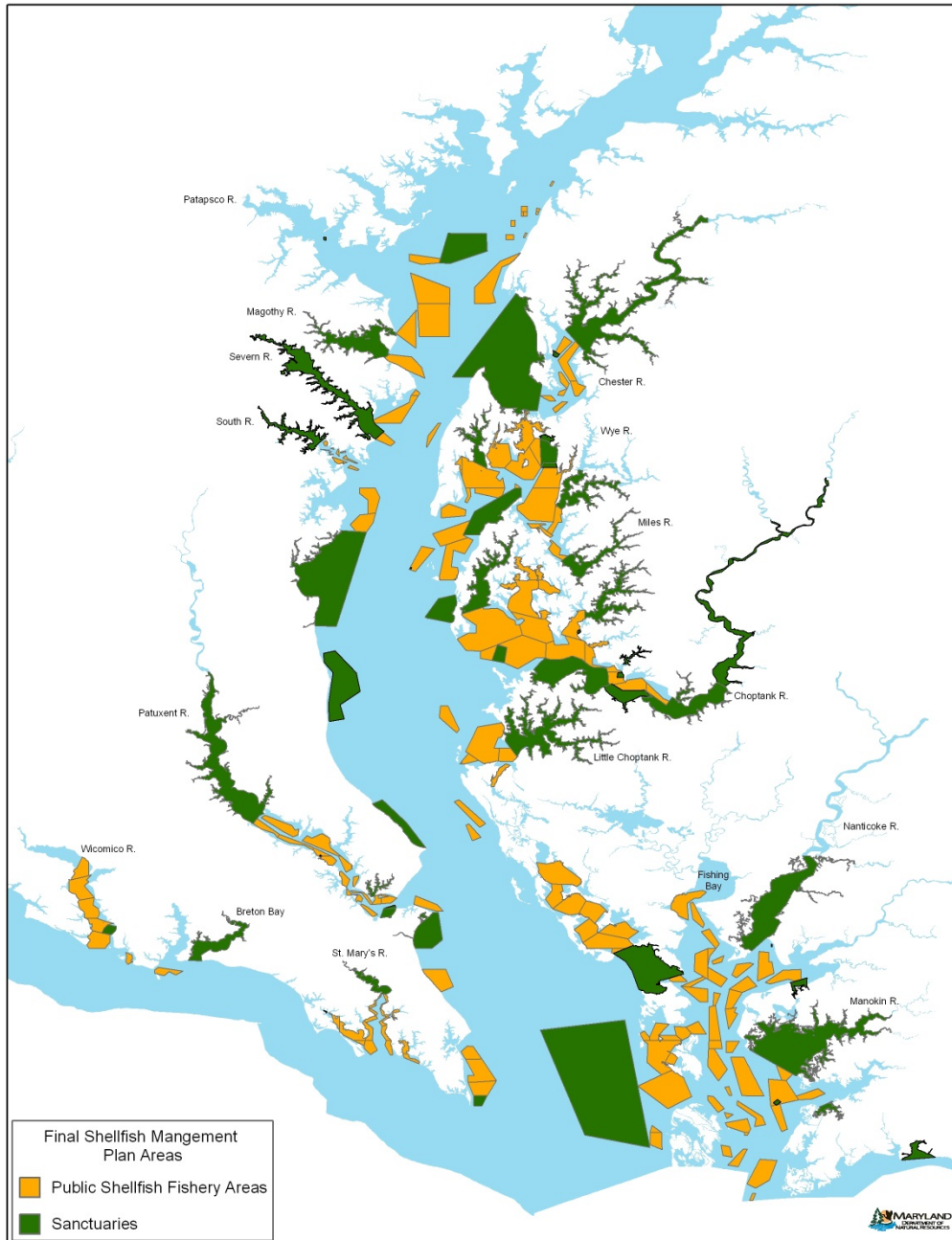
Marylanders Grow Oysters

COLLECTION & PLANTING

(about 9 months after distribution)

- Group effort
- A few days or a few weeks
- Plant while the boat is moving
- DATA... Volunteers.....





SANCTUARY AREAS

MGO oysters are
planted in
sanctuaries

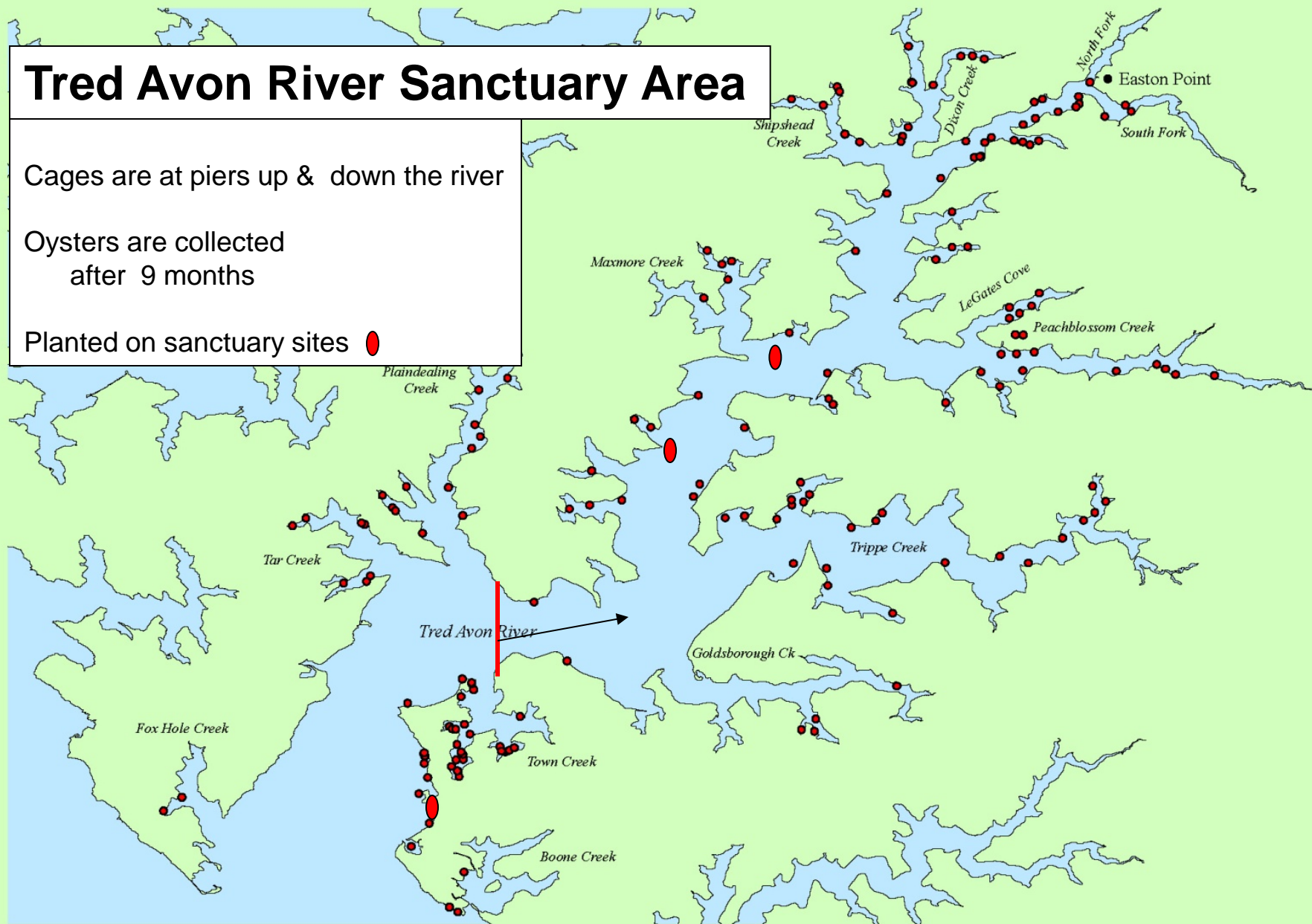
8M+ oysters since 2008

Tred Avon River Sanctuary Area

Cages are at piers up & down the river

Oysters are collected
after 9 months

Planted on sanctuary sites 



Tred Avon River Oyster Growers

Talbot County, Maryland

February 12, 2009

0 0.5 1
Miles

Marylanders Grow Oysters



Issues...



Fatally low salinities

Logistics/Labor



Fouling



Silt

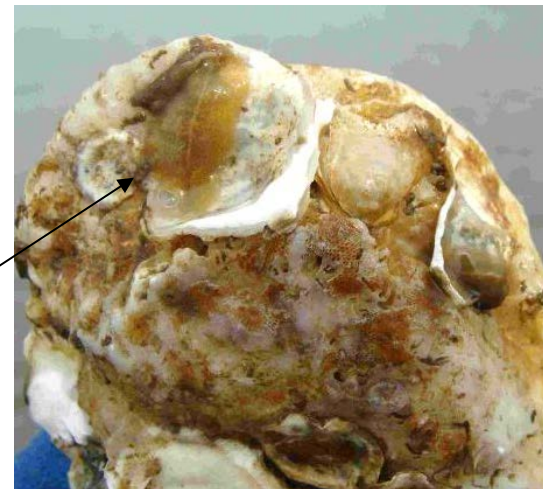
Marylanders Grow Oysters

Low tide in a frigid winter



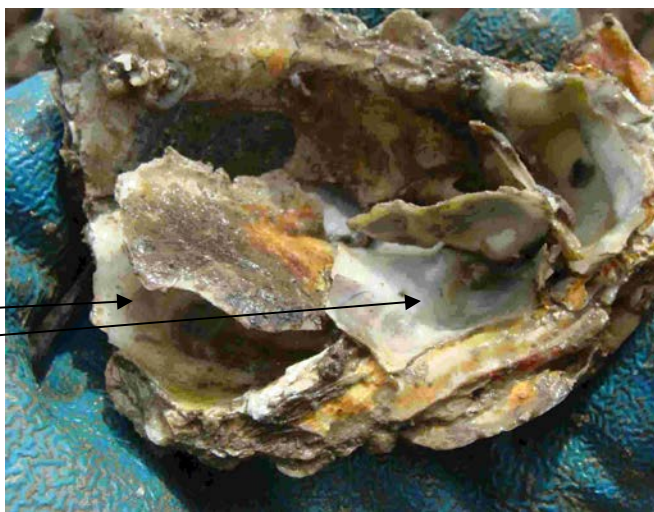
Issues...

Predatory flatworm



Damage by rays

oyster clump snack



Do Not Eat

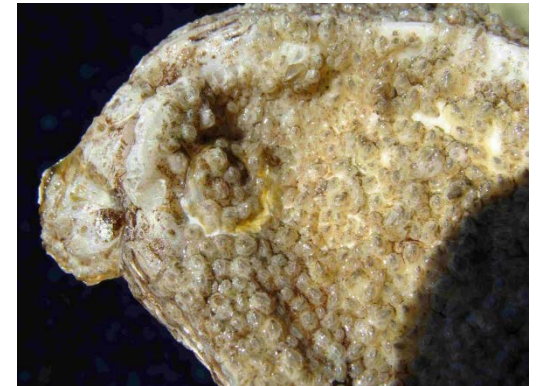


Marylanders Grow Oysters

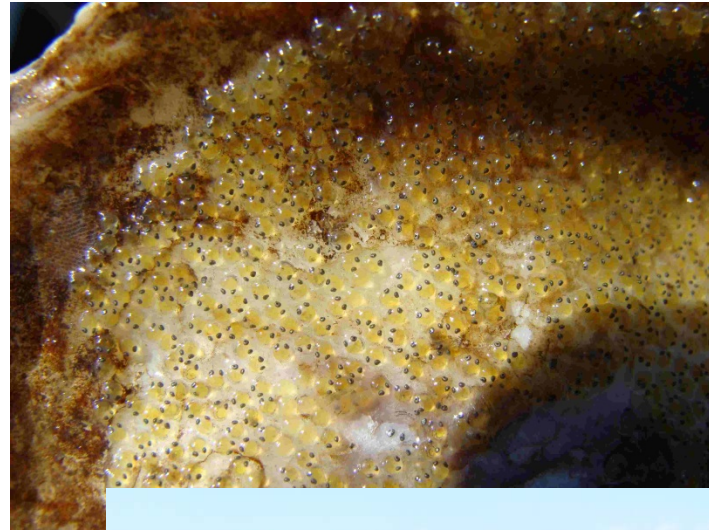
ABUNDANCE of LIFE

Oyster cages and oysters are home to a vast assortment of life.

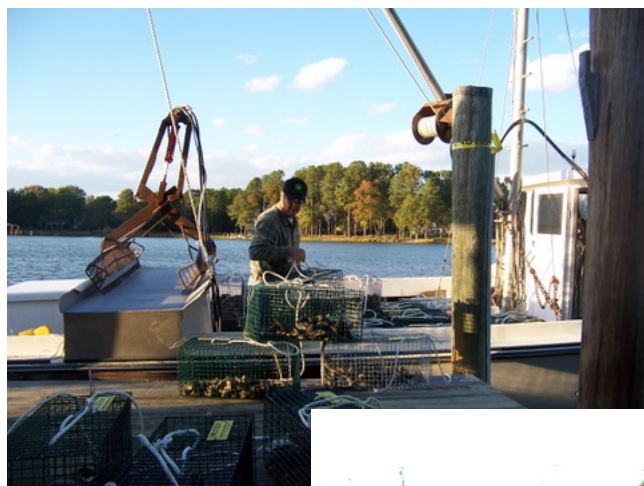
This life continues at the sanctuary.



Marylanders Grow Oysters



OYSTERS.... STEWARDSHIP.... ACTION



Inmates
Students
Residents
Watermen



Mike Sanders

Tidewater Oyster Gardeners Association