

September 29, 2020

Town of Harwich
Conservation Commission
732 Main Street
Harwich, MA

Attn: Amy Usowski, Conservation Agent

RE: Shellfish Survey Report, Proposed Pier, 41 Nons Road, Harwich, MA Job #50436.00

Dear Ms. Usowski and Members of the Conservation Commission:

BSC Group, Inc. (BSC) is pleased to submit this Shellfish Survey Report on behalf of Andy Pye (the Applicant), for the property located at 41 Nons Road, (the Site). On September 10th, 2020 Paul Mancuso and Hannah Raddatz, wetland scientists of BSC Group complete a shellfish survey at a proposed pier location at 41 Nons Road. The survey commenced at 12:00 pm as low tide was approaching.

The results from this shellfish survey are being included as part of the applicants Notice of Intent (NOI) package for the proposed pier at the Site. The Site has been designated as suitable for quahogs (*Mercenaria mercenaria*) and softshell clams (*Mya arenaria*) according to Mass Division of Marine Fisheries (See Shellfish Suitability Map). Land Containing shellfish is a recognized resource area under the Mass WPA and the Town of Harwich Wetlands Regulations and therefore the purpose of this survey was to provide the Harwich Conservation Commission an accurate report on the existing shellfish community at the Site.

BSC's used the following methodology to complete the shellfish assessment at the Site. A total of 8 transects were surveyed in the proposed pier location. Each transect ran parallel to the proposed pier location and each transect was separate by 10'. The centerline of the proposed pier is located between transects 4 and 5. Either 7 or 8 plots were surveyed along each transect using a standard clam rake. Each transect began with Plot 8 and continued seaward in descending order. If sediments became too mucky or the water was too deep (>5') only 7 plots were surveyed on a transect. There was 10' of separation between the edge of each plot and each plot surveyed was 3' x 3' wide and 1.5' deep. All shellfish found during the survey were counted and classified by size. Four size classes were used;

- 1 - Seeds are less than 1.5"
- 2 - Littlenecks are between 1.5" - 2",
- 3 - Cherrystone are between 2" - 3"
- 4 - Chowders are greater than 3"

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The table below summarizes the results from the shellfish survey.

Table 1: Shellfish Survey Results

Plot #	Seed	Littleneck	Cherrystone	Chowder	Total
Transect 1					
Plot 1	-	-	-	1	1
Plot 2	-	2	-	1	3
Plot 3	-	2	-	-	2
Plot 4	-	-	-	-	0
Plot 5	-	-	-	1	1
Plot 6	-	-	-	-	0
Plot 7	-	-	-	-	0
Plot 8	-	-	-	-	0
Transect 2					
Plot 1	-	-	-	-	0
Plot 2	-	-	1	1	2
Plot 3	-	2	1	1	4
Plot 4	-	-	-	-	0
Plot 5	-	2	3	-	5
Plot 6	-	-	1	-	1
Plot 7	-	-	-	-	0
Plot 8	-	-	-	-	0
Transect 3					
Plot 1	-	-	-	-	0
Plot 2	-	-	-	-	0
Plot 3	-	-	-	-	0
Plot 4	-	-	-	-	0
Plot 5	-	-	-	-	0
Plot 6	-	-	-	-	0
Plot 7	-	-	-	-	0
Plot 8	-	-	-	-	0
Transect 4					
Plot 1	-	-	-	-	0
Plot 2	-	-	1	-	1
Plot 3	-	-	-	-	0
Plot 4	-	-	-	-	0
Plot 5	-	-	-	-	0
Plot 6	-	1	-	-	1
Plot 7	-	-	-	-	0
Plot 8	-	-	-	-	0
Transect 5					
Plot 1	-	1	-	1	2
Plot 2	-	2	-	-	2
Plot 3	-	-	-	-	0
Plot 4	-	2	-	-	2
Plot 5	-	-	-	-	0
Plot 6	-	-	-	-	0
Plot 7	-	-	-	-	0
Plot 8	-	-	-	-	0



Plot #	Seed	Littleneck	Cherrystone	Chowder	Total
Transect 6					
Plot 1	-	2	-	1	3
Plot 2	-	2	-	-	2
Plot 3	-	-	-	-	0
Plot 4	-	-	-	-	0
Plot 5	-	-	1	-	1
Plot 6	-	-	-	-	0
Plot 7	-	-	-	-	0
Transect 7					
Plot 1	-	-	-	-	0
Plot 2	-	-	-	-	0
Plot 3	-	-	-	-	0
Plot 4	-	1	-	-	1
Plot 5	-	-	1	-	1
Plot 6	-	-	-	1	1
Plot 7	-	-	-	-	0
Transect 8					
Plot 1	-	-	-	-	0
Plot 2	-	2	1	-	3
Plot 3	-	1	1	-	2
Plot 4	-	-	-	1	1
Plot 5	-	-	-	1	1
Plot 6	-	-	-	-	0
Plot 7	-	-	-	-	0

Sixty-one plots (3" x 3" x 1.5") were surveyed around the proposed pier location. The following totals were observed....

Total Seeds: 0

Total Littlenecks: 22

Total Cherrystones: 11

Total Chowders: 10

Total Quahogs: 43

On each transect, Plot 7 and 8 of each transect were often located within salt marsh. These plots were not excavated to look for shellfish as quahogs do not burrow in salt marsh peat. The salt marsh was in good condition. The salt marsh vegetation is dominated by smooth cordgrass (*Spartina alterniflora*) and had a healthy population of ribbed mussels (*Geukensia demissa*) and fiddler crabs (*Uca pugnax*) present. Moving seaward, plot 6 through plot 4 generally had fine sandy sediment at the top 1' and had coarse sandy sediments between 1' – 1.5' depth. Plot 3 through plot 1 generally was comprised of mucky sandy sediments. Moving seaward beyond plot 1 became very mucky with the surveyors sinking over 1.5" into the muck.

The quahogs observed seem evenly distributed throughout the survey area. While there is not a dense population of quahogs at the Site, the area is suitable for shellfish. No softshell clams were observed during the survey. Much of the Site had patches of green



algae known as sea lettuce (*Ulva lactuca*). Periwinkles were abundant in the intertidal area as well. On shore, remnants (shells) from dead quahogs and mussels were found.

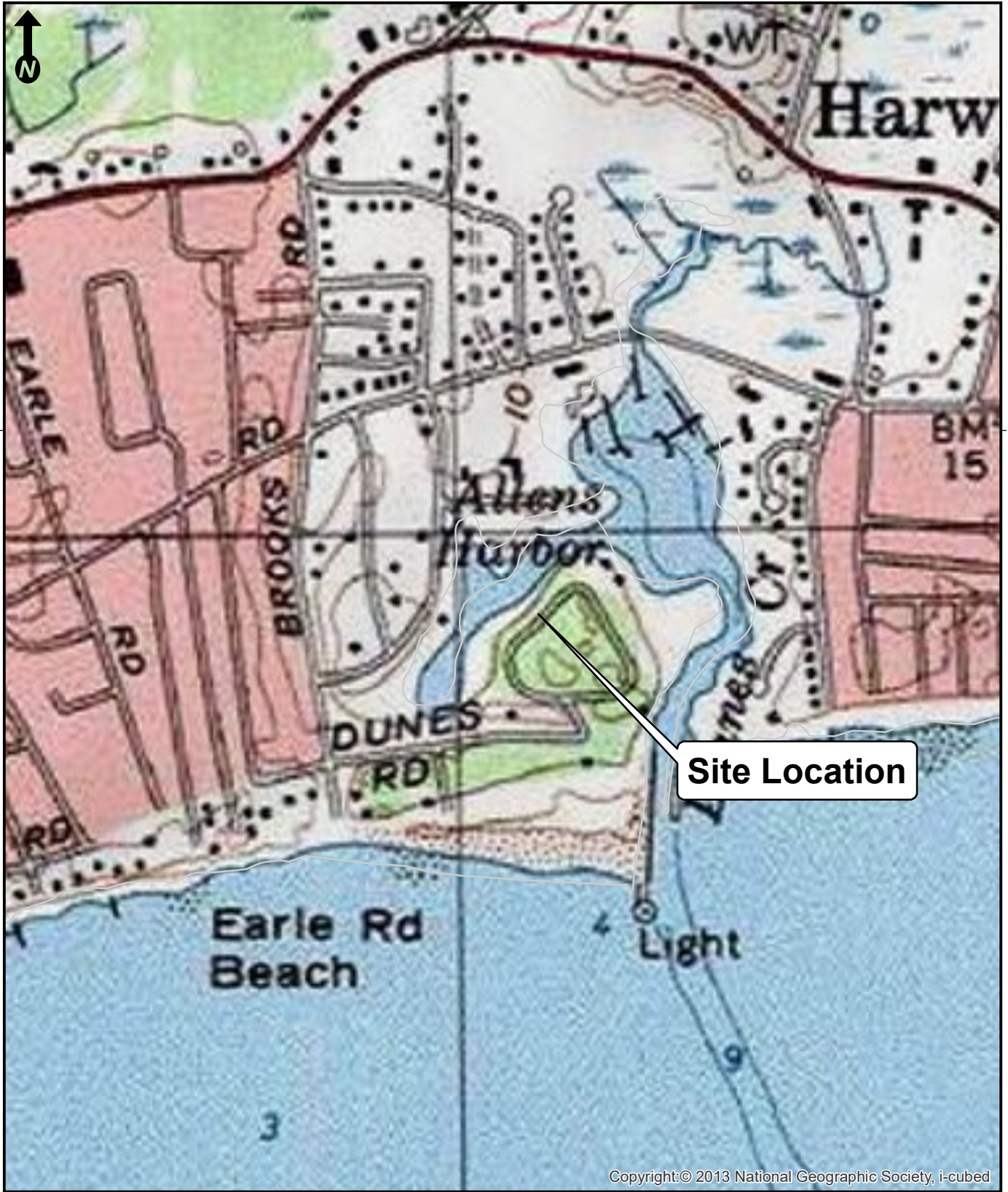
Attached at the end of this report are photos from the shellfish survey and a Shellfish Suitability Map. If you have any questions or require additional information, please contact me at (508) 778 - 8919.

Truly yours,

BSC GROUP, INC.

Matthew Creighton, PWS, MVP
Manager of Ecological Services – West Yarmouth
Senior Associate/Coastal Scientist

cc: Andy Pye, 13 Old County Road, Chester, CT, 06412



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Scale:
1 inch = 833 feet
0 440 880
Feet
(page size: 8.5 X 11)

**41 NONS ROAD
HARWICH, MA**
USGS Site Locus Map

Source: 2013
National Geographic
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Photo 1: View of the proposed pier location. The two white PVC pipes are on line with proposed pier. *Facing northeast*

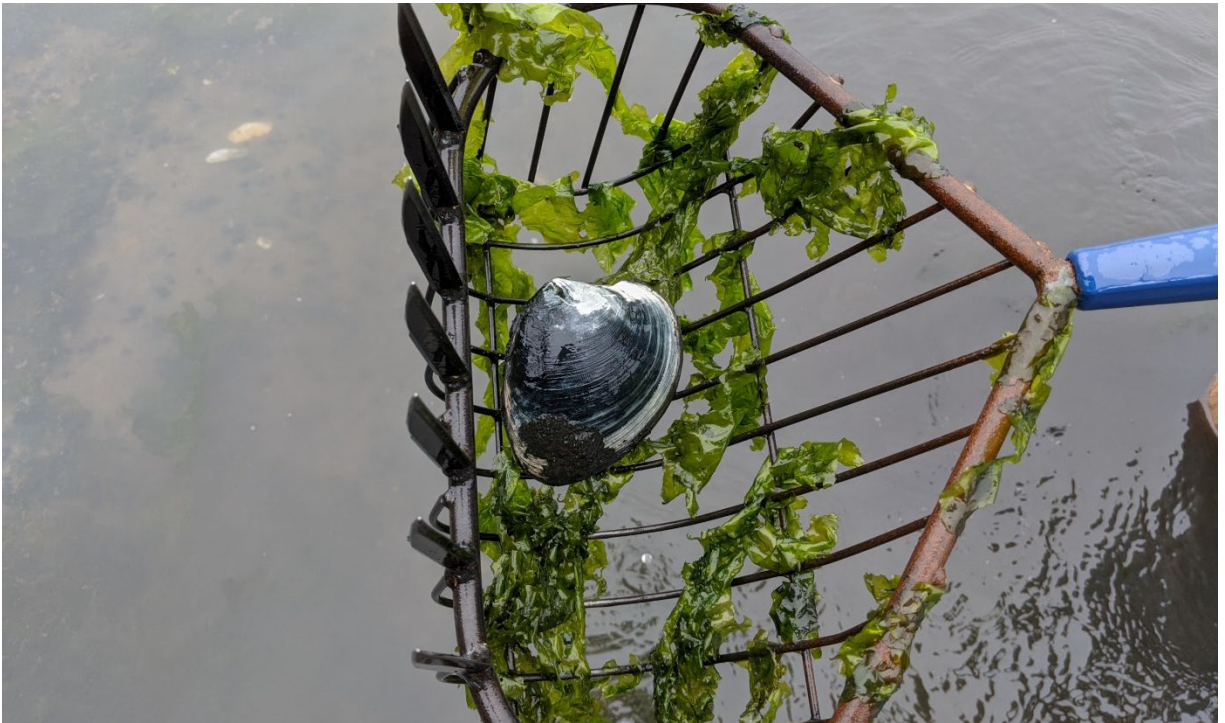


Photo 2: View of a Cherrystone quahog observed during the shellfish survey. *Facing west*



Photo 3: View of a section of salt marsh at the Site. Ribbed mussels were observed within the *Spartina alterniflora*. Facing northeast



Photo 4: View of a Cherrystone and a Littleneck quahog observed during the shellfish survey. Facing west