



# Back to the Bays

*An initiative of* **Cornell Cooperative Extension** | **Marine Program**

## Shelter Island Stewardship Site

PROJECT UPDATE

WQI Advisory Board – September 7, 2023



# Pilot SOS Oyster Reef

- Surveyed June 1
- 1 sq. ft. quadrat, count and measure all live oysters within area, replicated 3 times randomly
- Results:
  - Avg. size = 27mm, range = 15-59mm
    - Avg. size at deployment = 9mm
  - Avg. # of oysters / sq. ft. = 57
  - Est. total # of oysters on the pilot section of the reef = 42,500
    - Avg. 2 oysters / shell x Est. 21,250 shells deployed  
(25 shells / L x 850 L deployed)



# SOS Oyster Reef

- SI set tank wrapped up for the season
  - 2 rounds totaling 52 cu. ft. of spat-on-shell
- SCMELC set tank utilized to make up shell volume difference
  - 61 cu. ft. of spat-on-shell
- **TOTAL PLANTED:** est. ~567,000 oysters on 113 cu. ft. of shell
- **Next Steps:**
  - Approval for marking out reef with PVC stakes
  - Final survey for the season
  - Signage for reef site?
  - Plan for 2024!







# Back to the Bays

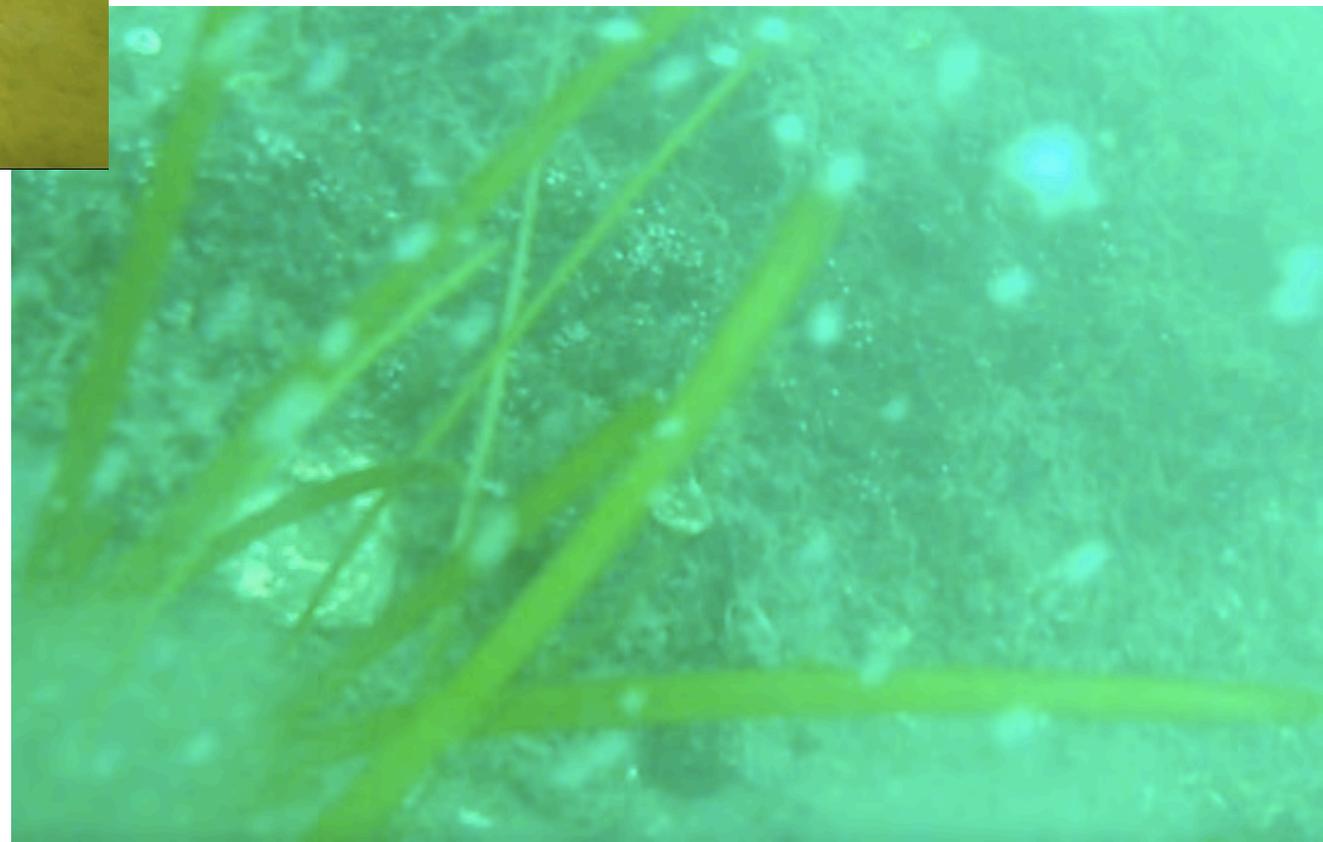
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# Scallop Sanctuary

- Surveyed within marked sanctuary boundary on June 6
- Found 0 scallops HOWEVER also 0 crushed or empty shells + 1 small clump of eelgrass
- Young/small scallops more active than larger ones, so very likely moved outside of designated area (no evidence of mass die off)
- Site lacks significant bottom structure that scallops prefer
- Next Steps:
  - Do another survey closer to seeding time, include area outside of boundary
  - Reassess, possibly select and survey alternate site



# Bay Scallops



- Late June and early July mortality in nursery and field growout in both 2023 and 2022 cohorts
  - Reason unknown – temperature? pH? parasite?
- Currently performing a series of late-season spawns
  - 2022 fall spawn trial study preliminary results show improved survival and resistance to parasite
  - Taking the opportunity to try different nursery methods
- Next Steps:
  - TBD: winter seeding vs. overwinter + seed in spring?





# Eelgrass

- Crab Creek temp logger retrieved in July
  - Looks promising! – groundwater influence, adult scallops, small rooted eelgrass
  - Gardiners Creek logger will be retrieved in the fall (soon!)
- Next Steps:
  - Habitat Team to explore West Neck Bay
  - Determine methodology used (tortilla and/or BuDS) based on site(s)
  - Prepare for fall test plantings

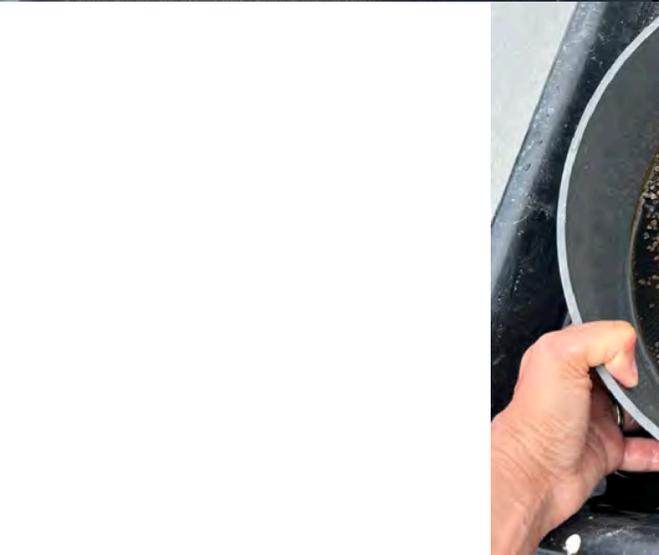




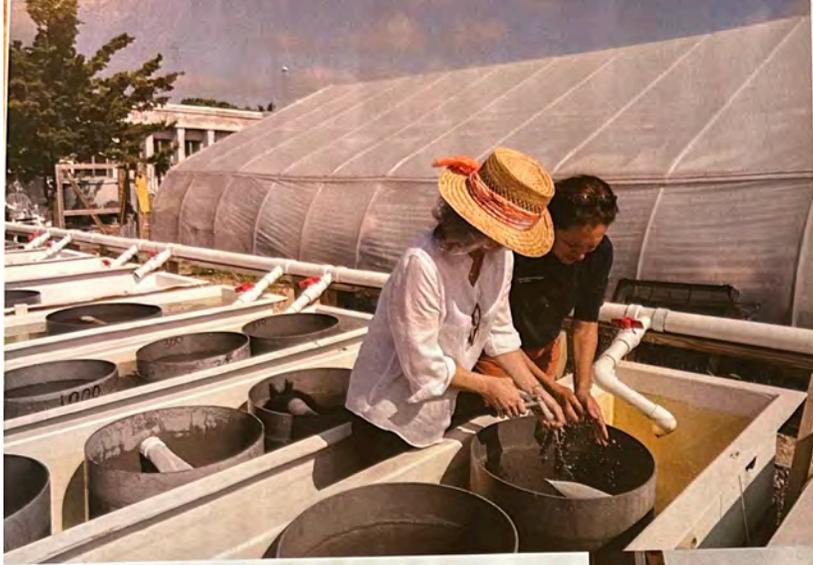
# Hard Clams

- Growing well – *record breaking numbers!*
- 12 barrels in the Mattituck Creek flupsys
- Highlighted in the August Northforker Magazine with the Clamity Janes
- Next Steps:
  - Continual maintenance (cleaning + sieving + dividing) until seeding in October/November
  - Clamity Janes fundraiser seeding party in Southold









**A CLAMMING CALAMITY**

Though these ladies are now seasoned clamming professionals, their brand came shortly after a calamity day where everything went wrong there for it.

Cheryl starts: "Apparently, my friend almost drove the boat ramp."

Steph, not missing a beat, deadpans: "I impaled the rake."

Cheryl volleys: "And then someone else lost the clams. Sunk it."

Steph rebounds: "Sunk it in the boat channel."

Cheryl chuckles. "Our friend called me and Cheryl - it was a calamity without you! And I say Clammy Janes!"

**GIVING BACK**

Because local conservation is very important to them, they kick off with a trip to Suffolk County Marine Environmental Learning Center in Southold to learn more about the Cooperative Extension Marine Program's Back to Bay program, which includes restoration projects to restore clams back into local bays and coves.

Once we all arrive, Kate Rossi-Snook, Back to Bay coordinator, takes us on a tour of the hatchery, where they produce millions of clams in a single day.

We walk past the conditioning tanks for the baby clams (adults), which get separated into 20 to 30 smaller tanks. Kate explains: "In the wintertime, we start making the water warmer. So we're raising the temperature of the water, and this nice rich smoothie kind of thing with algae. After about six to eight weeks of conditioning, they're ready to spawn."

Kate tells me the spawning process is the same for clams and scallops. "Bivalves are broadcast spawners. The females release the eggs into the water column, and the sperm, they become fertilized, and within 24 hours, they're ready to divide."

She continues: "It takes about two weeks for the clams to look like teeny tiny actual clams, even still. From there, we're constantly sieving them and separating them. They don't outcompete, and then we move them to larger tanks, and then eventually to the FLUPSYs over in the bay, ready for reseeding in the fall."

The whole process, from spawning to seeding, takes about three months, she says.

The Janes got involved with the marine center through a donation to the program. "We made a donation to the program, and they adopted 350,000 baby clams! In November, we'll release them into local water, and we'll do that again this year as part of a fundraising event attached to it."

She continues: "[Clamming] gives us a lot of joy and pleasure, and we love sharing it with people. But

2023 AUG



(top left) Stephanie with Kate Rossi-Snook, Back to the Bays Aquaculture Coordinator at the Suffolk County Marine Environmental Learning Center, cleaning the filters and sides of the nursery upwellers that pump in fresh water from the bay to hundreds of thousands of tiny baby clams, (top right) Looking at baby scallops

that are each about the size of a grain of sand on a screen projecting images from a microscope, (bottom left) Hatchery downwellers provide a slow, constant stream of fresh water to the bivalves.

# Stewardship / Outreach / Education

- ✓ May 5: Shell Bagging – *6 volunteers*
- ✓ May 17: Oyster Reef Lecture
- ✓ June 5: Set Tank Prep – *5 volunteers*
- ✓ June 9: Larvae Day – *3 volunteers*
- ✓ July 11: SOS Planting #1 – *18 volunteers*
- ✓ July 22: Installed Set Tank Signage
- ✓ July 23: SOS Planting #2 – *12 volunteers*
- ✓ July 26: Mashomack Oyster Reef Talk

# Stewardship / Outreach / Education

- ✓ August 10: SOS Planting #3 – *4 volunteers*
- ✓ August 12: Sylvester Manor Farm Stand Touch Tank
- ✓ August 26: SOS Planting #4 – *10 volunteers*

## Next Events:

- September 9: On the Water + In the Field Screening
- September 14: Chequit Oyster Happy Hour *\*tentative\**
- September 24: Mashomack Oyster Reef Talk
- TBD: PreK School Program *\*tentative\**
- TBD: Recreation Center After School Series





# Thank You!



Please do not hesitate to contact me with any questions:

Kate Rossi-Snook

[kr474@cornell.edu](mailto:kr474@cornell.edu)

631-353-9888