

ECR

Environmental Consulting & Restoration, LLC



January 16, 2025

Morse Engineering
10 New Driftway, Suite 303
Scituate, MA 02066

RE: Shellfish Survey, 35 Bel Air Road, Hingham, Massachusetts

Dear Morse Engineering, Inc.:

Environmental Consulting & Restoration, LLC (ECR) is pleased to present you with this Shellfish Survey Report to accompany the proposed pier, ramp and float reconstruction project located at 35 Bel Air Road in Hingham (the site). The shellfish survey was conducted on January 10, 2025, during a low tide event within and near the footprint of the proposed project. The results of the survey have been summarized in the attached report.

Enclosed for your review is the Shellfish Survey Report with attachments. Upon review, please contact me with any questions or requests for additional information at (617) 529 - 3792 or Brad@ecrwetlands.com

Sincerely,
Environmental Consulting & Restoration, LLC



Brad Holmes, PWS, MCA
Manager

Cameron Larson
Wetland Scientist

SHELLFISH & EELGRASS SURVEY
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SHELLFISH SURVEY REPORT

1. Introduction

On January 10, 2025 Environmental Consulting & Restoration, LLC (ECR) conducted a shellfish survey within the vicinity of the proposed pier, ramp, and float reconstruction project intended to provide recreational access to Hingham Bay for the property owners at 35 Bel Air Road in Hingham (the site). The survey was conducted during a low tide event with good weather consisting of clear skies, light wind and cold temperatures (35 degrees). The purpose of this survey was to determine the quantity of shellfish and the quality of habitat within and near the site. Furthermore, ECR also evaluated the condition of the coastal resource areas to determine what impacts, if any, would result from proposed work at the site. The findings and results of the survey are summarized below.

2. Site Description

The site is located to the north of Bel Air Road along the southern shore of Hingham Bay. The site is a residential property consisting of a single-family home, associated driveway, maintained lawn, landscaped areas, wooden seawall, deck and a pier. The site abuts the coastal wetland resource areas associated with Hingham Bay to the rear of the home. The coastline onsite includes a Salt Marsh immediately below the existing seawall that merges with a rocky intertidal area. The intertidal area and the area adjacent to the site below mean low water consists of sandy, silty sediments with a significant amount of cobble. The proposed project includes reconstructing the existing pier, ramp and float to include new 12-inch diameter piles to support the pier and the removal of the moorings used to anchor the float. The float is proposed to be supported by new 12-inch diameter piles. The proposed project occurs within the resource areas of Land Under the Ocean, Land Containing Shellfish, Rocky Intertidal Shore, Salt Marsh and Land Subject to Coastal Storm Flowage. For more information regarding the existing site conditions, please refer to the photograph pages.

Review of the Mass Mapper data viewer indicates the following:

1. The site is not located within Estimated/Priority Habitat for Rare Species according to the Massachusetts Natural Heritage & Endangered Species Program (MaNHESP).
2. The site does not contain or is near Certified Vernal Pools according to the MaNHESP.
3. The site does not contain or is near a U.S.G.S. mapped stream.
4. The site is not located within an Area of Critical Environmental Concern.
5. The site does contain areas mapped as Land Subject to Coastal Storm Flowage (FEMA Flood Zone VE).
6. The area to the north of the home is located within an area mapped by the Massachusetts Division of Marine Fisheries (MA DMF) as suitable habitat for soft-shell clams, and blue mussels.
7. The offshore area to the north of the home is located within an area mapped by MA DMF as "Conditionally Restricted" shellfish growing areas.

3. Shellfish Survey

The shellfish survey was conducted on January 10, 2025 during a low tide event at approximately 2:07 PM with a predicted tide of -0.2 feet. To document shellfish and shellfish habitat, a total of 11 examination plots along three transects were conducted along with several additional random plots within the vicinity of the existing pier. Each plot was sampled by hand

using appropriate shellfish rakes within and near the project area. Plots were conducted along 3 transects (transects A, B, and C) located within and near the project area. Transect A was located west of the proposed pier centerline, transect B was located within the centerline of the proposed pier, and transect C was located east of the proposed pier centerline. The plots extended seaward beyond the extent of the proposed float. Each shellfish sample plot was approximately 3 feet wide by 3 feet long and dug to a depth of approximately 12 inches, where possible. The survey was established to include a representative number of plots to adequately assess the shellfish habitat.

The table below identifies the shellfish, description of the area and notes documented within the survey area described above:

TABLE 1 – Shellfish Inventory

Plot	Shellfish (size)	Notes
A1	1 Softshell Clam (2")	Plot located west of existing pier. Sediment is somewhat sandy, but finer silt present below 3". Cobble at surface. Significant amount of softshell clam shells (dead).
A2	No shellfish	Plot located west of float location above the water line during the survey. Sediment is somewhat sandy, but finer silt present below 3". Cobble at surface. Significant amount of softshell clam shells (dead).
A3	No shellfish	Plot located below mean low water. Sediment similar to intertidal zone with less cobble. Blue mussels found on rocks nearby plot.
A4	No shellfish	Plot located below mean low water in approximately 12 inches of water. Sediment similar to intertidal zone with some cobble. Rockier than A3.
Total for Transect A = 1 Softshell Clam		
B1	No shellfish	Plot located within the intertidal area in vicinity of float footprint. Sediment is somewhat sandy, but finer silt present below 3". Cobble at surface. Significant amount of softshell clam shells (dead).
B2	No shellfish	Plot located below mean low water. Sediment similar to intertidal zone with less cobble.
B3	No shellfish	Plot located below mean low water in approximately 12 inches of water. Sediment similar to intertidal zone with some cobble. Rockier than B2.
Total for Transect B = 0 shellfish		
C1	1 Softshell Clam (0.75")	Plot located east of float location above the water line during the survey. Sediment is somewhat sandy, but finer silt present below 3". Cobble at surface. Significant amount of softshell clam shells (dead).
C2	No shellfish	Plot located at mean low water. Sediment is somewhat sandy, but finer silt present below 3". Cobble at surface. Significant amount of softshell clam shells (dead).
C3	No shellfish	Plot located below mean low water. Sediment similar to intertidal zone with less cobble.

C4	No shellfish	Plot located below mean low water in approximately 12 inches of water. Sediment similar to intertidal zone with some cobble. Rockier than C33.
Total for Transect C = 1 Softshell Clam		

Based on ECR's survey, Softshell Clams (*Mya arenaria*) were the only species recorded within the survey plots. Near Transect A and to the west of the survey area, ECR found a small number of Blue Mussels attached to scattered rocks lying on the ocean floor. The Blue Mussels (*Mytilus edulis*) consist of small clusters attached to the rocks, which are below the Mean Low Water line and outside the project area. Additionally, a minimal number of Oysters (*Crassostrea virginica*) were found in the survey area beyond the examination plots. No other shellfish were found during the survey.

TABLE 2 – Shellfish Density

Shellfish	Total Harvested in 99 Square Feet of Plot Area (11 plots x 9 sq. ft. per plot)	Number of Shellfish Per Sq. Ft.
Softshell Clams	2	0.020
Oysters	0	0.000
Surf Clams	0	0.000
Quahogs	0	0.000
Razor Clams	0	0.000
Blue Mussels	0	0.000
TOTAL	0	0.020

An analysis of shellfish density across the 11 survey plots reveals a very low density of Softshell Clam. As noted above, a minimal number of Oysters and Blue Mussels were found near the project area. Within the survey plots, ECR found a significant amount of dead Softshell Clams and shell hash throughout the intertidal zone. It appears the site may have historically been a productive habitat for Softshell Clams, but that is no longer the case. This may be due to the presence of the invasive Green Crab, which extensively feeds on Soft Shell Clams. ECR observed similar conditions in Hingham near the Weymouth Back River where survey plots were abundant with dead Soft Shell Clams from the invasive Green Crab.

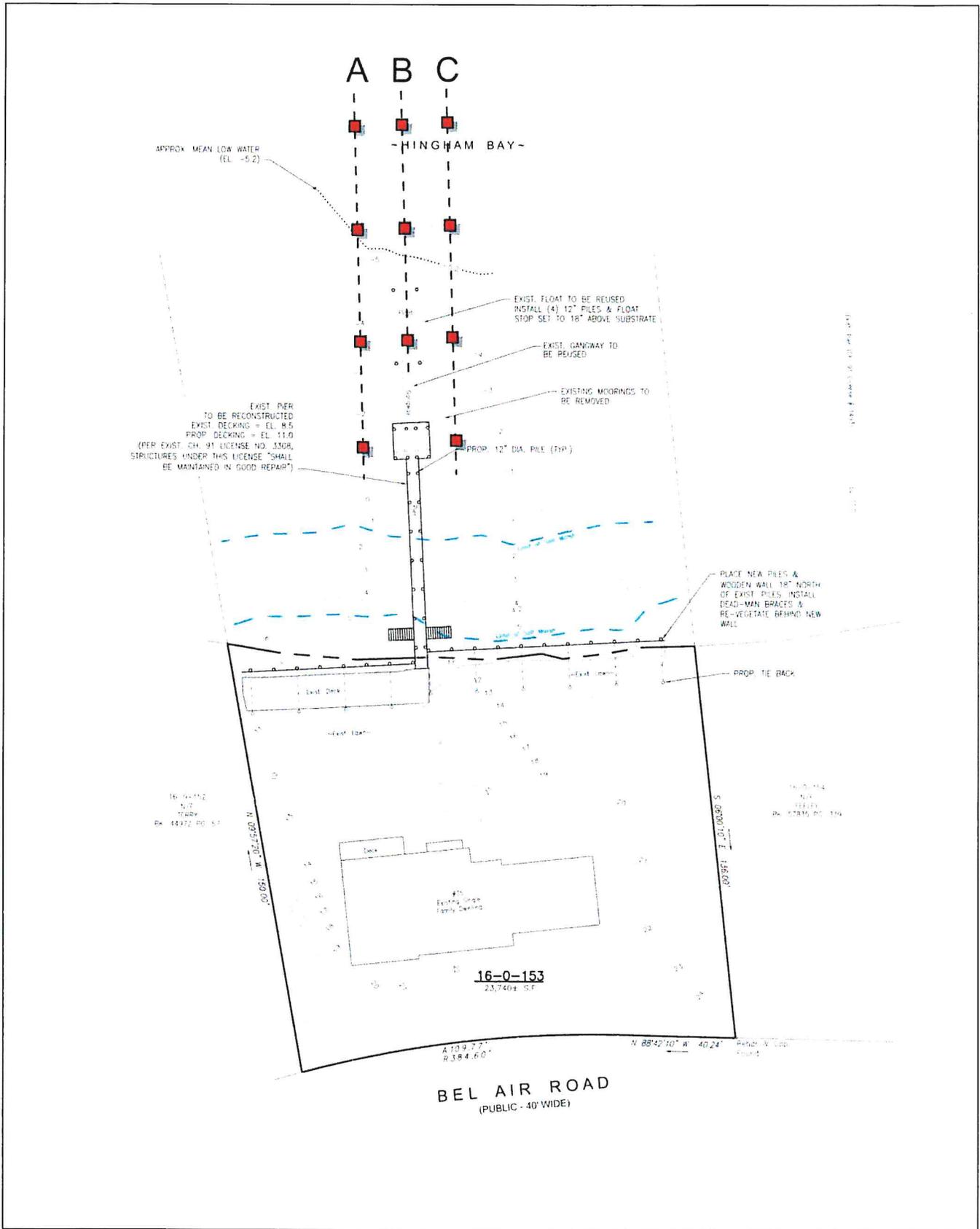
4. Recommended Protection Measures

Reconstruction of the pier, ramp, and float at the site would have only temporary minor impacts at the site. The reconstruction of the proposed pier, ramp, and float system should be designed in accordance with MassDEP's Guide to Permitting Small Pile-Support Docks and Piers (November 2003) to the maximum extent possible. Time of year restrictions will be set by the Massachusetts Division of Marine Fisheries Service to restrict activities during fish passage periods and shellfish and finfish spawning periods. The following conditions could also be included with this project to ensure protection of shellfish at the site such as:

- Coordination of proposed activity with the Hingham Shellfish Warden.
- Prior to work, any shellfish within the project area could be harvested and/or collected and transplanted at the direction of the Town of Hingham Shellfish Warden.

5. Summary

ECR's shellfish survey revealed a minimal number of shellfish in the vicinity of the proposed pier reconstruction project. The proposed project could be designed, constructed, and installed to avoid adverse impacts to shellfish habitat and the wetland resource areas. For more information, please refer to the attachments included with this report.



SURVEY PLOT MAP
35 Bel Air Road
Hingham, Massachusetts



Source: ECR overlaid plot locations onto plan prepared by Morse Engineering

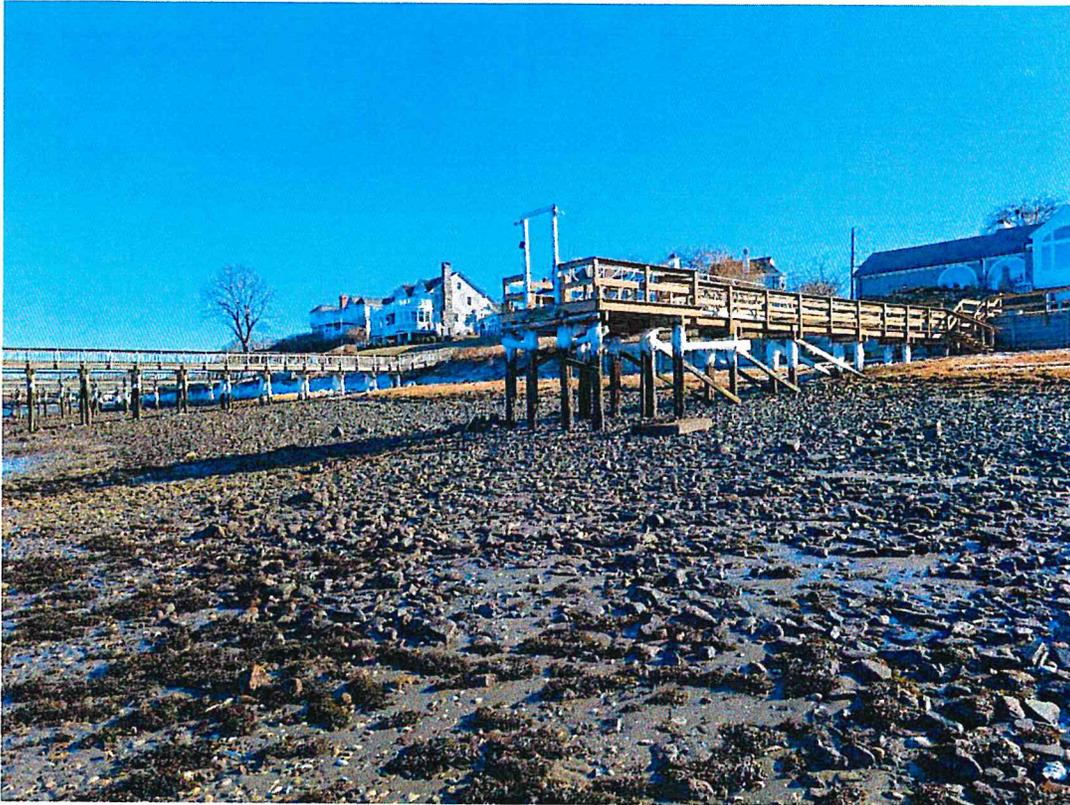
35 Bel Air Road, Hingham
Shellfish Survey Photographs



Photograph #1 – View west toward the existing pier.



Photograph #2 – Another view west toward the end of the existing pier.



Photograph #3 – View east toward the end of the existing pier.



Photograph #4 – View across the survey area just north of the existing pier.



Photograph #5 – View of Blue Mussels found attached to rocks within the survey area.



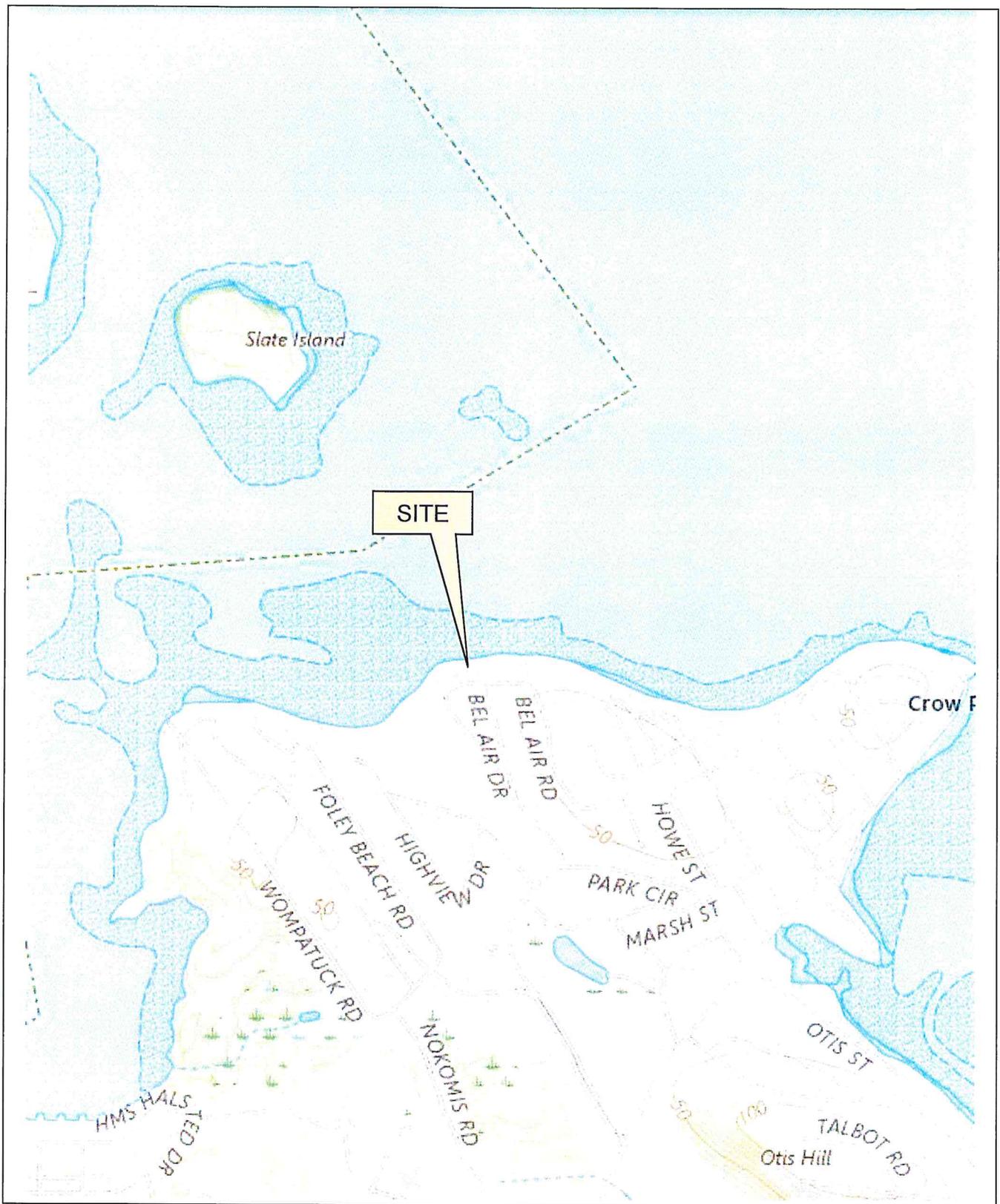
Photograph #6 – View of numerous dead soft shell clams found within a plot within the survey area.



Photograph #7 – View of two softshell clams found alive within the survey area.



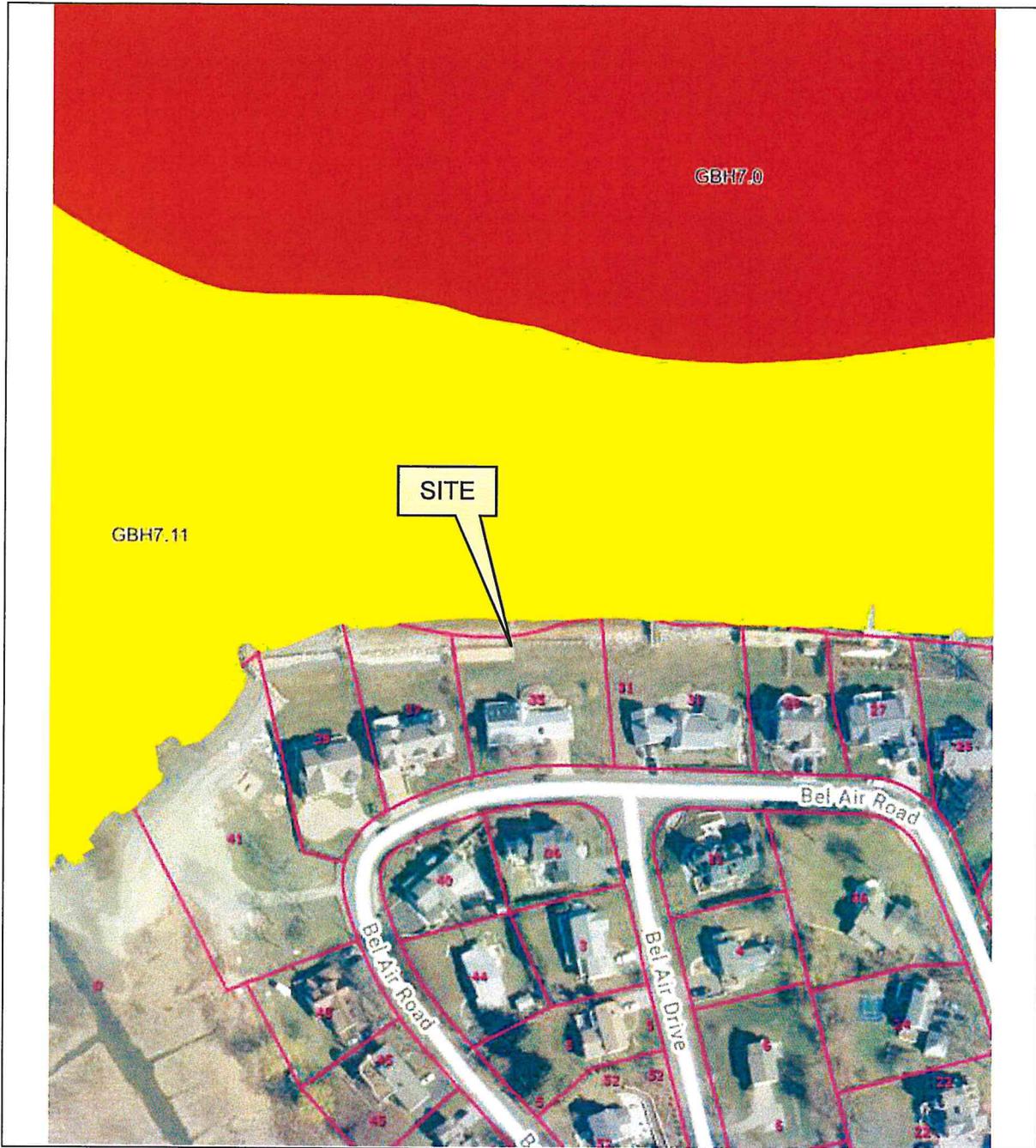
Photograph #8 – View of the sediment found within the survey area. Sediment was silty with a significant amount of cobble present.



USGS SITE LOCUS MAP
35 Bel Air Road
Hingham, Massachusetts

Source: USGS Topographic Quadrangle Images





SHELLFISH GROWING AREA MAP
35 Bel Air Rd
Hingham, Massachusetts

Source: MassMapper – Shellfish Growing Areas

Shellfish Growing Areas

- APPROVED
- CONDITIONALLY APPROVED
- RESTRICTED
- CONDITIONALLY RESTRICTED
- PROHIBITED



SHELLFISH SUITABILITY MAP
35 Bel Air Road
Hingham, Massachusetts

Source: MassMapper – Shellfish Suitability Areas

- Shellfish Suitability Area
- SOFT-SHELLED CLAM
 - BLUE MUSSEL