



Wellfleet Shellfish Department



300 Main Street, Wellfleet, Massachusetts 02667

DATE: October 20, 2023

TO: Leon Shreves, Chair, Wellfleet Conservation Commission and members
Barbara Brennessel, John Cumbler, Benjamin Fairbank, Michael Fisher, Martin Murphy, Robert Stewart
Leslie Reynolds, Acting Superintendent Cape Cod National Seashore
Sophia Fox, Research Manager, National Park Service
Lauren McKean, Park Planner, National Park Service
Geoff Sanders, Chief of Natural Resource Management and Science, Cape Cod National Seashore

CC: Jennifer Elsensohn, Health & Conservation Dept., Wellfleet
Richard Waldo, Town Administrator, Wellfleet
Purvi Patel, Mass. Environmental Protection Agency
Cally Harper, Mass. Department of Environmental Protection, Waterways Div.
Town of Wellfleet Shellfish Advisory Board
Don Munroe, Coastal Engineering

RE: WSD comprehensive cultching report 2020 to 2023

Dear Mr. Shreves and Conservation Commission members and Acting Cape Cod National Seashore Superintendent Reynolds:

The Wellfleet Shellfish Department appreciates the ongoing collaboration that allows us to continue the town's century-old practice of placing sea clam cultch in Wellfleet Harbor as part of its yearly propagation efforts.

We wanted to follow up on a couple of things discussed in the Conservation Commission's August 2, 2023, meeting. First, we wanted to let you know that we received clarification both from the Mass. Division of Marine Fisheries and Mass. DEP that placing spat-on-shell is NOT covered under our state propagation permit, as I mistakenly believed, but rather is required under our cultching permits. Our spat-on-shell bags are currently being moved from Chipman's Cove where we put them in June to inside the boundaries of Area 5 permitted in our Conservation Commission Order of Conditions and our state DEP certifications (WQC and Chapter 91). These are not included in this report but are being tracked and can be provided at a later time.

At your August 2 meeting, you asked the Shellfish Department to prepare a comprehensive report on our cultching activities. Previously, we had tried tracking our cultch strips, and upon doing further research, I was able to upload additional data from our handheld GPS from 2020 through 2022 into Google Earth. See attached maps of these cultch strips in relation to the permitted areas, which we now have also uploaded to our GPS. Following this memo are two sets of maps: (1) close ups of cumulative cultch

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strips in each area from 2020-2023, and (2) maps of Noth and South Wellfleet for each year's cultching, 2020-2023.

We received our state permits last year after our cultching operations had concluded, so this is the first year we walked the bottom with our GPS inside the final permitted areas using the coordinates from our permit, and then put buoys out based on these site visits. Using our GPS, we tracked our strips as we laid them, and then uploaded the permitted area coordinates and our strips to Google Earth.

As you can see on the 2023 maps, there are places where we went outside of the boundaries of the permitted areas. There are multiple explanations for this:

- our first time using these instruments, and we are doing so to the best of our ability,
- the limitations of our technology (our GPS is accurate to 3-10 feet and Google Earth is accurate to 15-30 ft.),
- the inherent inaccuracies of laying strips at high tide with wind, currents and buoys that move, as opposed to when we walk the dry bottom at low tide, and
- the dynamic nature of the marine environment with currents and tides as well as wind induced littoral transport.

We are exploring solutions that will both benefit Wellfleet Harbor and its shellfishing community and ensure we comply with the Conservation Commission's Order of Conditions and our state certifications. Since that meeting, we have had the actual boundary lines of each permitted area uploaded onto our GPS so that we can clearly see when we are "inside the lines" as opposed to how we did it this year, which was by boundary points, which made it difficult to understand where we were in the field. We already tested this with Area 5 and moving the cultch bags, and we are accurate. We will use these going forward each year.

Another avenue we are pursuing is the expansion of our cultching areas. We are already feeling the limitations of our current permitted areas due to the fact that the "polygons" are finite, and once we place cultch, oysters grow. Once oysters grow, we can no longer place cultch there as it would be a detriment to these living shellfish resources. The placement of cultch is enhancing our natural harbor environment, and the Town has been doing this since at least 1908. Our successful program will mean we will need more area in the future, so we are working with Coastal Engineering to seek permitting for expanded areas in Wellfleet Harbor for cultching. We met with MEPA this week about submitting a Notice of Project Change and the analysis and notifications we will need to provide. We will work with both the Cape Cod National Seashore and Conservation Commission during this process, so you are able to make a determination regarding additional permitting and requirements.

Here is our full and final 2023 cultching report by permitted area. Our operations ran from June 2 to 16, 2023.

- 1) We did not place any cultch in area 1 this year.
- 2) We placed about 20-22 strips here this year, and unfortunately missed the mark on getting inside the area. We are confident with the boundary lines in our GPS now, and this missing the mark shouldn't happen again.
- 3) We did not place any cultch in area 3 this year.
- 4) We did not place any cultch in area 4 this year.
- 5) We placed five strips of cultch here this year.
- 6) Area 6 is comprised of three areas in the Herring River.
 - A. We placed eight cultch strips here this year, and an additional one outside of the area as we began at the wrong buoy for the first strip.
 - B. We placed about a dozen cultch strips in this area, and unfortunately, while they all began inside the boundary, most of them finished outside the boundary.
 - C. We did not place cultch here this year.
- 7) We placed one cultch strip here.
- 8) Area 8 is comprised of two areas in Blackfish Creek.
 - A. We placed eight cultch strips here this year.
 - B. We did not place cultch here this year.

Because of an oversight on my part which I discovered when I went back into the GPS, I did not include data for six rows of cultch we placed on Smalley's Bar this year in the original maps provided for your August 2 meeting. They are in the updated maps attached. We understand that we are not allowed to do this. We will not place cultch outside of permitted areas again.

The Shellfish Department is working hard to make sure that we get the strips in the right locations under our current permitting. We are learning that this is not as exact a science as we would have thought. While we recognize that placing cultch outside of the permitted areas is not detrimental to the marine environment as it increases shellfish resources and biodiversity and contributes to improved water quality, we place a high value on getting it right and working under the Commission's review to provide this benefit to the Town. We look forward to continuing to see these harbor improvements, as well as water quality improvements due to our cultching program.

I look forward to our discussions and welcome any ideas on how we might be able to do a better job. We are committed to working within the Order of Conditions and DEP permitting to ensure a sustainable oyster fishery for the Town of Wellfleet in the future. Sincerely,



Nancy Civetta, Shellfish Constable



Johnny Mankevetch, Asst. Shellfish Constable

Total Strips Laid in Designated Cultch Areas from 2020 to 2023

COLOR KEY:

2023=lilac/pink

2022=coral/salmon

2021=peach

2020=yellow

Area 1 – 3 strips, in and near



COLOR KEY:

2023=lilac/pink

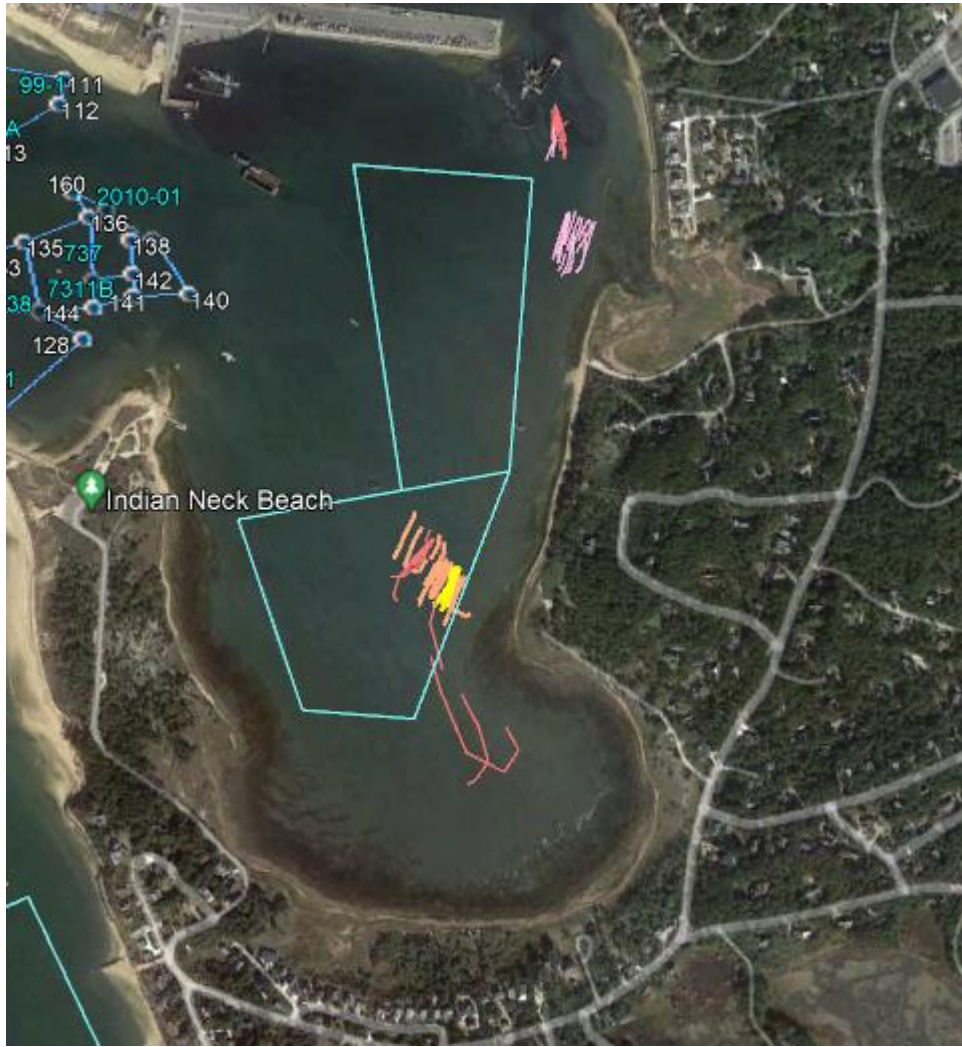
2022=coral/salmon

2021=peach

2020=yellow

Area 2 - 32 near

Area 3 -28 total (26 in, 2 near)



COLOR KEY:

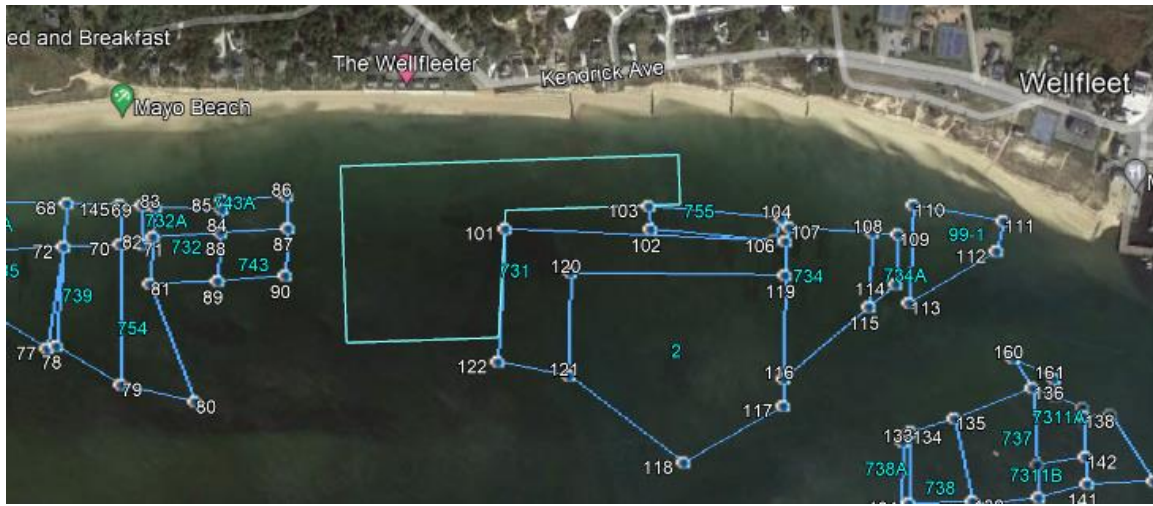
2023=lilac/pink

2022=coral/salmon

2021=peach

2020=yellow

Area 4 – No strips. It is a bathing beach so we have not used the area.



COLOR KEY:

2023=lilac/pink

2022=coral/salmon

2021=peach

2020=yellow

Area 5 – 16 (11 in, 5 near)

Area 6 – Herring River

6A - 9 total (8 in, 1 near)

6B - 34 total (9 in, 25 near)

6C - 0 There were strips laid **near** this area because we mistakenly thought that the area we call the Dandy Hole where we did lay them was the permitted area 6C.



COLOR KEY:

2023=lilac/pink

2022=coral/salmon

2021=peach

2020=yellow

Area 7 - 19 total (3 in, 16 near)



COLOR KEY:

2023=lilac/pink

2022=coral/salmon

2021=peach

2020=yellow

Area 8 - Blackfish Creek

8A - 64 total (47 in, 17 near) A corner of this area cannot be used because there are grants on it.

8B - 0 This area cannot be used because of deep water on one side and grants on the other side.



COLOR KEY:

2023=lilac/pink

2022=coral/salmon

2021=peach

2020=yellow

Strips of cultch laid Outside of Designated Boundaries 2020 - 2023

Lieutenant Island 2020

West Side – 13 strips

North Side – 4 strips

South Side – 3 strips



COLOR KEY:

2023=lilac/pink

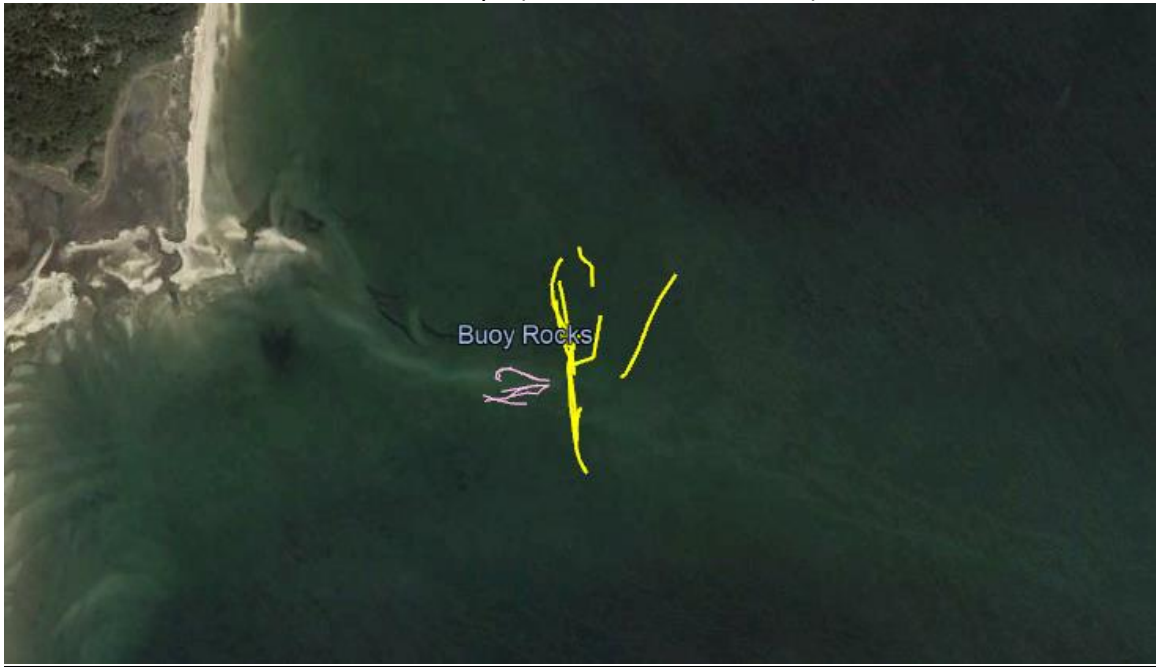
2022=coral/salmon

2021=peach

2020=yellow

Smalley Bar/Buoy Rocks - 2020 8 strips (1,660 feet from shore)

2023 6 strips (1,460 feet from shore)



COLOR KEY:

2023=lilac/pink

2022=coral/salmon

2021=peach

2020=yellow

Area near Indian Neck 2021 – 1 strip



COLOR KEY:

2023=lilac/pink

2022=coral/salmon

2021=peach

2020=yellow

Loagy Bay 2021– 15 strips



COLOR KEY:

2023=lilac/pink

2022=coral/salmon

2021=peach

2020=yellow

Great Island 2021 – 2 strips (1,510 feet from shore)



Great Island 2022 – 13 strips (We believed this was Area 6C, which we call the Dandy Hole.)



Breakout of Strips Laid Each Year

Strips Laid in Designated Cultch Area 2020 (North and South Wellfleet)

Area 1 - 0

Area 2 - 0

Area 3 Chipman's Cove – 8 strips

Area 4 Mayo- 0

Area 5 - 2 strips

Area 6 –Herring River

Area 6A – 0

Area 6B – 11 near

Area 6C - 0

Area 7 Burton Baker – 18 strips (2 in, 16 near)

Area 8 Blackfish Creek

8A Pleasant Point – 10 strips (8 in, 2 near)

8B – 0



Strips laid in Designated Cultch Area 2021 (North and South Wellfleet)

Area 1 – 0

Area 2 - 0

Area 3 Chipman’s Cove – 12 strips

Area 4 Mayo – 0

Area 5 – 5 strips (3 in, 2 near)

Area 6 – 3 areas in the Herring River

Area 6A - 0

Area 6B – 3 strips

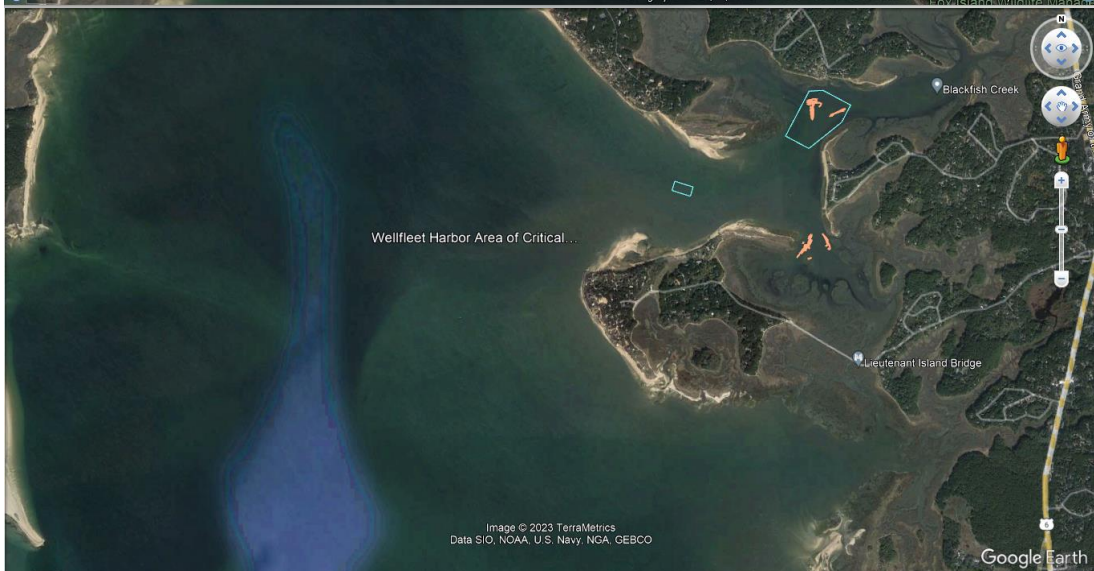
Area 6C - 0

Area 7 Burton Baker - 0

Area 8 Blackfish Creek

8A Pleasant Point– 23 strips

8B – 0



Strips laid in Designated Cultch Area 2022 (North and South Wellfleet)

Area 1 – 3 in and near

Area 2 – 0 in, 10 near

Area 3 Chipman's Cove -8 strips (6 in, 2 near)

Area 4 Mayo - 0

Area 5 – 4 strips (1 in, 3 near)

Area 6 – 3 areas in the Herring River

Area 6A -0

Area 6B – 21 in or near (6 in, 14 near)

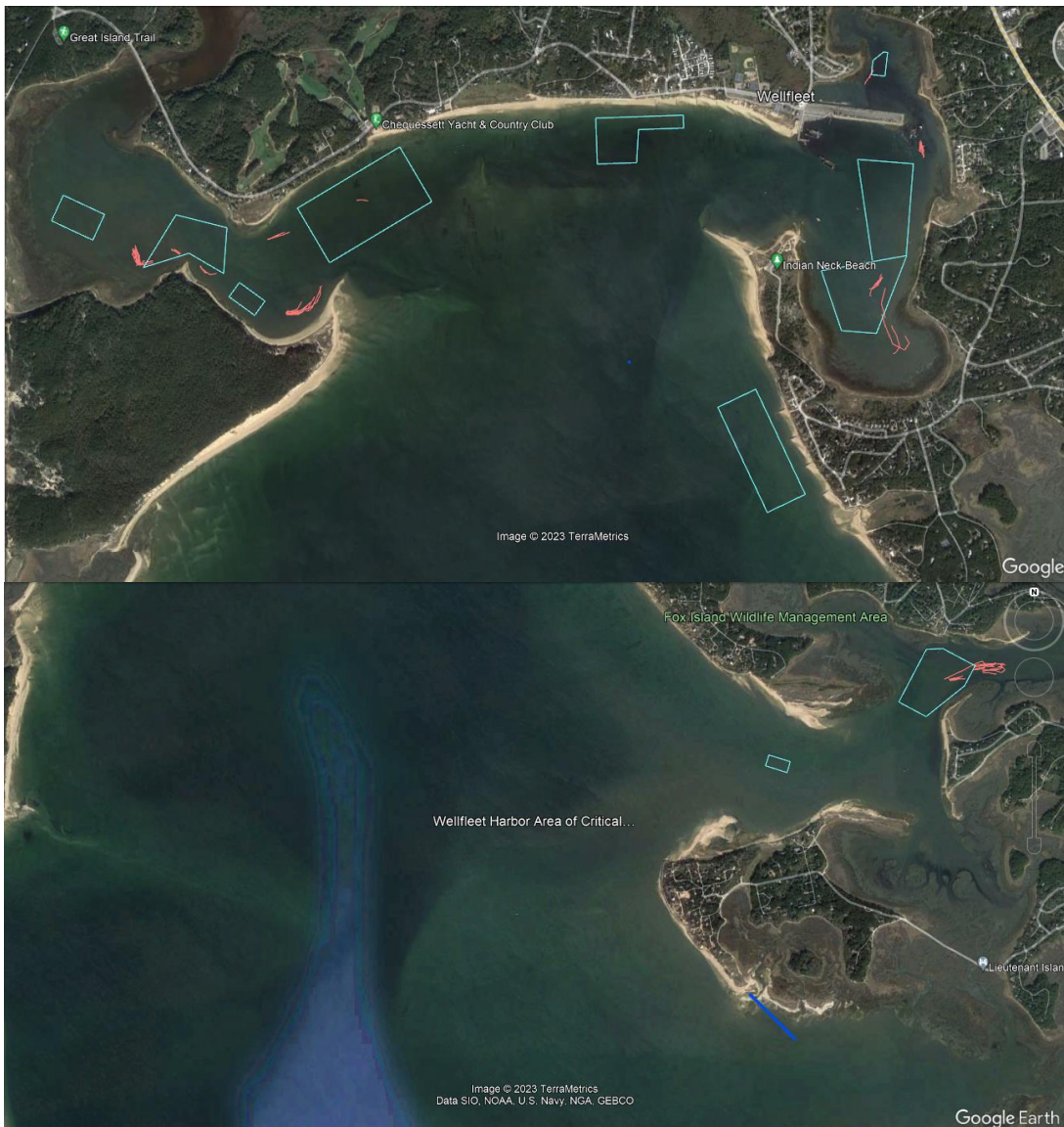
Area 6C - 0

Area 7 Burton Baker – 0

Area 8 Blackfish Creek

8A Pleasant Point – 23 strips (8 in, 15 near)

8B - 0



Strips laid in Designated Cultch Area 2023 (North and South Wellfleet)

Area 1 – 0

Area 2 – 0 in, 22 near

Area 3 – 0 strips

Area 4 Mayo– 0

Area 5 – 5 strips

Area 6 – 3 areas in Herring River

 Area 6A – 9 Strips (8 in, 1 near)

 Area 6B – 0

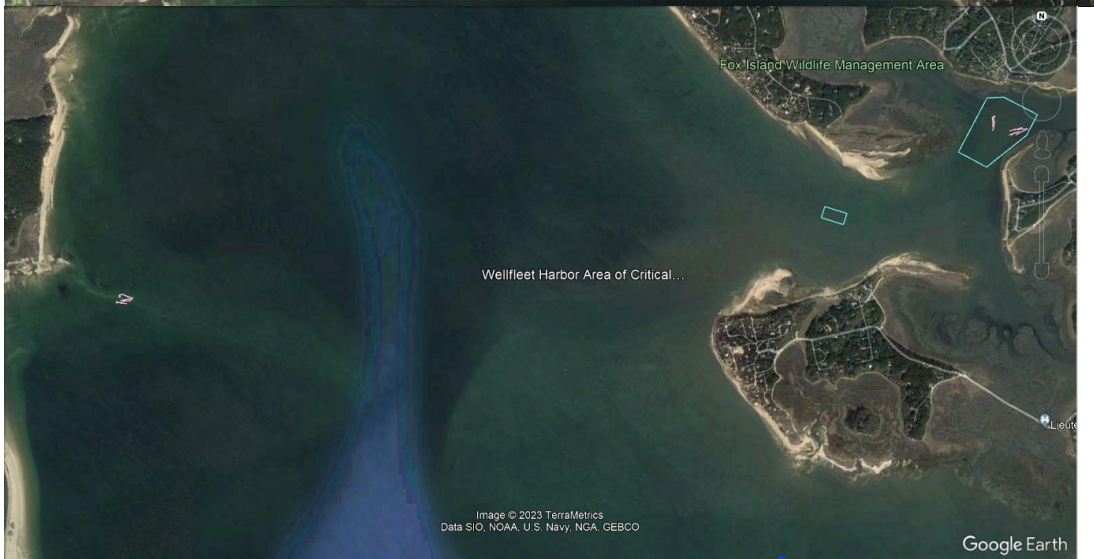
 Area 6C - 0

Area 7 Burton Baker– 1 strip

Area 8 Blackfish Creek

 8A – 8 strips

 8B - 0



Cumulative Totals 2020-2023

270 total strips deposited
107 in permitted areas
98 near permitted areas
65 outside permitted areas

When cultch strips are laid on the bottom, they are typically about 100 feet long, about two feet wide and our goal for relief height is six inches. This relief settles down over time. Each strip we lay is equal to six yards of whole shell. Six yards of whole shells weighs 4,240 pounds. So, in four years, we have deposited 1.14M pounds of cultch throughout Wellfleet Harbor as demonstrated on the maps above. We source the shell from Atlantic Capes Fisheries and age it over the winter. In 2022, we also used two loads of oyster and quahog shells from Mass Oyster Project's restaurant shell recycling program, which had aged for more than a full calendar year. These two strips were deployed inside Area 3 next to sea clam shell for a comparative study they were doing.

Please see photos of our efforts attached.