

SEP18'17 REG DIV



NBSF SDF Permit Application  
WELSCO 7  
September 15<sup>th</sup> 2017

**U.S. ARMY CORPS OF ENGINEERS  
APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT  
33 CFR 325. The proponent agency is CECW-CO-R.**

**Form Approved -  
OMB No. 0710-0003  
Expires: 30-SEPTEMBER-2015**

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

**PRIVACY ACT STATEMENT**

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

**(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)**

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE
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**(ITEMS BELOW TO BE FILLED BY APPLICANT)**

5. APPLICANT'S NAME First - Timothy      Middle - Andrew      Last - Londregan III Company - Niantic Bay Shellfish Farm LLC E-mail Address - timothy@nianticbayshellfishfarm.com			8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required) First -                      Middle -                      Last - Company - E-mail Address -		
6. APPLICANT'S ADDRESS: Address- 59 Woodlawn Road City - New London      State - CT      Zip - 06320      Country - USA			9. AGENT'S ADDRESS: Address- City -                      State -                      Zip -                      Country -		
7. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence      b. Business      c. Fax 860-287-0770      860-739-6273			10. AGENTS PHONE NOS. w/AREA CODE a. Residence      b. Business      c. Fax		

**STATEMENT OF AUTHORIZATION**

11. I hereby authorize, \_\_\_\_\_ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

\_\_\_\_\_  
SIGNATURE OF APPLICANT                      DATE

**NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY**

12. PROJECT NAME OR TITLE (see instructions) NBSF WELSCO 7			
13. NAME OF WATERBODY, IF KNOWN (if applicable) Niantic River		14. PROJECT STREET ADDRESS (if applicable) Address	
15. LOCATION OF PROJECT Latitude: °N 41.32719      Longitude: °W -72.17808		City -                      State-                      Zip-	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID                      Municipality Section -                      Township -                      Range -			

17. DIRECTIONS TO THE SITE

Located in the Niantic River on the Eastern part of Squall Flats. Southern-most corner is located 363 feet Northwest from Red #6 buoy and the Northern-most corner is located 1,361 feet East of Red #14 buoy.

18. Nature of Activity (Description of project, include all features)

No dredging/discharge associated with project. Placement by hand, no heavy machinery, of aquaculture gear (rack & bag, trays with and without feet. Used to cultivate bivalves, primarily oysters and scallops. Planting of crop in April, tending of crop during the growing months, sale of seed by late fall early winter. Some seed, and scallops, will be over-wintered in the Bay (off-site) or in the deeper parts of this site, majority of the gear will hopefully be empty and not in use. Racks are made of 3/8th rebar. Trays without feet are secured with pvc pipe and are made of plastic. Trays with feet are made from Aquamesh (pvc coated wire). Please see attached for diagrams and greater project detail.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Aquaculture. Growing oysters and bay scallops. The town needs a project like this for a few reasons. First, jobs. Second, investment. Third, working waterfront. Fourth, eco-tourism. Fifth, product production. Lastly, restoration and re-stocking. As the East Lyme First Selectman said, "We need eco-friendly businesses run by young persons in this Town." The local restaurants love the product and want more safe, locally produced food. An aquaculture business benefits the recreational harvesters due to the fact that NBSF works closely with the Shellfish Commission on projects and pays dues with "in-kind-services" or shellfish placed into public grounds. Finally, between all of the eight or so commissions dealing with the Niantic River, all note the importance of water quality and eco-system health; this project will increase both. With the presence of a commercial aquaculture project, the State will devote more resources to this area thus benefiting the public- more sampling, new rain gauge, and upgraded water quality are a few examples. Begin 5-1-2017, complete 2017 install 6-25-2017

**USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED**

20. Reason(s) for Discharge

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type	Type	Type
Amount in Cubic Yards	Amount in Cubic Yards	Amount in Cubic Yards

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres  
or  
Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)





Niantic Bay Shellfish Farm LLC: Wadsworth Initiative  
ENG 4345 and Supporting Documents  
Prepared by Timothy A. Londregan III  
3/27/2017

Executive Summary

The proposed project, type II aquaculture for bay scallops and oysters, will occur on the leased bed designated WELSCO 7. The lessor is Waterford East Lyme Shellfish Commission (WELSCO) and the lessee is Niantic Bay Shellfish Farm LLC. WELSCO 7 is located on the eastern portion of Squall Flats in the Niantic River within waters of the Town of Waterford. This lease was the result of WELSCO's desire to exercise their rights to lease bottom to responsible commercial agriculturists. Furthermore, this site was leased after a 15 month process eliminating the other six identified aquaculture sites within the River under WELSCO's jurisdiction due to user conflicts (boating, navigational hazards, shellfishing, fishing, recreational sports, unfit for aquaculture, and other lesser issues), presences of SAV, and the presences of significant natural resources.

WELSCO 7 is located on an unproductive sand bar. MLL water ranges from 0" to 15" while MHHW ranges from 25.1" to 51.1". Currents at this site are relatively high due to the narrow single entrance to the river and due to the jutting nature of Mago Point. According to both WELSCO and the Bureau of Aquaculture, this area is a "natural bed" but the proposed project will not adversely affect shellfish due to the lack of any natural set. Rich Chimel, head Shellfish Warden of WELSCO, has also identified this spot as lacking natural resources thus making it an unfrequented recreational area. The bottom is primarily packed sand with the outlying areas to the south and east of the site mud/silt. There are not outcroppings or rocky bottom to speak of. Don Landers, of Millstone Environmental Lab, has stated that the primary concern for this area is SAV, however, he was quick to add no SAV has been surveyed in this area.

The current Pre-Application Screening Form is on file with the BA and is identified as CT 092a AO and was filed on 11/21/2016. The plan calls for the placement of structures over the 6.41 acre lease over the course of a few years. The NDDB determination resulted in a no conflict assessment filed under 201701429 on 2/22/2017. This site will act as a nursery site to serve the NBSF lease in Niantic Bay designated as EL-3 which has been work for the past year. WELSCO 7 will also serve as the rearing grounds for the native Niantic Bay Scallop which NBSF and WELSCO are truly excited about with the anticipation of stock enhancement. The three primary gear types to be used are rack and bag, trays, and Deep Sea trays.

The bio-diversity of this site is limited due to its' exposure and high energy. Based off of the lack of diversity due to the lack of a hospitable environment, it is in our opinion that this project will increase sanctuary for juvenile species while also adding trillions of shellfish larvae to the estuary.

Index:

ENG Form 4345  
Vicinity Map WELSCO 7  
Figure A: Bird eye Dimensions  
Figure B: Bird eye Gear Plan  
Figure C: Gear Types  
Figure D: Hydrography  
Figure E: Cross Section of Gear

Niantic Bay Shellfish Farm  
Waterford East-Lyme Shellfish Commission  
WELSCO-7 Lease

**Lease Location Overview:**

WELSCO 7 is a 6.41 acre plot located in the Niantic River designated for "aquaculture projects." Located on the eastern portion of Squall Flats, this area presents a hard sand bottom with a depth anywhere from 12" to 2' at MLW with some areas becoming exposed during a blow-out tide. According to the most recent SAV surveys and recent observations, no SAV is present within the boundaries of WELSCO 7.

**Competing Uses:**

The Niantic River is a popular water body for many recreational purposes. Due to this reality, over the last 12 months NBSF and WELSCO have determined that WELSCO 7 is one of the most viable areas to carry out an aquaculture project.

*-Fishing:*

According to the Commission and Wardens, no recreational shellfishing occurs within WELSCO 7. The western part of the sand bar sees winter clamming activity but the eastern part is barren. No major commercial activity is conducted on the river besides one significant green crabber. When speaking with this gentleman, there is not a conflict between our goals. Furthermore, his traps are not placed in WELSCO 7. Recreational fishing on this flat is non-existent.

*-Boating:*

The most significant concern for this area is boating. While WELSCO 7 is well outside all marked or locally established channels, I can attest to the fact that unwary and inexperienced boaters may attempt to run the flat at low tide. This typically results in a beached vessel. Most individuals run the western half of the flat not the eastern part. Shallow draft vessels (18" or less draft) can run the entire river at high tide. Vessels mostly utilizing this area are small sailing vessels, jet skis and kayaks. The area of most concern would be the eastern boundary to the lease. While the lease is confined to the sand bar, it does hug the pseudo-channel or Indian channel. This does not represent a risk for larger vessels as they would run-aground if they strayed outside of the Indian channel. Jet skiers launching from the State boat launch do typically disregard the Open Water Policies set by Waterford Harbor commission and do traverse this area at high speeds. At low tide this area would become impassible.

**Gear to be Deployed:**

First Year: 100 trays individually marked/placed. 4'x3' double stacked  
500 double stacked super trays 2'x2'- individually placed and secured to bottom  
2000 bags on two tier tables

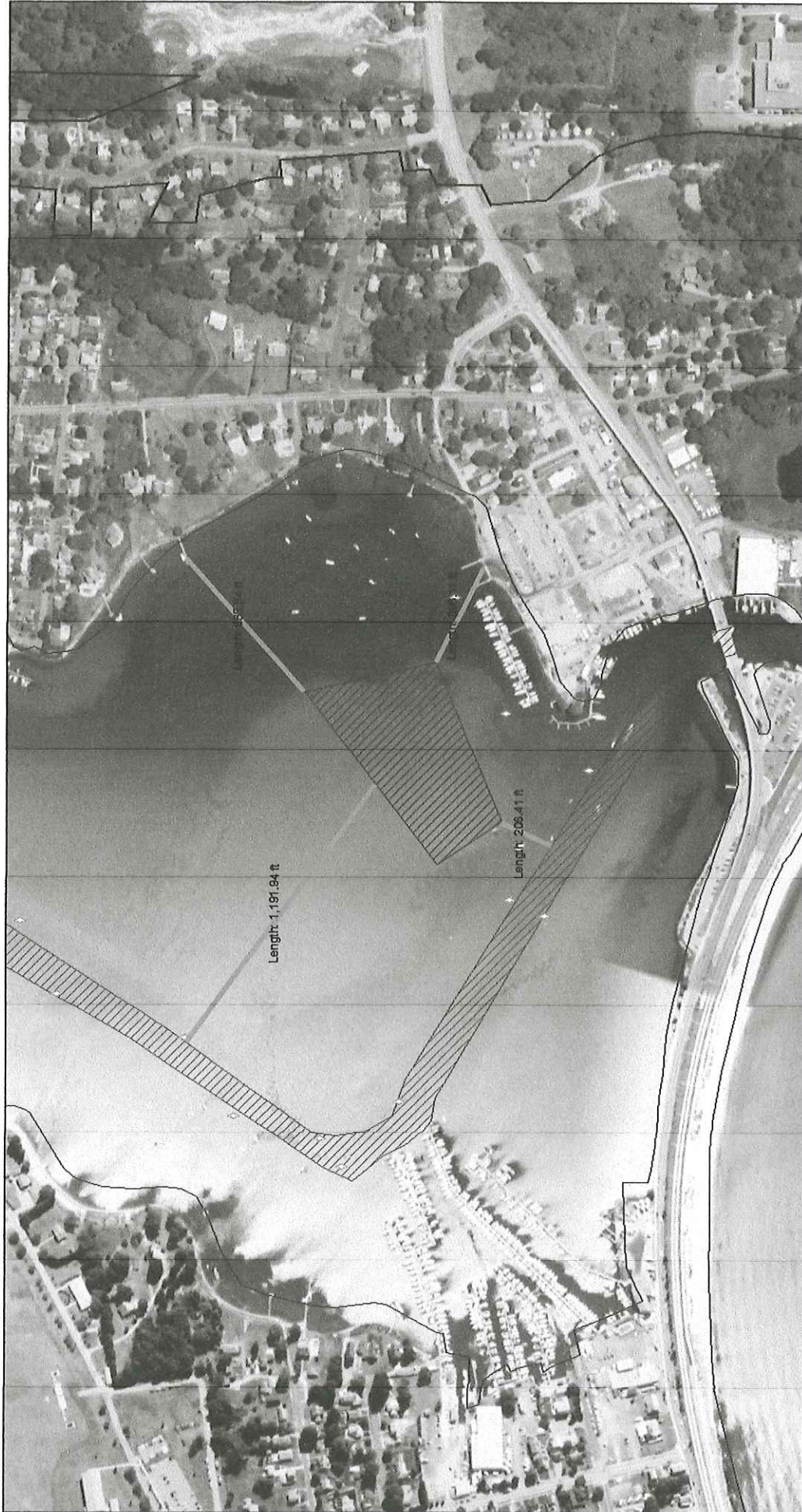
Second Year: 1000 bags

Gear dependent on growth rates/findings with scallops in year one.





Continuing gear deployment as outlined in application. By year 5 we want to have 12,000 serviceable units over the 6.41 acres

First year gear will be deployed in the 3 acre are noted on the maps. Trays will be deployed on the southern side. Super trays deployed along the western edge moving north into the center and the bags/tables will be in rows running north to south in the remaining area.

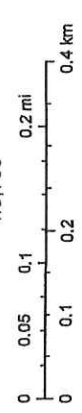
# Vicinity Map WELSCO 7



March 24, 2017

-  Aids to Navigation (2013)
-  Channels, Basins, Anchorage Areas (DEEP)
-  Connecticut Towns
-  Coastal Boundary

1:5,733

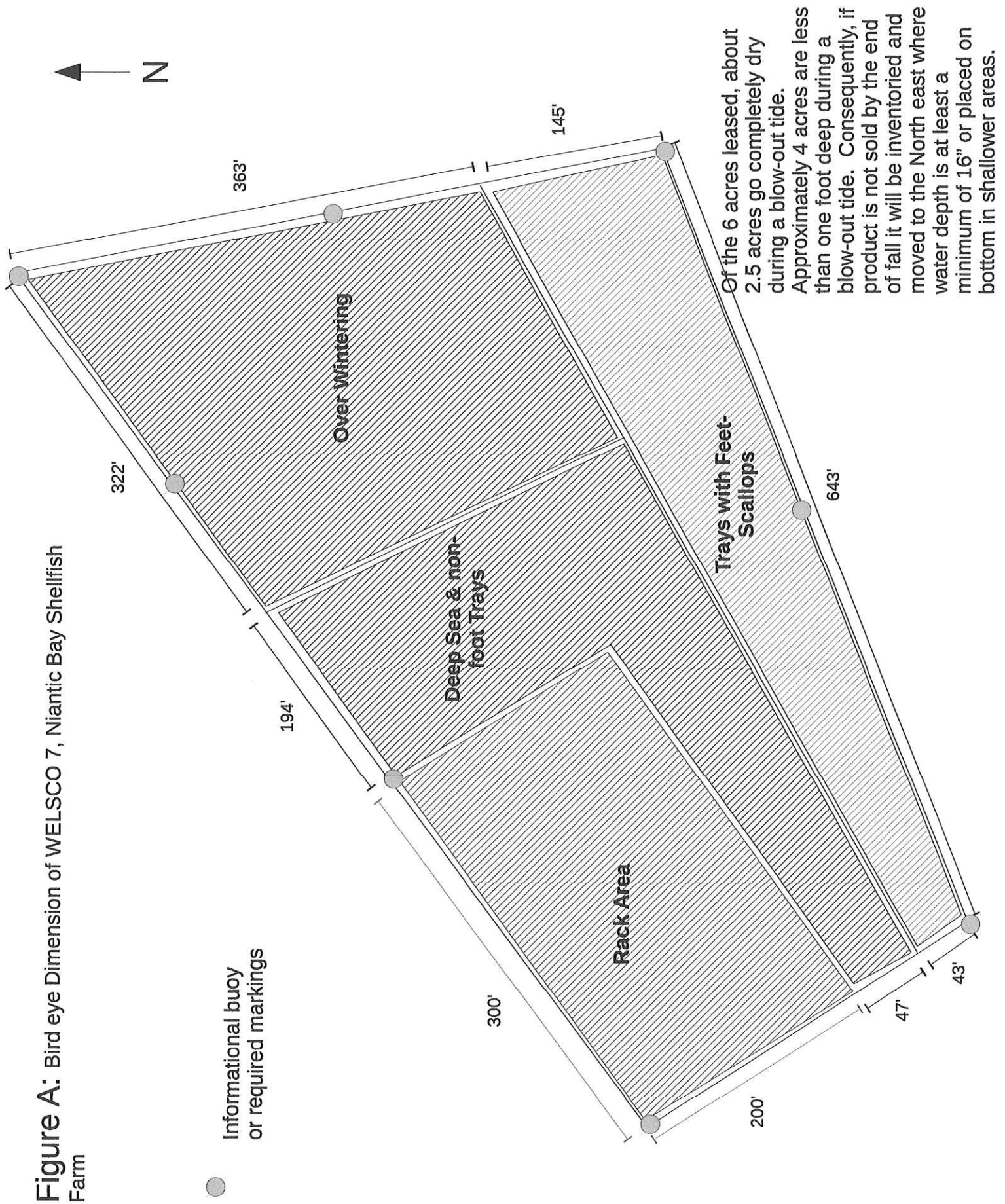


Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Niantic Bay Shellfish Farm  
 Copyright: Connecticut Sea Grant and UConn CLEAR



**Figure A:** Bird eye Dimension of WELSCO 7, Niantic Bay Shellfish Farm



**Figure B:** Bird eye view of WELSCO 7, Niantic Bay Shellfish Farm

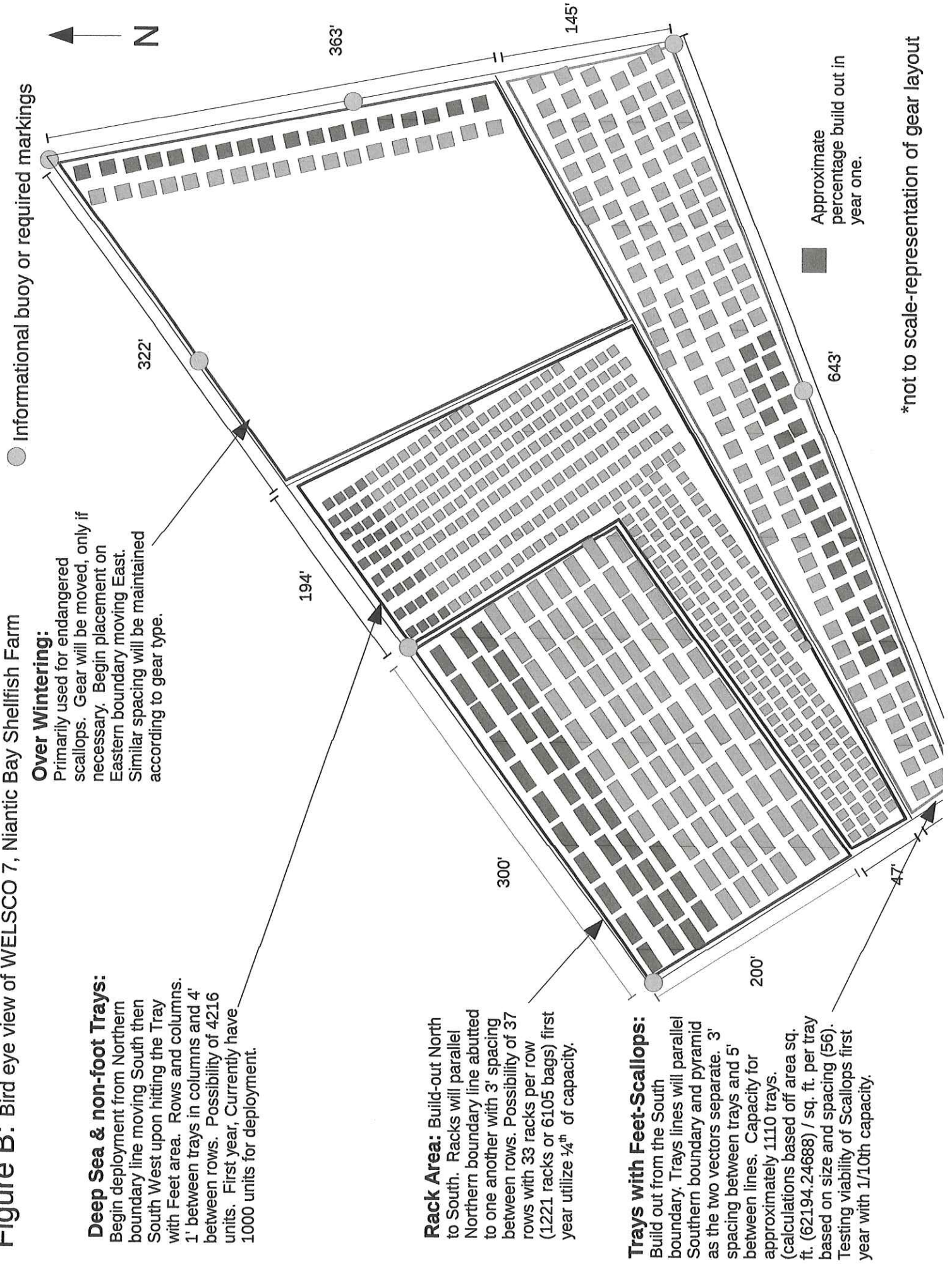
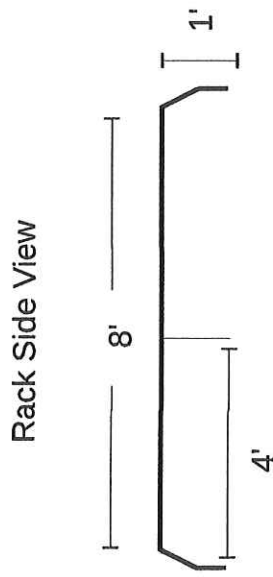
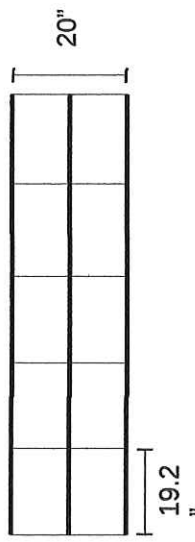


Figure C: Proposed gear for WELSCO 7, Niantic Bay Shellfish Farm



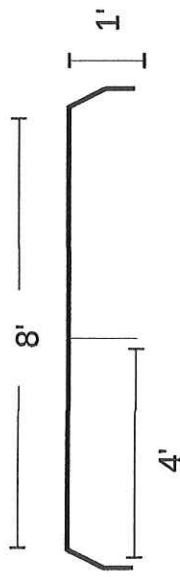
Rack Top View



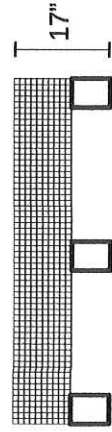
Each rack supports five 18"x30" bags. 400 racks first year for 2,000,000 oysters with an additional 200 for every million added.

Racks are not buoyed. They are secured into sand by vertical round stock and bags are secure to rack with bungee and S hooks.

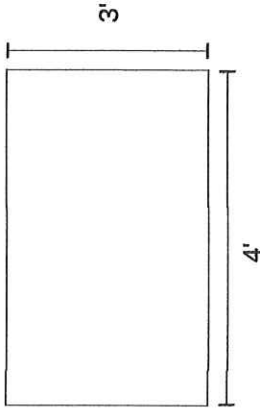
Rack Side View



Tray Side View



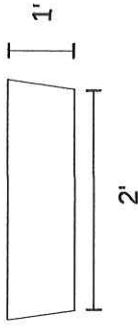
Tray Top View



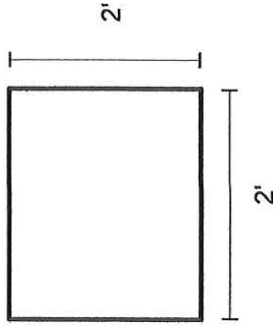
Trays have either 1/2" mesh or 1" mesh. Primarily used for scallops, over wintering, and inventorying. First year, 100 double stacks with feet, 300 singles without feet.

Trays closest to Wadsworth channel (with feet) are individually buoyed. None-feet trays are meant for shallower water and are not buoyed

Deep Sea Trays Side View



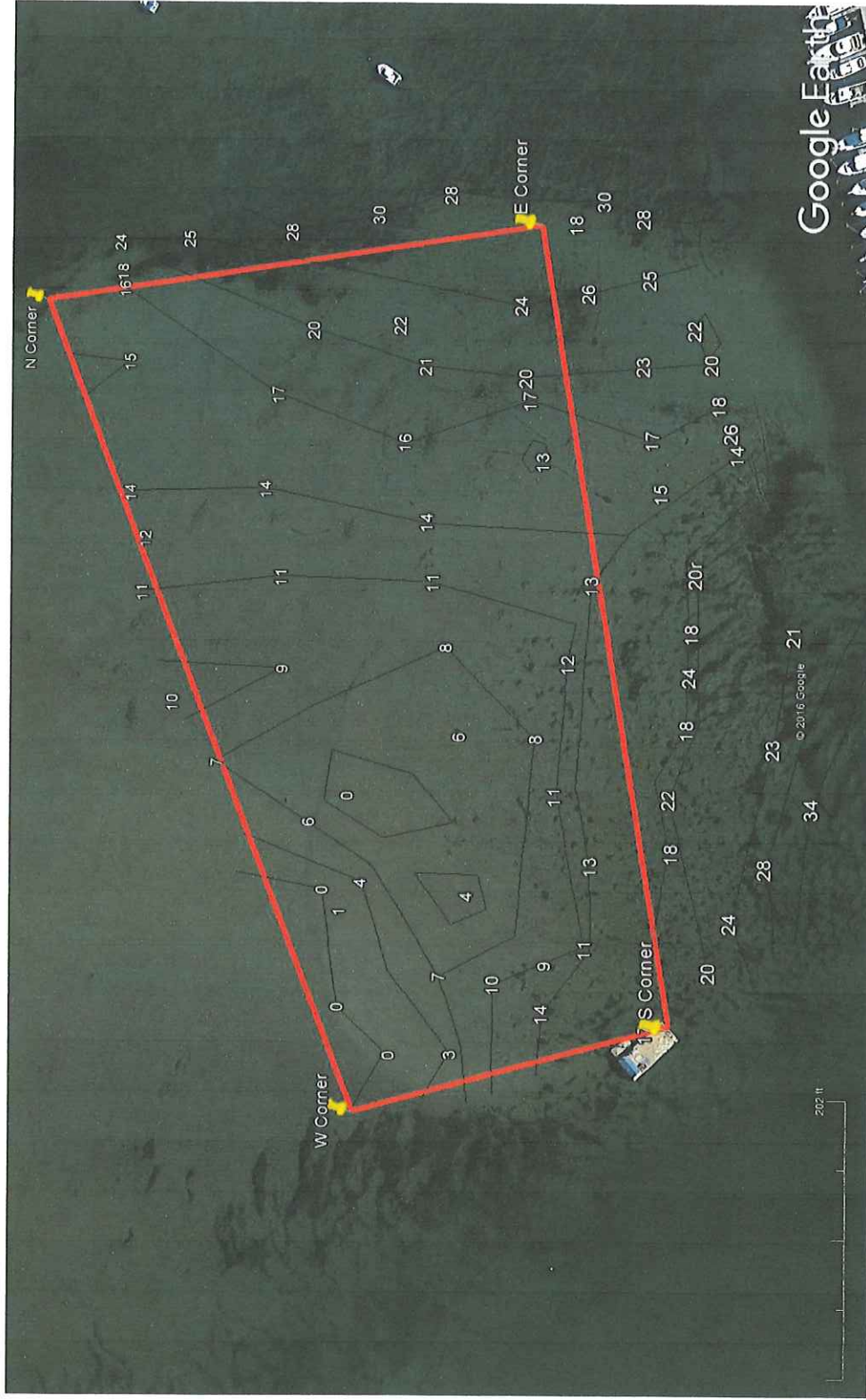
Deep Sea Top View



1000 double stacks deployed. Used for Scallop Seed as it attains appropriate size. Secured to bottom using 1/2 pvc pipe.

\*not to scale

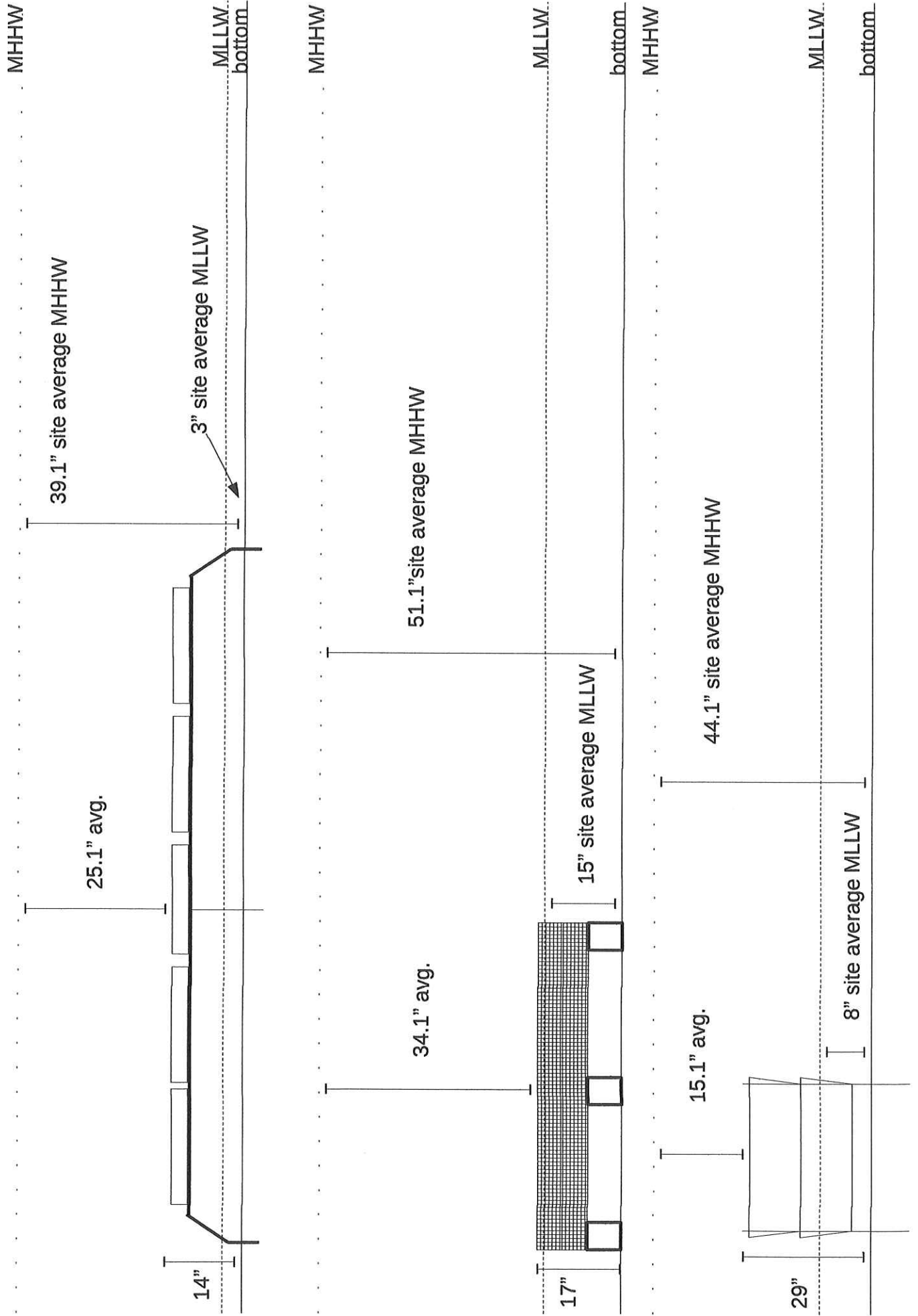
Figure D: Hydrography WELSCO 7, Niantic Bay Shellfish Farm

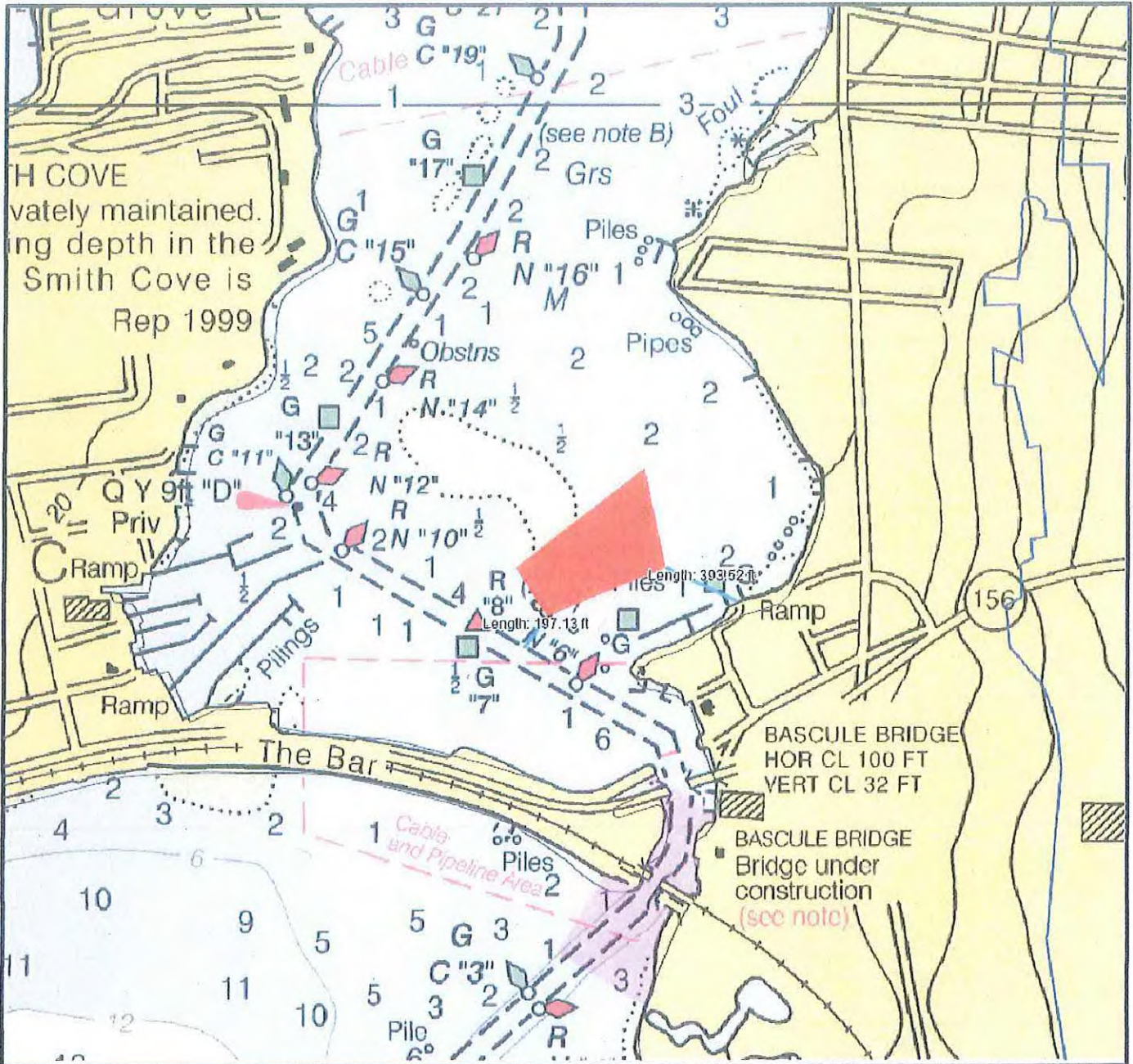


Site sounding in inches. Soundings taken at MLLW using USGS station 8461925 (Niantic, CT) as the datum.



Figure E: Cross Section of Niantic Bay Shellfish Farm Gear at WELSCO 7





Area 1 = Gear Area  
 Area = 6.41 Acres  
 Long: 72° 10' 37.9", Lat: 41° 19' 42.1"  
 Long: 72° 10' 36.5", Lat: 41° 19' 37.2"  
 Long: 72° 10' 44.3", Lat: 41° 19' 34.8"  
 Long: 72° 10' 46.4", Lat: 41° 19' 37.2"

Area 1 = CT State Plane NAD83  
 Classification = Conditionally Approved  
 x=1157323.440494, y=680890.144710  
 x=1157433.538619, y=680394.920786  
 x=1156840.056017, y=680148.075198  
 x=1156678.234846, y=680389.922550

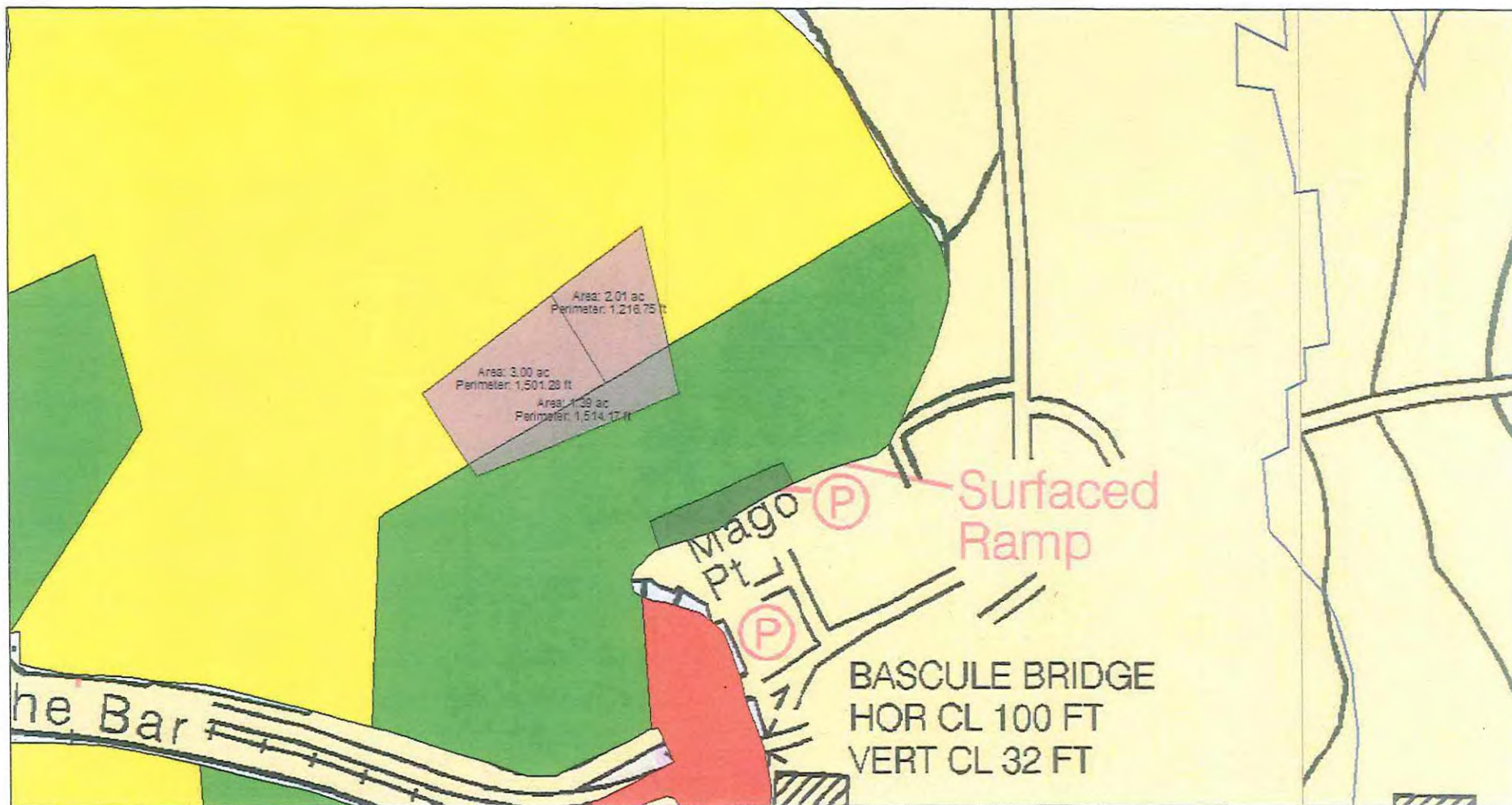


**Legend**  
 Lease Area  
 Gear Area  
 Niantic River  
 Waterford CT


**Figure 1**  
**Name - Timothy Londregan III**  
**Lease ID - WELSCO 7**  
 Federal Channel(s) -  
 Closest Landmark -

This map is for information only and its utilization and verification shall be the sole responsibility of the user. No warranty, expressed or implied, is made by the State of CT as to the accuracy or completeness of this map nor shall the fact of distribution

# WELSCO 7 Break Down

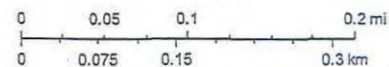


November 17, 2016

Shellfish Classification Areas (2014)  Coastal Boundary

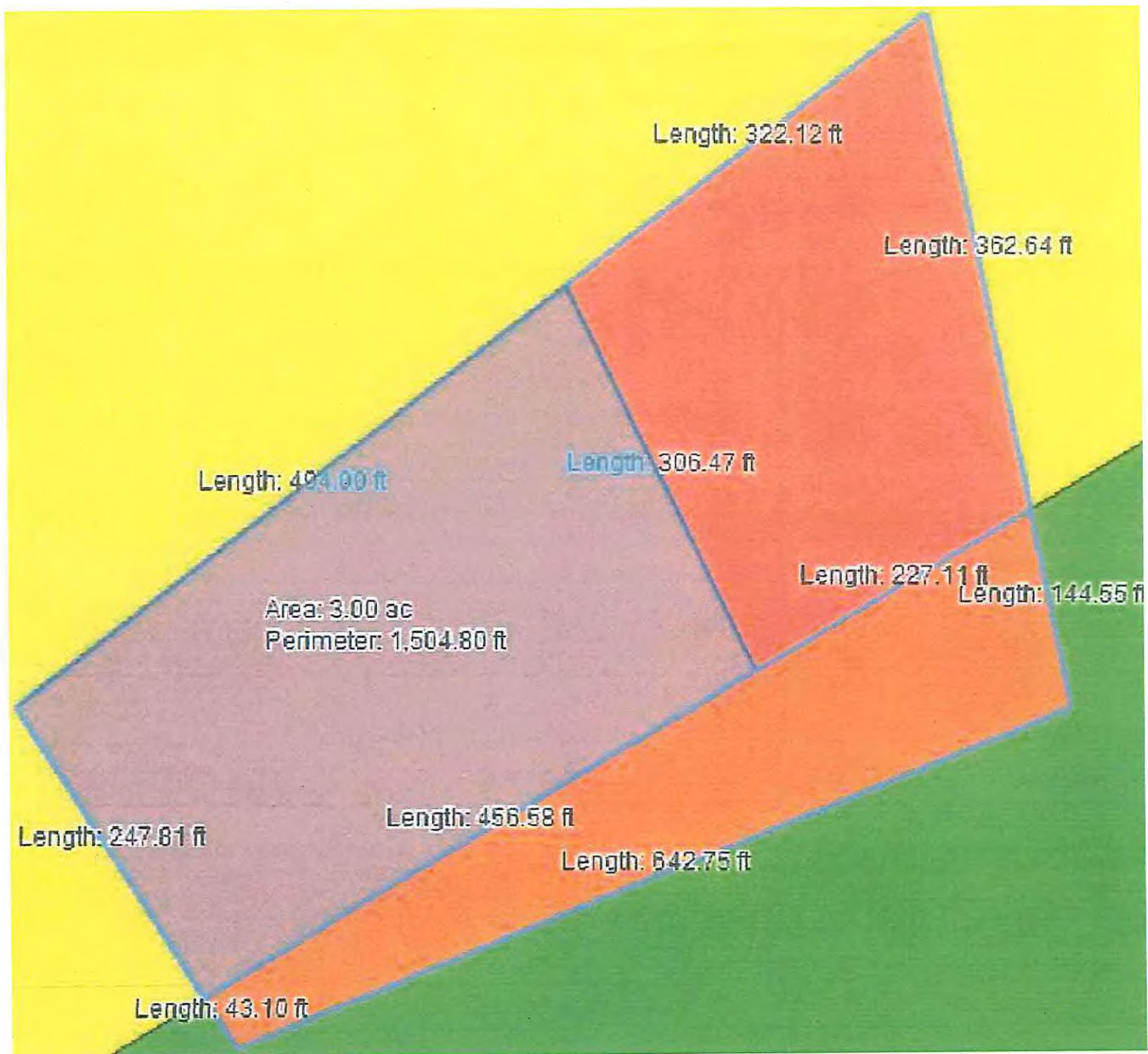
-  Conditionally Approved
-  Conditionally Restricted
-  Prohibited
-  Restricted
-  Connecticut Towns

1:4,514



NOAA / NOS / Office of Coast Survey

Timothy A Londregan III  
Copyright: Connecticut Sea Grant and UConn CLEAR





# NBSF WELSCO 7 Gear Deployment

● Informational buoy or required markings



Of the 6 acres leased, about 2.5 acres go completely dry during a blow-out tide. Approximately 4 acres are less than one foot deep during a blow-out tide. Consequently, if product is not sold by the end of fall it will be inventoried and moved to the North east where water depth is at least a minimum of 16" or placed on bottom in shallower areas.

# NBSF WELSCO 7 Spacial Gear Deployment: Bird eye

● Informational buoy or required markings

## Deep Sea & non-foot Trays:

Begin deployment from Northern boundary line moving South then South West upon hitting the Tray with Feet area. Rows and columns. 1' between trays in columns and 4' between rows. Possibility of 4216 units. First year, Currently have 1000 units for deployment.

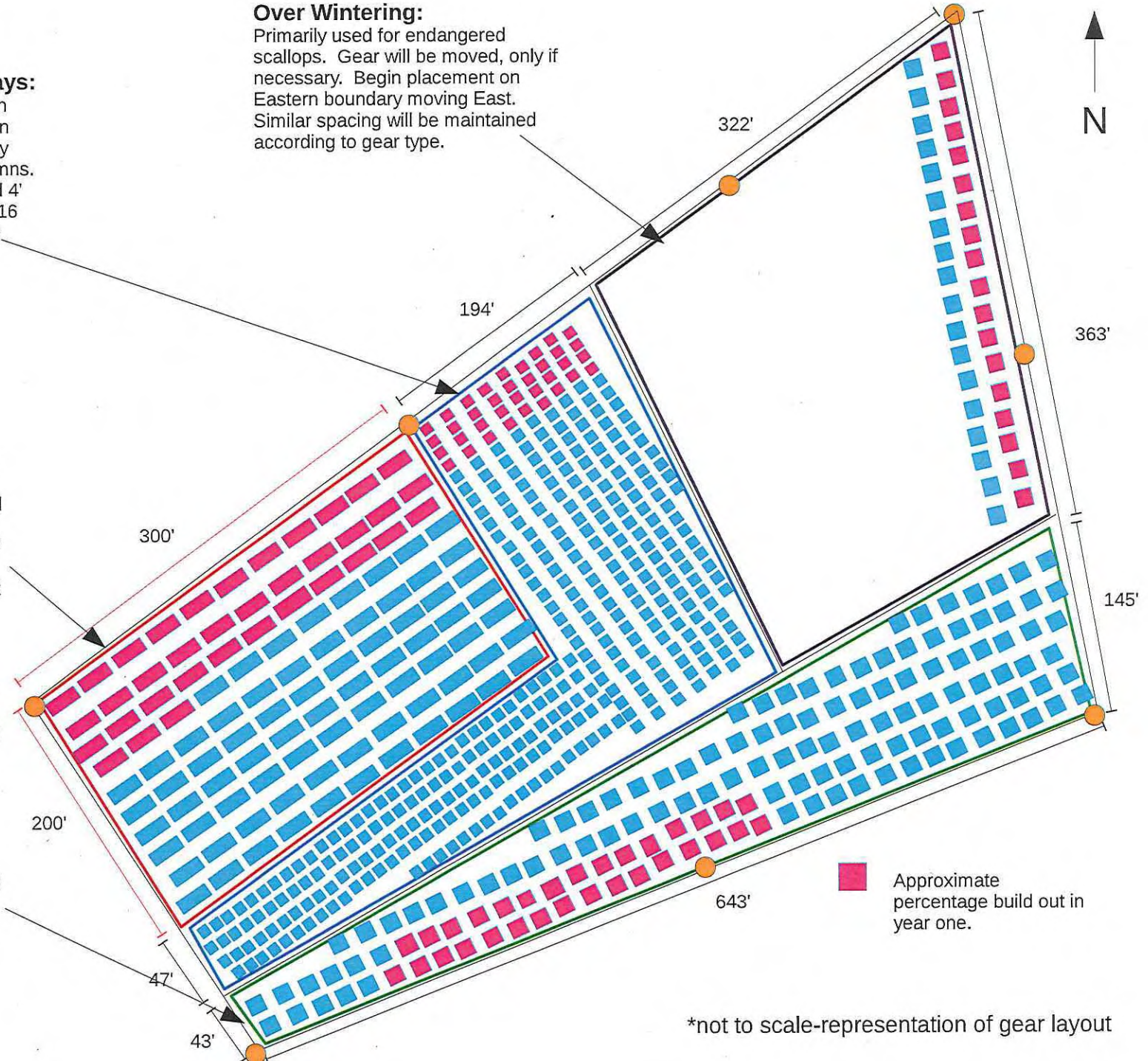
## Over Wintering:

Primarily used for endangered scallops. Gear will be moved, only if necessary. Begin placement on Eastern boundary moving East. Similar spacing will be maintained according to gear type.

**Rack Area:** Build-out North to South. Racks will parallel Northern boundary line abutted to one another with 3' spacing between rows. Possibility of 37 rows with 33 racks per row (1221 racks or 6105 bags) first year utilize 1/4<sup>th</sup> of capacity.

## Trays with Feet-Scallops:

Build out from the South boundary. Trays lines will parallel Southern boundary and pyramid as the two vectors separate. 3' spacing between trays and 5' between lines. Capacity for approximately 1110 trays. (calculations based off area sq. ft. (62194.24688) / sq. ft. per tray based on size and spacing (56). Testing viability of Scallops first year with 1/10th capacity.

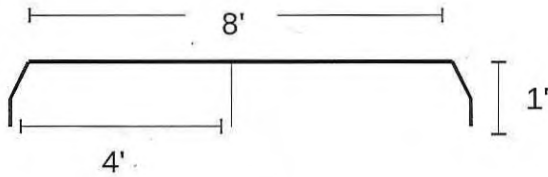


■ Approximate percentage build out in year one.

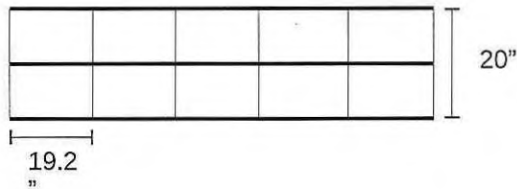
\*not to scale-representation of gear layout

## NBSF Niantic River Lease Gear Overview (WELSCO 7)

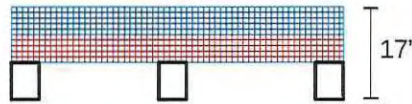
Rack Side View



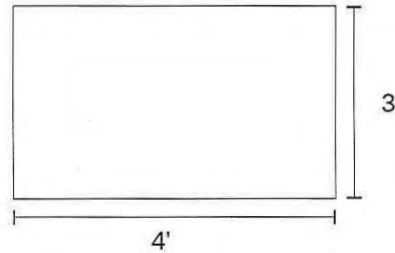
Rack Top View



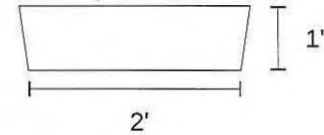
Tray Side View



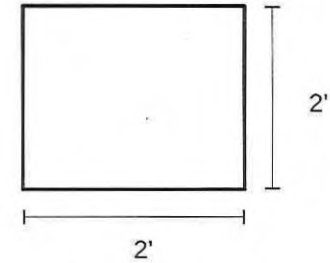
Tray Top View



Deep Sea Trays Side View



Deep Sea Top View



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Racks are not buoyed. They are secured into sand by vertical round stock and bags are secure to rack with bungee and S hooks.

Trays have either 1/2" mesh or 1" mesh. Primarily used for scallops, over wintering, and inventorying. First year, 100 double stacks with feet, 300 singles without feet.

Trays closest to Wadsworth channel (with feet) are individually buoyed. None-feet trays are meant for shallower water and are not buoyed.

1000 double stacks deployed. Used for Scallop Seed as it attains appropriate size. Secured to bottom using 1/2 pvc pipe.

\*not to scale

## Attachment A:

### Executive Summary:

#### **Description of proposed regulated activities:**

Niantic Bay Shellfish Farm is submitting a full SDF permit dealing with three regulated activities. First, placement of aquaculture structures withing WELSCO 7 project area. Second, replacement of four pre-exisiting non-permitted piles along with the placement of two other piles. Third, the re-classification of a vessel to a floating structure used to tend to NBSF aquaculture activities.

First, placement of aquaculture structures withing WELSCO 7 project area. The project area in 6.41 acres. There are four areas withing the 6.41 acres. Three of the four areas are designated for gear, the fourth area is designated for overwintering of gear which would be exposed during blow-out tides in the winter. The Rack Area in the winter will have the most exposure and thus that area seed will be sold prior to winter or moved to the over wintering area. Different gear types were designated based on species to be grown, water depth, water classification and availability.

Seed will be placed in April. Seed to be sold will be sold in late fall or early spring. Seed to be grown to market size will remain in WELSCO 7 until maturity. NBSF will place/replace gear in March by hand so as to prepare for the deployment of seed in April. The gear will be tended year-round, with an emphasis on the growing season (when the water temperature is above 50). NBSF is working in tandem with the Waterford East Lyme Shellfish Commission (WELSCO) on restoration activities and enhancement of natural stock available to recreational harvesters.

Second, replacement of four pre-exisiting non-permitted piles along with the placement of two other piles. NBSF currently owns the four piles placed on the south-eastern section of Squall Flats. These piles were placed in the late 1960's and purchased by NBSF in 2016. NBSF is seeking recognition of these piles, which have not been a navigational hazard for the last 50-60 years, are located well outside the Federally maintained channel and would only be used for the water dependent use of aquaculture. Upon recognition, NBSF wishes to pull these piles and replace them so as to ensure the vessels tied to the said piles is safe and not a liability. Two of the original six piles are no longer standing, NBSF is requesting the placement of two new piles to act as dolphins to better secure the vessel and protect against ice flow. Furthermore, these piles would aid in the shading of product during harvest to conform to FDA standard relating to Vibrio along with providing a platform to monitor the activity occurring on WELSCO 7 and deter illegal harvesting from non-permitted persons and well as observe for any possible issues.

Third, the re-classification of a vessel to a floating structure used to tend to NBSF aquaculture activities. The vessel currently birthed at the aforementioned piles is currently registered with the CT DMV and can be self propelled. Furthermore, the vessel does not fall under the existing local definition of a house boat nor the State definition of a Floating Structure. However, due to the use of the vessel the DEEP and ACoE has indicated that the vessel should be permitted through this application not the original COP NBSF was asked to file due to the nature of the vessels use. NBSF is asking for a permit for a floating structure. This structure would be solely used for the water dependent use of Aquaculture. Activities occurring on the structure would include, but not strictly limited to the following; the use of these pilings to support operations to grow sustainable shellfish and promote shellfish restoration activities. Activities include, drying gear, cleaning gear, assembling gear, sorting

shellfish, cleaning shellfish, tumbling shellfish, processing shellfish, growing shellfish, protecting shellfish, staging gear for near future deployment as well as any other basic activities required in the cultivation/sale of shellfish.

### **Synopsis of the environmental and engineering analysis of the impact of such activities**

There have been no studies indicating a negative environmental impact to the area based off of the proposed activities. NDDDB and EFH have come back as no-impact. It has been noted by the local shellfish commissions as well as the local watershed committee and other local agencies that this project will primarily create more habitat while improving water quality. While there are studies indicating the negative effects of over saturated areas with poor flushing, this site has plenty of flushing power and the historical data clearly indicates that the Rivers' carrying capacity is far from max saturation. The impact of such gear placement is being reviewed by the ACoE. However, this type of gear and placement strategy has been demonstrated across the country to be an acceptable form of cultivation of shellfish. This is made evident by the fact that the gear design meets industry best practices and standards.

## Attachment B:

### Waterford East Lyme Shellfish Commission Aquaculture Application

Applicant Name: Timothy A. Londregan III

Business Name: Niantic Bay Shellfish Farm LLC

Mailing Address: P.O. Box 106, Niantic CT 06357

Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Business Phone: 860-739-6273 Cell: 860-287-0770

Purpose: Probationary Research Project to Commercial Lease

Species to be Cultivated: Native Bay Scallop & Eastern Oyster

Source of Seed Stock (Must be DA/BA Approved): Fishers Island Oyster Farm -Stonington

Length of Lease Requested: 1yr Research into 5yr Commercial

Location of Project- Attach map (list GPS coordinates in order for irregular plots)

Please see attached Map

Position 1: \_\_\_\_\_ Position 4: \_\_\_\_\_

Position 2: \_\_\_\_\_ Position 5: \_\_\_\_\_

Position 3: \_\_\_\_\_ Position 6: \_\_\_\_\_

Total number of tract acres: 6.41

Water Classification: Approved \_\_\_\_\_ Conditional  Restricted Relay \_\_\_\_\_ Prohibited \_\_\_\_\_

Type of Aquaculture:

Category I: \_\_\_\_\_ Category II:

If Category II is selected, describe gear:

Heavy use of Table and Bag along with Super Trays Limited use of trays and Float gear (oyster

gro and floating bags) As methods are developed gear changes may be requested based on scallop growth.

I certify that the above application and all submitted documentation are correct to the best of my knowledge. The applicant must receive approval from the DA/BA for all operations and must conform to all requirements as specific in the Aquaculture section of WELSCO management plan.

Date: 10/30/2016

11/17/2016

Applicant signature: Timothy A. Londregan III



Commission approval:

Date: 17 Nov 2016

Chairman: Peter H. H. H. H.

## Attachment B:

Waterford East Lyme Shellfish Commission (WELSCO)  
Niantic Bay Shellfish Farm LLC (NBSF)  
Experimental Area Agreement  
"WELSCO 7"

NBSF wishes to use noted area (see attached Figure One) to carry out experimental activities to determine whether or not a commercial presence in said area is viable. NBSF will utilize a few growing methods involving structures to cultivate juvenile oysters, provide a safe haven for mature oysters should the need arise, and raise juvenile bay scallops to maturity.

NBSF also recognizes that upon WELSCO's modification of their 2002 Shellfish Management plan, NBSF will apply to lease "WELSCO 7" from WELSCO as a research project for the duration of one year. "In-kind-services" will be the form of payment. These in-kind-services shall include the following: seeding of oysters from NBSF commercial venture in the bay into open areas in the river; placement of bay scallop spawning sanctuaries as well as the seeding of any remaining seed from the seasons' scallop hatchery set. NBSF is willing to work with WELSCO to establish other programs that will benefit the estuary and the public.


NBSF will continue the dialogue established with WELSCO so as to help determine the most agreeable areas for raising shellfish while respecting other interests. Upon the first planting of scallops on "WELSCO 7," NBSF will analyze the viability and report the findings to WELSCO.

Finally, after the one year probationary experimental project, assuming NBSF has been an upstanding lessee, NBSF will be given the preferential option to commercially lease the project area noted for 5 years with preferred renewal. Prior to operation, NBSF must acquire all necessary State and Federal permits. If NBSF should terminate the lease, all gear must be removed from the water in a timely manner. If NBSF is in egregious fault of operating in an upstanding manner, WELSCO has the authority to revoke the lease prior to the end of the lease term. NBSF must make at least one yearly report to the commission regarding operations.

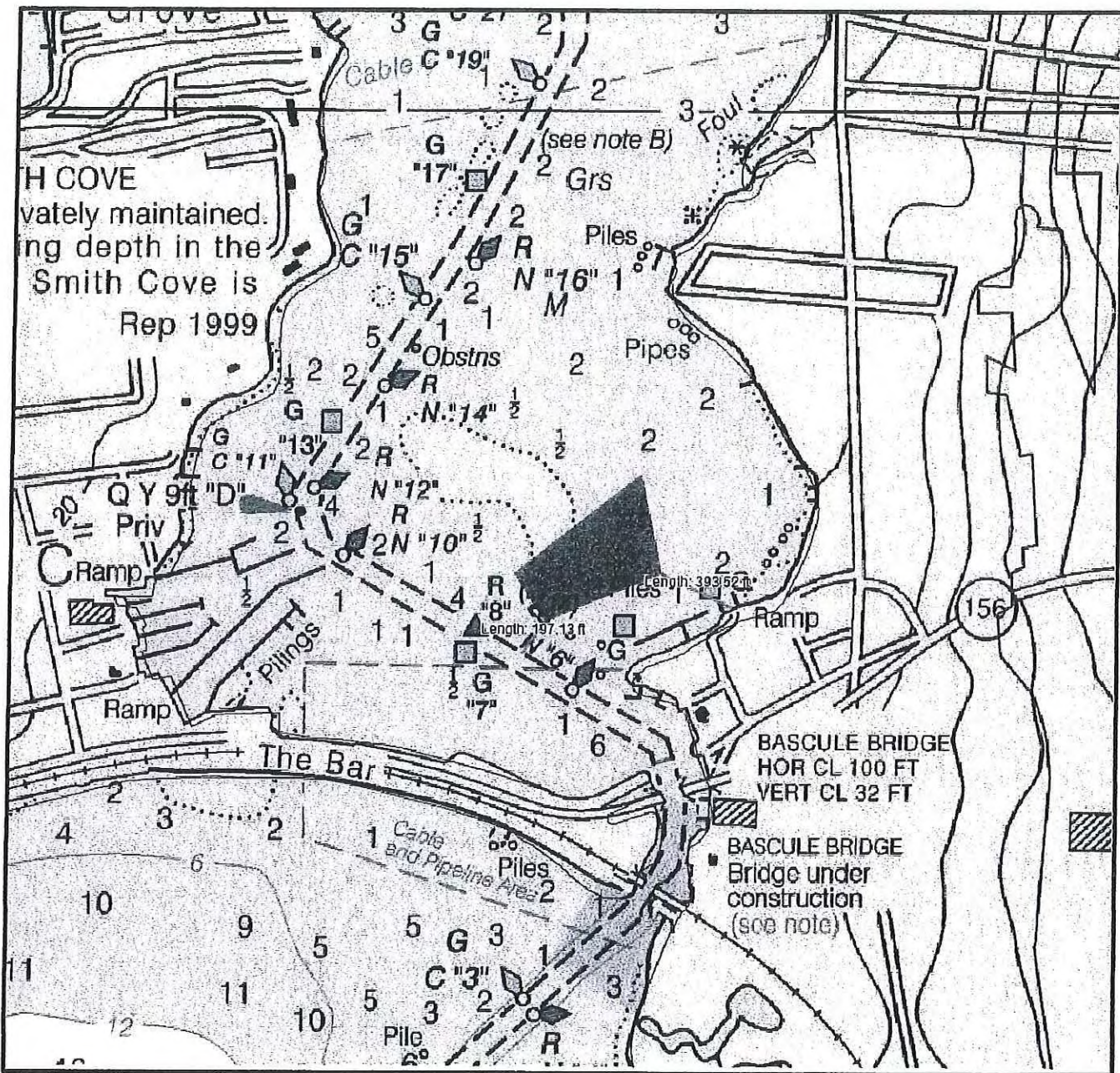
Remarks:

  
Timothy A. Londregan III  
NBSF Managing Member

11/17/2016  
Date

  
Peter Harris  
WELSCO Chairman

17 Nov 2016  
Date



<p><b>Area 1 = Gear Area</b>          Area = 6.41 Acres          Long: 72° 10' 37.9", Lat: 41° 19' 42.1"          Long: 72° 10' 36.5", Lat: 41° 19' 37.2"          Long: 72° 10' 44.3", Lat: 41° 19' 34.8"          Long: 72° 10' 46.4", Lat: 41° 19' 37.2"</p>	<p><b>Area 1 = CT State Plane NAD83</b>          Classification = Conditionally Approved          x=1157323.440494, y=680890.144710          x=1157433.538619, y=680394.920766          x=1156840.056017, y=680148.075198          x=1156678.234846, y=680389.922550</p>
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**Legend**

- Lease Area
- Gear Area
- Niantic River
- Waterford CT

**Figure 1**  
**Name - Timothy Londregan III**  
**Lease ID - WELSCO 7**

Federal Channel(s) -  
 Closest Landmark -





This map is for information only and its utilization and verification shall be the sole responsibility of the user. No warranty, expressed or implied, is made by the State of CT as to the accuracy or completeness of this map nor shall the fact of distribution



# WELSCO 7 Attach. B

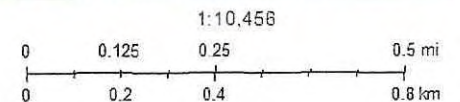


January 31, 2017

-  Channels, Basins, Anchorage Areas (DEEP)
-  Connecticut Towns
-  Town Jurisdiction
-  Coastal Boundary

Area 1 = Gear Area  
 Area = 6.41 Acres  
 Long: 72° 10' 37.9", Lat: 41° 19' 42.1"  
 Long: 72° 10' 36.5", Lat: 41° 19' 37.2"  
 Long: 72° 10' 44.3", Lat: 41° 19' 34.8"  
 Long: 72° 10' 46.4", Lat: 41° 19' 37.2"

Area 1 = CT State Plane NAD83  
 Classification = Conditionally Approved  
 x=1157323.440494, y=680890.144710  
 x=1157433.538619, y=680394.928788  
 x=1156840.956017, y=680148.075198  
 x=1156678.234846, y=680389.922550





Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Timothy A. Londregan III  
 Copyright: Connecticut Sea Grant and UConn CLEAR

# Natural Diversity Data Base Areas

WATERFORD, CT

December 2016

-  State and Federal Listed Species & Significant Natural Communities
-  Town Boundary

NOTE: This map shows general locations of State and Federal Listed Species and Significant Natural Communities. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a number of data sources. Exact locations of species have been buffered to produce the general locations. Exact locations of species and communities occur somewhere in the shaded areas, not necessarily in the center. A new mapping format is being employed that more accurately models important riparian and aquatic areas and eliminates the need for the upstream/downstream searches required in previous versions.

This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a shaded area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

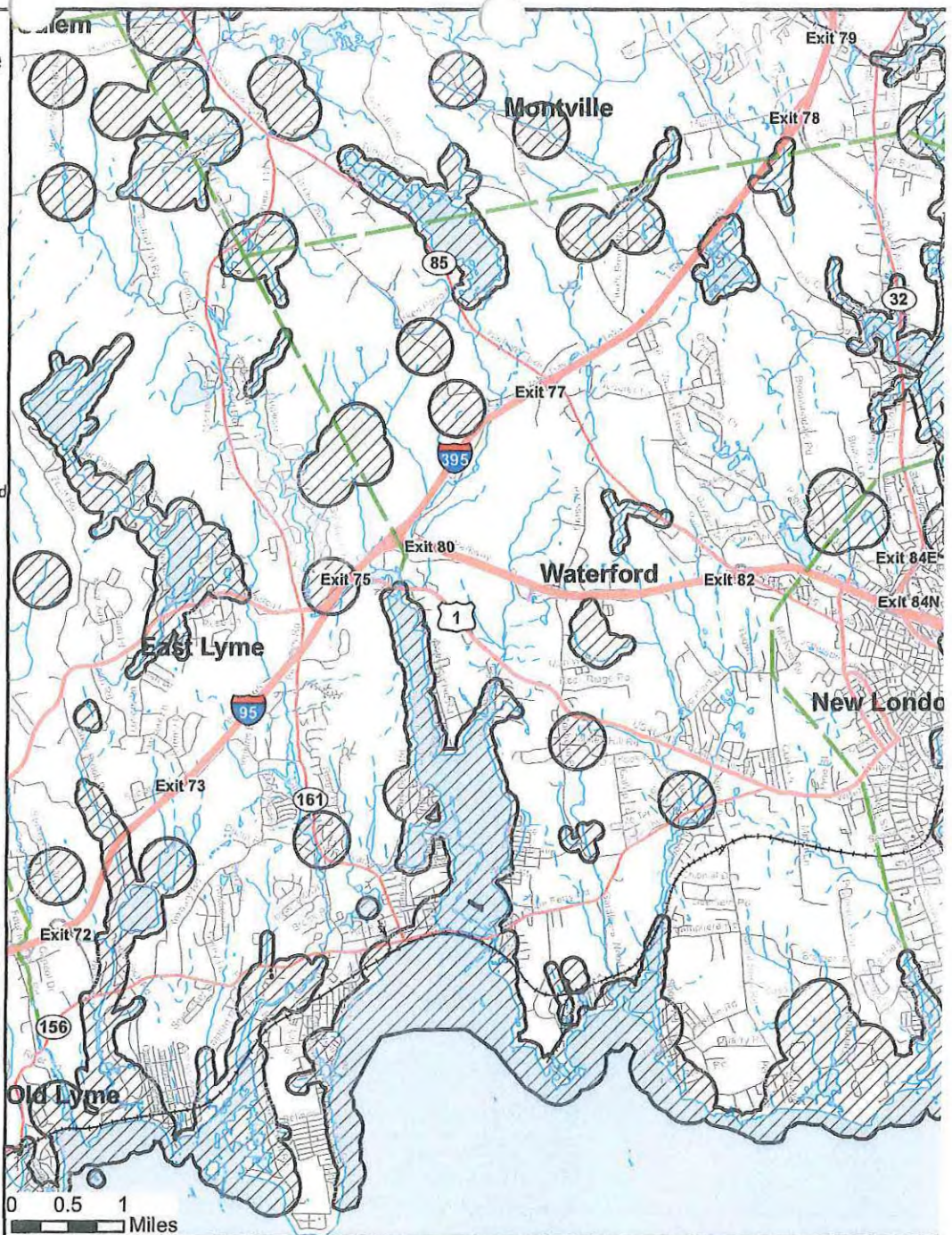
[www.ct.gov/deep/nddbrequest](http://www.ct.gov/deep/nddbrequest)

Use the CTECO Interactive Map Viewers at [www.cteco.uconn.edu](http://www.cteco.uconn.edu) to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)  
79 Elm St., Hartford CT 06106  
Phone (860) 424-3011



Connecticut Department of  
Energy & Environmental Protection  
Bureau of Natural Resources  
Wildlife Division



# Existing Conditions



January 31, 2017

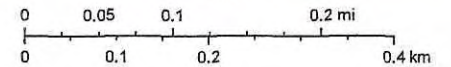
- Aids to Navigation (2013)
- Marinas (2014)
- Coastal Boat Launches**
  - Trailer, Car Top/Carry-In
  - Coastal Access Sites
- State Owned Open Space**
  - Other DEP Property
  - Channels, Basins, Anchorage Areas (DEEP)

- Commercial Shellfish Beds (Municipal Waters) - 2014
- Recreational Shellfish Beds (2014)
- Conditionally Approved
- Shellfish Area Jurisdiction Line
- Connecticut Towns
- Coastal Boundary
- Environmental Sensitivity Index (lines)
- 8B-Sheltered, solid man-made structures

- 6B-Riprap
- 5-Mixed sand & gravel beaches
- 3A-Fine- to medium-grained sand beaches
- 1B-Exposed, solid man-made structures
- U
- Environmental Sensitivity Index (polygons)**
  - 10A-Salt- & brackish-water marshes

- Critical Coastal Habitats**
  - Beachshore, B
- Eelgrass Beds (2012)**
  - High
  - Medium
  - Low
- Long Island Sound Bathymetry**
  - 1 - 20

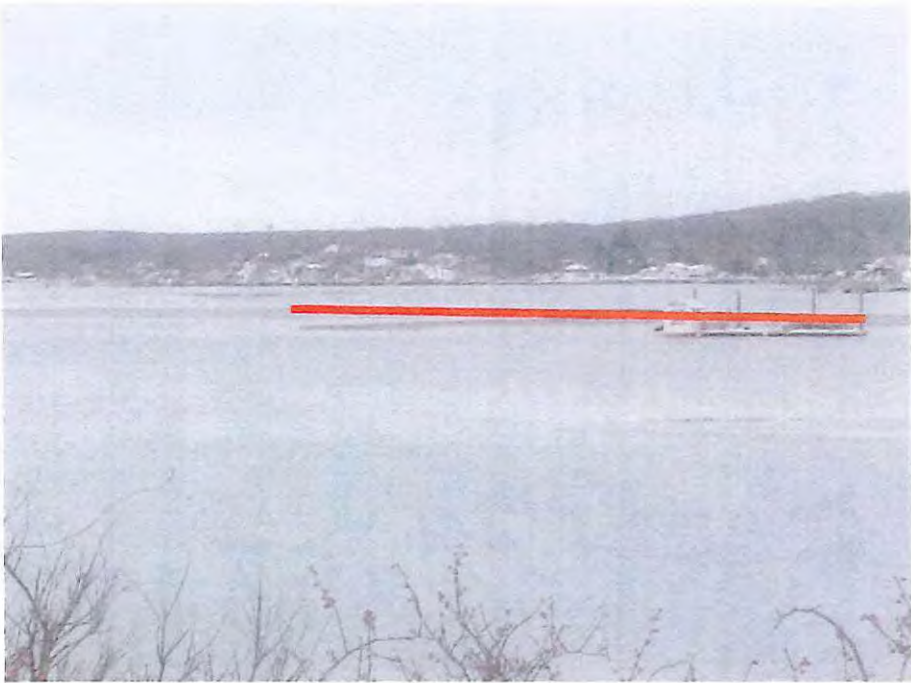
1:5,228



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Timothy A Londregan III  
Copyright: Connecticut Sea Grant and UConn CLEAR

Existing Conditions:  
Photographs A



Left: Blow-out tide January 9<sup>th</sup> 2017 2:34pm. Looking NNE from Cini Park in Niantic CT. Lease SW border is approximately marked. The pilings and Oyster Plex belong to NBSF. Please see map "WELSCO 7: Relationship to NBSF Oyster Plex"



Left: Blow-Out tide January 11<sup>th</sup> 2017 2:54pm. Looking ESE from red channel marker #14.

Existing Conditions:  
Photographs 



WELSCO 7 looking NNE on a blow-out tide November 22<sup>nd</sup> 10:30am.

# WELSCO 7

Relationship to NBSF Oyster Plex

Legend

W Corner

N Corner

E Corner

S Corner

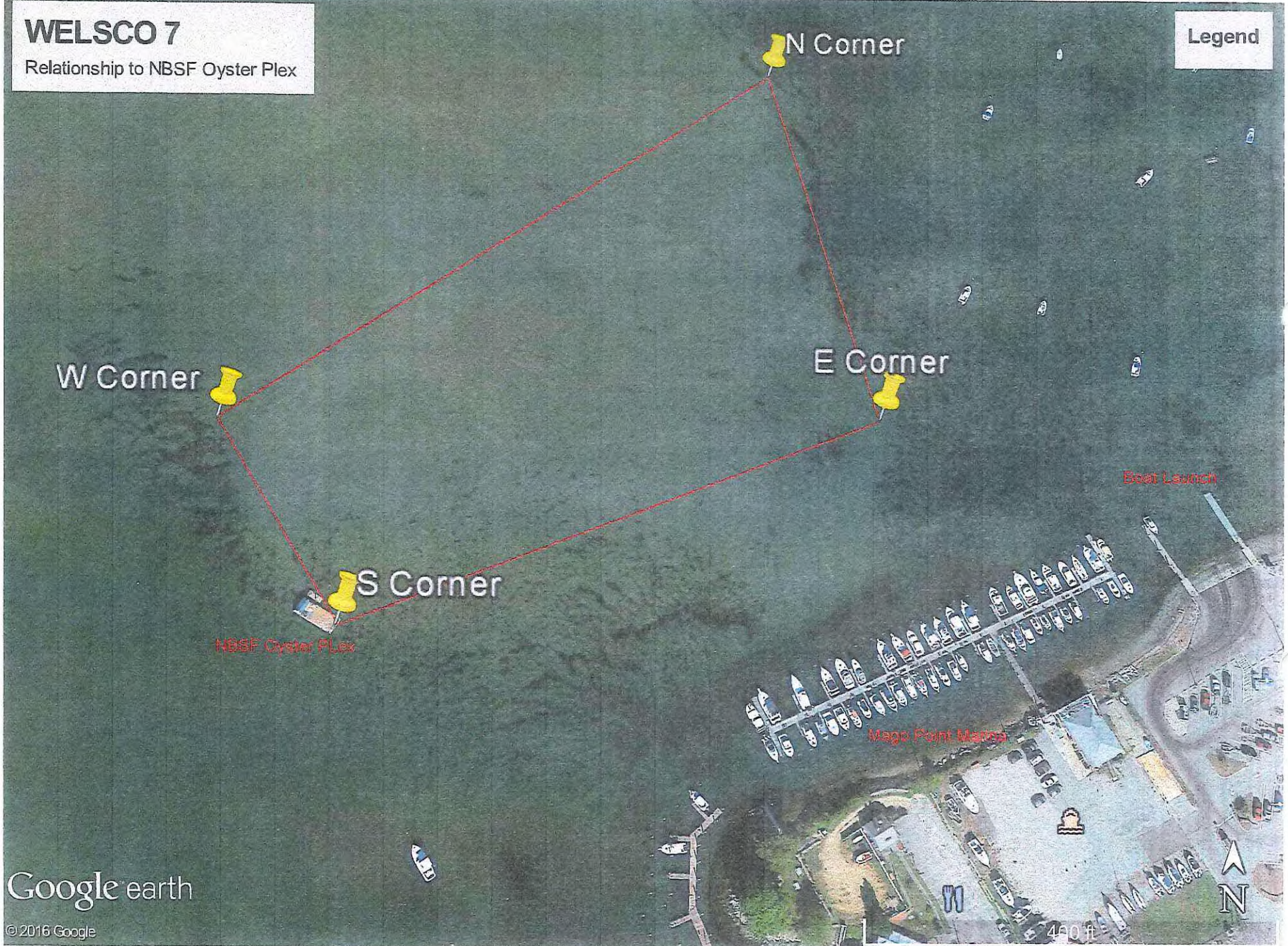
NBSF Oyster Plex

Boat Launch

Magic Point Marina

Google earth

© 2016 Google



# Existing Conditions: Eelgrass Historical Presence

Millstone Annual Report 2015

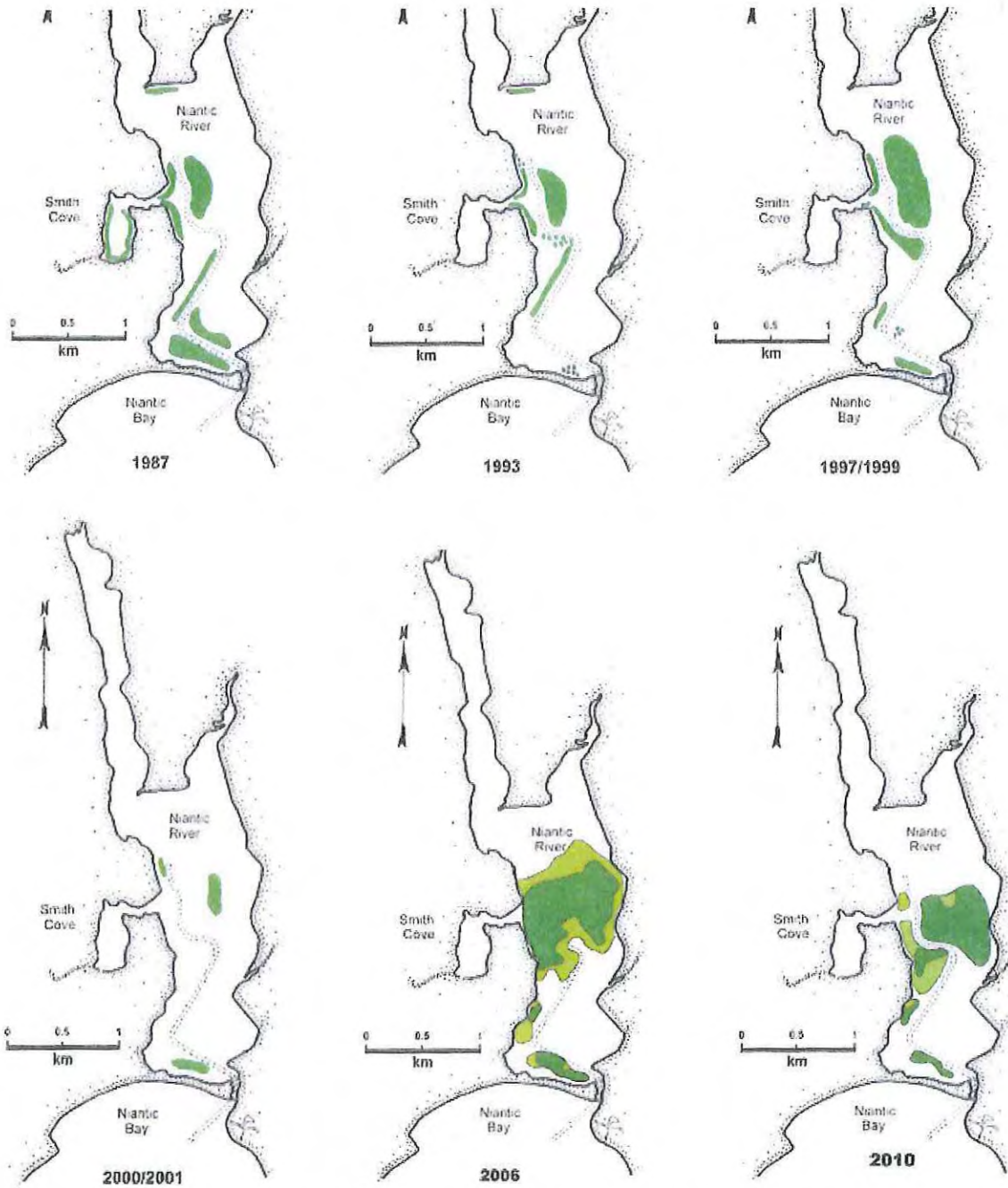


Fig. 8. Eelgrass (*Zostera marina*) distribution in the Nantic River based on surveys conducted during 1987-2015 (select years shown). Green areas on maps from 1987 to 2001 indicate presence of eelgrass. Lighter green areas in maps from later years indicate sparse ( $\leq 10\%$  cover) eelgrass abundance.

# Existing Conditions: Eelgrass Historical Presence

Millstone Annual Report 2015

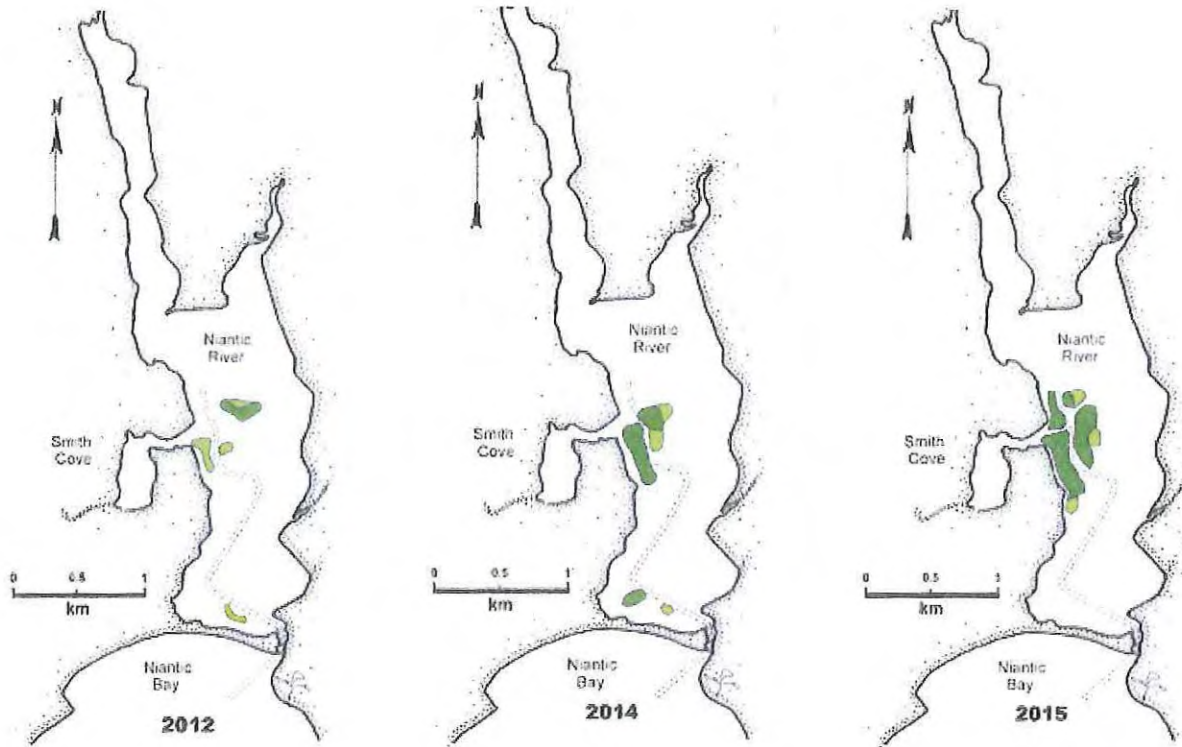


Fig. 8 continued.

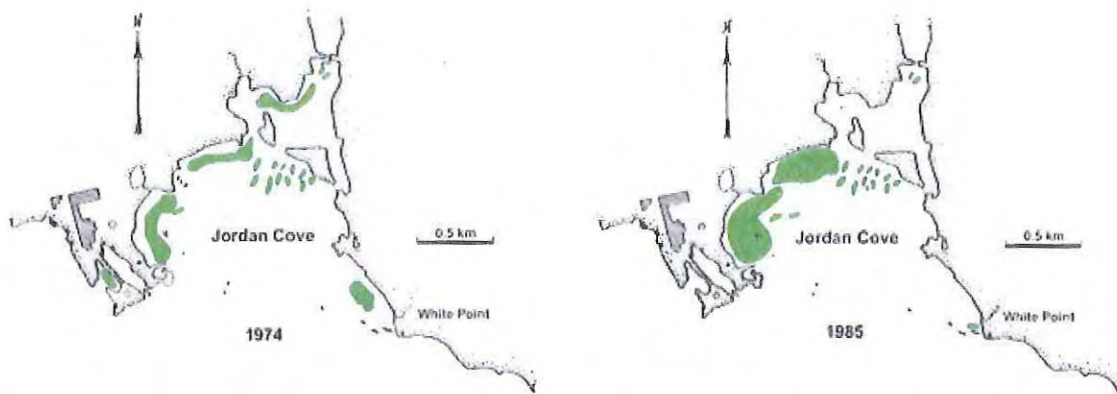


Fig. 9. Eelgrass (*Zostera marina*) distribution in Jordan Cove (select years shown). Green areas on maps from 1974 to 1997 indicate presence of eelgrass. Lighter green areas maps from later years indicate sparse ( $\leq 10\%$  cover) eelgrass abundance. The 1974 map was based on Knight and Lawton (1974).



# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI. Total number of samples taken and effort-adjusted<sup>2</sup> number of fish collected by trawl at station NR during each report year from June 1976 through December 2015.

Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Number of samples	45	78	78	78	81	78	78	78	78	78	78	77	77	76
Taxon <sup>1</sup>														
Winter Flounder	2,418	1,311	1,157	2,168	3,672	4,465	5,840	4,861	4,613	2,827	4,098	3,452	6,746	4,402
Silverside spp.	1,203	904	61	93	105	161	144	189	39	81	1,460	416	604	212
Grubby	37	32	34	65	230	336	390	418	236	281	366	282	439	622
Scup	58	10	11	5	6	38	27	57	2	3	22	15	3	5
Tautog	39	15	27	47	26	126	80	31	5	25	100	26	50	38
Summer Flounder	41	29	16	14	21	100	82	60	165	58	240	208	200	28
Windorygma	71	41	24	150	158	177	208	228	243	114	295	272	173	370
Black Sea Bass	18	0	0	1	2	3	2	0	1	8	112	0	3	1
Atlantic Menhaden	0	4	10	0	1	1	0	0	1	31	10	3	0	788
Northern Pipefish	19	9	14	22	62	177	100	97	63	101	102	205	148	68
Cunner	14	3	4	15	4	64	70	62	30	13	34	20	9	16
Striped Sea Robin	3	1	0	2	0	7	4	1	0	2	31	0	0	139
Threespine Stickleback	0	17	13	48	21	185	110	45	5	164	94	12	16	63
Anchovy spp.	10	195	0	0	2	0	11	2	5	15	9	11	168	734
Fourspine Stickleback	4	5	2	22	32	192	763	72	5	102	115	29	29	14
Rock Gummel	0	0	1	11	3	17	32	77	27	16	14	45	33	52
Atlantic Tomcod	3	6	8	11	101	164	66	50	11	46	15	0	30	21
Oyster Toadfish	95	22	6	16	28	34	20	26	16	33	53	49	58	32
Northern Sea Robin	92	22	1	5	4	3	249	1	2	1	13	0	19	13
Spotted Hake	0	0	0	0	0	0	1	3	0	3	4	0	6	1
Atlantic Cod	0	0	0	0	0	0	1	9	7	1	152	6	3	4
Northern Puffer	11	5	0	0	7	11	12	7	1	2	1	0	2	4
American Eel	16	11	7	4	8	23	14	21	16	25	24	18	20	5
Rainbow Smelt	55	86	2	0	6	13	14	17	3	31	8	7	34	5
Herring family spp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Goby spp.	3	0	0	0	4	0	0	2	2	12	3	3	12	2
River Herring spp.	0	0	0	0	0	0	0	0	0	0	0	0	1	3
Lined Senkorse	0	0	0	0	0	0	0	1	1	1	9	4	2	2
American Shad	2	0	0	3	2	1	0	9	0	0	0	0	0	0
Alewife	0	31	16	2	2	2	3	1	1	1	2	2	1	0
Smallmouth Flounder	0	0	0	0	1	0	0	1	2	0	4	2	4	3
American Sand Lance	1	0	1	74	4	0	2	14	1	0	0	0	1	0
Skate spp.	0	0	0	0	2	1	1	3	0	1	1	0	4	2
Sea Raven	0	0	0	2	5	9	6	32	24	3	1	0	0	0
Pollock	0	0	0	1	0	1	6	0	0	0	7	1	1	2
Codfish family spp.	0	1	1	2	0	40	2	0	0	0	0	0	0	0
White Hake	0	0	0	0	0	0	0	0	0	1	2	16	1	9
White Perch	2	1	0	1	5	2	0	0	0	0	0	0	2	8
Red Hake	0	0	0	0	0	3	0	7	0	4	0	0	7	1
Bluespotted Cometfish	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Striped Bass	0	0	2	1	0	1	1	0	0	1	0	0	0	4
Blueback Herring	0	0	8	1	8	0	0	0	2	1	0	0	0	0
Flying Gurnard	2	0	0	0	0	1	3	0	0	1	1	0	0	0
Inshore Lizardfish	0	1	1	0	0	0	1	0	0	0	0	0	0	0
Atlantic Herring	0	0	0	0	0	0	0	0	3	0	0	1	0	0
Silver Hake	0	0	0	0	0	0	2	1	0	0	0	1	0	2
Butterfish	1	0	0	0	0	0	0	2	0	0	0	0	0	3
Snailfish spp.	0	0	0	0	0	1	0	0	0	0	0	0	0	9
Fourspot Flounder	0	0	0	2	0	0	0	0	0	0	0	0	2	8
Lumpfish	0	0	0	1	1	0	0	1	0	1	0	0	2	0

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI (continued).

Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Number of samples	45	78	78	78	81	78	78	78	78	78	78	77	77	76
Taxon <sup>a</sup>														
Striped Cusk-eel	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Searobin spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Killifish spp.	0	0	0	0	0	4	3	0	0	0	2	0	0	1
Hake spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Spotfin Butterflyfish	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Stickleback spp.	0	0	0	0	11	0	0	0	0	0	0	0	0	0
Weakfish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Kingfish	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Conger Eel	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Bluefish	0	1	0	0	0	0	2	0	0	0	0	1	0	0
Clearnose Skate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Sennet	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Ninespine Stickleback	0	0	0	0	0	1	1	0	0	0	1	0	0	0
Feather Blenny	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackspotted Stickleback	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Spot	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planehead Filefish	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Striped Mullet	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Boxfish spp.	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Yellowtail Flounder	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gag	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hogchoker	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Mummichog	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hickory Shad	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eyed Flounder	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Crevalle Jack	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striped Burrfish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheepshead Minnow	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Striped Killifish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Snapper spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Filefish spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Dogfish	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Bigeye	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Short Bigeye	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown Trout	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Chain Dogfish	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Lookdown	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>NUMBER OF TAXA</b>	28	27	25	30	33	34	37	35	32	36	37	29	40	44
<b>TOTAL</b>	4,221	2,165	1,428	2,770	4,545	6,364	8,274	6,409	5,534	4,011	7,388	5,109	8,845	7,708

<sup>a</sup> See Materials and Methods for details.

<sup>b</sup> Fish were identified to lowest practical taxon. See Appendix I for a list of common and scientific names.

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI (continued).

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Number of samples	78	81	78	78	78	78	78	78	78	78	78	78	80	78
Taxa <sup>a</sup>														
Winter Flounder	3,734	5,145	5,971	1,728	2,354	1,553	1,820	720	1,130	1,305	1,394	383	344	721
Silverside spp.	217	542	456	144	108	58	269	213	84	606	897	197	259	492
Grubby	419	357	411	259	245	281	434	286	386	150	125	58	39	266
Scup	10	175	119	0	84	41	4	21	5	98	263	183	629	1,170
Tautog	89	67	22	17	14	163	62	44	144	246	324	175	238	280
Summer Flounder	143	171	257	103	243	75	177	310	94	166	254	130	112	275
Windswane	379	236	228	293	119	149	133	138	82	46	43	14	2	6
Black Sea Bass	16	44	1	0	7	10	0	4	5	41	65	6	57	92
Atlantic Menhaden	0	179	26	19	16	28	2	1	2	106	101	18	28	303
Northern Pipefish	85	106	73	214	34	166	85	27	57	32	45	19	19	12
Cunner	12	4	13	11	9	17	3	18	107	37	24	35	32	67
Striped Seabroin	82	239	23	14	255	18	8	48	30	480	65	5	116	98
Threespine Stickleback	11	11	433	111	23	76	3	116	53	80	3	6	1	0
Anchovy spp.	2	12	1	0	12	2	26	3	22	139	0	35	59	0
Fourspine Stickleback	9	26	107	30	3	8	2	13	1	47	7	8	5	1
Rock Gunnel	97	52	22	59	42	40	62	37	155	52	23	23	13	26
Atlantic Tomcod	32	2	0	10	15	5	79	63	126	12	3	18	3	8
Oyster Toadfish	52	23	4	10	17	21	10	10	11	6	7	9	12	1
Northern Seabroin	13	21	11	0	10	54	4	17	0	7	6	0	0	0
Spotted Hake	4	2	2	2	0	22	5	2	8	39	128	14	1	75
Atlantic Cod	0	3	1	8	2	12	44	5	3	2	8	1	0	58
Northern Puffer	12	23	3	2	16	16	2	6	2	28	8	3	18	20
American Eel	14	3	1	5	10	10	14	2	7	8	3	8	16	7
Rainbow Smelt	1	6	13	1	1	4	1	4	0	3	1	0	1	1
Herring family spp.	0	0	0	0	0	0	238	0	0	0	0	0	7	0
Goby spp.	15	11	9	34	0	6	0	2	6	7	3	9	2	0
River Herring spp.	14	0	12	17	111	0	0	0	0	6	0	0	0	1
Lined Senhorce	6	36	1	0	0	0	0	0	6	12	25	0	2	1
American Shad	0	0	0	0	0	0	40	0	0	1	0	0	0	2
Alewife	3	0	0	0	0	2	1	0	0	0	0	0	1	2
Smallmouth Flounder	2	6	9	2	3	6	1	12	2	10	10	2	0	6
American Sand Lance	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Skate spp.	3	2	20	2	8	3	12	20	5	4	1	0	1	1
Sea Raven	0	0	0	0	1	2	1	0	1	0	0	0	0	0
Pollock	0	0	0	0	0	4	2	0	0	0	2	0	3	7
Codfish family spp.	0	0	12	0	0	0	0	0	0	0	0	0	0	0
White Hake	0	0	0	2	0	6	6	0	1	1	1	0	0	1
White Perch	1	0	1	2	0	0	0	0	0	0	1	0	0	14
Red Hake	3	1	1	0	0	0	0	0	4	1	0	6	0	0
Bluespotted Cometfish	7	3	0	0	1	0	0	0	0	3	4	0	0	0
Striped Bass	1	0	0	2	3	0	6	1	0	1	0	0	0	1
Blueback Herring	0	0	9	0	0	8	0	0	0	0	0	0	0	0
Flying Gurnard	0	3	2	2	1	1	6	2	0	3	3	0	0	0
Inshore Lizardfish	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Atlantic Herring	0	0	0	0	0	0	0	0	0	2	1	0	8	2
Silver Hake	0	0	4	0	0	8	0	2	0	2	0	0	0	0
Butterfish	0	0	2	0	0	0	0	0	1	0	6	0	1	1
Snailfish spp.	0	1	0	0	1	1	0	0	1	0	0	2	1	0
Fourspot Flounder	0	1	0	0	0	0	0	0	0	2	0	0	0	0
Lumpfish	0	0	2	1	1	0	1	1	0	0	0	2	0	0

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI (continued).

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Number of samples	78	81	78	78	78	78	78	78	78	78	78	78	80	78
Taxon <sup>a</sup>														
Striped Cusk-eel	3	0	0	0	0	0	0	0	0	0	5	0	0	0
Searobin spp.	3	5	6	0	0	0	0	0	0	0	0	0	0	0
Killifish spp.	1	0	0	1	0	0	0	0	0	1	0	0	0	0
Hake spp.	0	1	0	2	0	2	0	0	1	0	1	1	0	0
Spotfin Butterflyfish	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Stickleback spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weakfish	1	0	0	0	0	0	0	0	0	0	1	0	0	3
Northern Kingfish	1	0	0	0	0	3	0	0	1	0	0	0	0	0
Conger Eel	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Bluefish	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Clearnose Skate	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Northern Sennet	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ninespine Stickleback	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feather Blenny	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackspeckled Stickleback	0	1	0	0	0	0	0	0	0	0	0	1	0	0
Spot	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Plumhead Filefish	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Striped Mullet	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Boxfish spp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellowtail Flounder	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Gag	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hogchoker	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mummichog	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hickory Shad	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Eyed Flounder	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Creville Jack	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Striped Burrfish	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Sheepshead Minnow	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striped Killifish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Snapper spp.	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Filefish spp.	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Smooth Dogfish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bigeye	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Short Bigeye	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Brown Trout	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chain Dogfish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lookdown	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>NUMBER OF TAXA</b>	<b>39</b>	<b>38</b>	<b>40</b>	<b>31</b>	<b>35</b>	<b>38</b>	<b>35</b>	<b>31</b>	<b>34</b>	<b>41</b>	<b>37</b>	<b>31</b>	<b>31</b>	<b>36</b>
<b>TOTAL</b>	<b>5,519</b>	<b>7,522</b>	<b>8,192</b>	<b>3,107</b>	<b>3,772</b>	<b>2,882</b>	<b>3,584</b>	<b>2,148</b>	<b>2,544</b>	<b>3,794</b>	<b>3,861</b>	<b>1,423</b>	<b>2,030</b>	<b>4,028</b>

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI (continued).

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Number of samples	78	78	78	78	78	78	78	78	78	78	81	78	3,094
Taxon <sup>1</sup>													
Winter Flounder	470	268	565	318	217	342	182	241	168	174	281	221	83,689
Silverside spp.	347	98	46	222	58	38	309	53	292	47	118	222	11,464
Grobby	371	97	30	278	243	29	112	24	16	5	75	26	8,790
Scup	306	125	180	259	159	107	25	88	86	223	794	393	5,809
Tautog	254	249	60	421	191	63	64	15	51	85	412	355	4,740
Summer Flounder	58	43	101	77	106	43	38	113	34	93	89	146	4,713
Windowpane	5	1	3	1	3	1	1	4	3	1	0	0	4,395
Black Sea Bass	16	3	119	92	65	87	45	24	206	239	1,263	603	3,266
Atlantic Menhaden	1	5	0	1	904	0	0	83	12	0	0	142	2,826
Northern Pipefish	7	9	12	6	19	14	61	23	21	34	30	22	2,419
Cunner	101	123	54	155	133	91	175	72	52	34	68	61	1,916
Striped Seerobin	4	13	13	3	6	6	4	1	2	13	11	67	1,814
Threespine Stickleback	1	0	1	2	1	1	4	9	2	0	1	0	1,732
Anchovy spp.	1	4	3	0	7	3	1	175	27	1	0	0	1,697
Fourspine Stickleback	0	0	0	0	1	0	3	21	0	0	0	0	1,678
Rock Gummel	33	95	20	35	33	18	43	13	8	1	15	18	1,363
Atlantic Tomcod	21	10	2	5	10	1	4	6	1	0	7	0	975
Oyster Toadfish	2	2	4	5	2	1	8	6	3	1	1	1	717
Northern Seerobin	2	0	5	0	0	3	0	0	2	5	4	0	589
Spotted Hake	12	0	5	1	1	4	5	3	6	24	50	19	452
Atlantic Cod	19	6	0	1	2	39	5	21	0	3	8	0	434
Northern Puffer	1	3	11	14	3	4	1	1	10	5	28	63	366
American Eel	3	4	1	4	1	2	1	0	1	7	1	0	345
Rainbow Smelt	2	0	0	0	0	0	0	0	0	0	0	0	320
Herring family spp.	0	0	0	0	0	0	0	0	0	0	0	0	266
Goby spp.	3	8	3	9	3	2	3	1	2	6	3	1	191
River Herring spp.	0	0	0	0	0	0	0	0	2	0	0	3	170
Lined Seahorse	0	0	0	5	11	5	0	0	5	8	0	0	143
American Shad	46	3	0	2	0	0	0	0	0	0	0	0	111
Alewife	3	3	0	1	0	0	27	0	1	0	0	1	109
Smallmouth Flounder	1	0	0	0	1	2	0	0	0	8	1	2	103
American Sand Lance	0	0	0	0	0	0	0	2	0	0	0	0	101
Skate spp.	0	0	2	0	0	0	0	0	0	0	0	0	99
Sea Raven	0	0	1	1	0	0	1	0	1	1	0	0	92
Pollock	1	7	0	1	2	1	9	1	0	0	2	0	61
Codfish family spp.	0	0	0	0	0	0	0	0	0	0	0	0	58
White Hake	0	0	1	0	0	3	0	0	0	0	0	0	51
White Perch	0	0	1	0	2	0	0	0	0	0	0	0	43
Red Hake	0	0	0	0	0	1	0	3	0	0	0	1	43
Bluespotted Cornetfish	0	0	0	0	7	0	0	0	0	1	10	2	41
Striped Bass	0	0	4	0	9	1	0	0	0	0	0	0	39
Blueback Herring	0	0	0	0	0	1	0	0	0	0	0	0	38
Flying Gurnard	0	1	0	0	1	2	1	0	0	0	2	0	38
Inshore Lizardfish	1	0	7	1	1	1	0	0	0	2	19	0	36
Atlantic Herring	0	0	0	0	0	0	0	0	0	2	0	5	24
Silver Hake	0	0	0	0	1	0	0	0	0	0	0	0	23
Butterfish	0	1	0	0	0	0	0	0	0	0	0	0	23
Snailfish spp.	0	0	0	1	0	0	2	0	0	0	0	0	20
Fourspot Flounder	0	0	0	0	0	0	0	0	0	0	0	0	15
Lumpfish	0	0	0	0	0	0	0	0	0	0	0	0	14

# Existing Conditions:

## Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI (continued).

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Number of samples	78	78	78	78	78	78	78	78	78	78	81	78	3,094
Taxon <sup>a</sup>													
Striped Cusk-eel	1	0	0	0	1	1	0	0	0	0	0	0	14
Senobin spp.	0	0	0	0	0	0	0	0	0	0	0	0	14
Killifish spp.	0	0	0	0	0	0	0	0	0	0	0	0	13
Hake spp.	0	0	0	0	0	0	0	0	0	1	0	0	12
Spotfin Butterflyfish	0	0	1	3	0	2	0	0	0	1	1	0	11
Stickleback spp.	0	0	0	0	0	0	0	0	0	0	0	0	11
Weakfish	0	0	0	0	0	0	0	0	0	0	0	0	10
Northern Kingfish	0	0	1	0	0	0	0	0	0	0	0	0	8
Conger Eel	0	0	0	0	0	0	0	0	0	0	0	4	8
Bluefish	0	0	1	0	0	0	0	0	0	0	0	0	7
Clearnose Skate	0	0	0	1	0	0	0	0	1	0	3	1	7
Northern Sannet	0	0	0	0	0	0	0	0	0	0	0	0	6
Ninespine Stickleback	0	0	0	1	1	0	0	0	0	0	0	0	5
Feather Blenny	0	0	0	0	0	0	0	0	1	2	1	0	4
Blackspotted Stickleback	0	0	0	0	0	0	0	0	0	0	0	0	3
Spot	0	0	1	0	0	0	0	0	0	0	1	0	3
Plunthead Filefish	0	0	0	0	0	0	0	0	0	0	0	0	3
Striped Mullet	0	0	0	0	0	0	0	0	0	0	0	0	3
Boxfish spp.	0	0	0	0	0	0	0	0	0	0	0	0	2
Yellowtail Flounder	0	0	0	0	0	0	0	0	0	0	0	0	2
Gug	0	2	0	0	0	0	0	0	0	0	0	0	2
Hogchoker	0	0	0	0	0	0	0	0	0	0	0	0	2
Mummichog	0	0	0	0	1	0	0	0	0	0	0	1	2
Hickory Shed	0	0	0	0	0	0	0	0	0	0	0	0	1
Eyed Flounder	0	0	0	0	0	0	0	0	0	0	0	0	1
Creville Jack	0	0	0	0	0	0	0	0	0	0	0	0	1
Striped Burrfish	0	0	0	0	0	0	0	0	0	0	0	0	1
Sheepshead Minnow	0	0	0	0	0	0	0	0	0	0	0	0	1
Striped Killifish	0	0	0	0	0	0	0	0	0	0	0	1	1
Snapper spp.	0	0	0	0	0	0	0	0	0	0	0	0	1
Filefish spp.	0	0	0	0	0	0	0	0	0	0	0	0	1
Smooth Dogfish	0	0	0	0	0	0	0	0	0	0	0	0	1
Bigeye	0	0	0	0	0	0	0	0	0	0	0	0	1
Short Bigeye	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Trout	0	0	0	0	0	0	0	0	0	0	0	0	1
Chain Dogfish	0	0	0	0	0	0	0	0	0	0	0	0	1
Lookdown	0	0	0	0	0	0	0	0	0	0	0	0	1
NUMBER OF TAXA	30	26	31	31	35	33	27	25	28	29	29	26	87
TOTAL	2,093	1,183	1,258	1,926	2,206	919	1,134	1,003	1,016	1,027	3,299	2,306	148,627

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

## NIANTIC RIVER (NR):

Green crab	200	74	50	80	714	1,516	3,116	1,161	2,454	2,847	3,851	4,908	2,358	4,626
Spider crabs	781	3,583	243	266	1,730	1,527	1,105	1,147	984	1,157	821	691	2,331	1,604
Lady crab	32	101	107	178	476	328	606	428	233	76	20	75	356	439
Atlantic rock crab	24	26	30	23	43	109	334	378	133	276	18	59	140	395
Bay scallop	105	315	156	47	404	425	169	316	366	630	2,026	530	55	44
American lobster	8	7	10	9	9	8	210	53	14	13	74	8	110	825
Blue crab	19	3	3	10	105	23	30	18	20	17	41	18	17	29
Horseshoe crab	84	130	20	43	26	35	50	43	23	33	27	41	69	68
Flatclaw hermit crab	26	12	7	12	12	7	37	3	7	10	2	3	18	13
Longfin squid	4	7	4	23	75	6	1	10	0	10	2	4	7	1
Whelks	2	6	6	3	14	13	5	5	7	3	2	12	10	14
Moonsnails	0	1	5	2	1	0	0	2	0	1	4	0	0	1
Jonah crab	8	6	0	0	0	0	0	0	0	0	0	0	0	0
Mantis shrimp	0	0	0	0	0	0	0	0	0	0	2	0	1	1
Lesser blue crab	0	0	0	0	0	0	11	0	0	0	0	0	0	0
Asian shore crab	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown shrimp	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>1,293</b>	<b>4,271</b>	<b>641</b>	<b>696</b>	<b>3,609</b>	<b>3,997</b>	<b>5,674</b>	<b>3,564</b>	<b>4,241</b>	<b>5,073</b>	<b>6,890</b>	<b>6,349</b>	<b>5,472</b>	<b>8,060</b>

<sup>a</sup> See Materials and Methods for details and Appendices IV-VI for annual effort by station.

<sup>b</sup> Only selected macroinvertebrates were recorded in trawl catches. See Appendix II for a list of common and scientific names.

# Pre-Application Screening Form



AGENCY USE ONLY

Date of Receipt: 11/21/16  
 DA/BA File: CT092a AO  
 DEEP File: \_\_\_\_\_  
 USACE App No. NAE- \_\_\_\_\_

Pre-screening proposed aquaculture activities allows the agencies to quickly to determine if the location and activity place the project within the guidelines for the general aquaculture permitting process and State of Connecticut exemption or if the project will require a more extensive application and review process. This screening tool will result in acknowledgment and written response to the producer, usually within 10 days, that identifies the necessary application(s) to complete and an expected time-frame from application submittal to final project approval. The pre-application screening process is meant to provide the prospective applicant with better information and the flexibility to adapt project plans without first completing an extensive application.

This form must be submitted to initiate the application process for aquaculture and related activities in the State of Connecticut. **Submit completed form by email: [dept.agric@snet.net](mailto:dept.agric@snet.net) OR fax (203) 874-9976 OR mail to: Connecticut Department of Agriculture, Bureau of Aquaculture, P.O. Box 97, Milford, CT 06460.**

## PART I: APPLICANT INFORMATION

Business or Organization Name: Niantic Bay Shellfish Farm  
 Contact Person: Timothy A. Londregan III Title: Managing Member  
 Mailing Address: 59 Woodlawn Road  
 City: New London State: CT Zip Code: 06320  
 Business Phone: 860-287-0770 Ext. \_\_\_\_\_ Fax: \_\_\_\_\_  
 Email\*: [timothylandregan@gmail.com](mailto:timothylandregan@gmail.com)

\*By providing this e-mail address you are agreeing to receive official correspondence from the department, at this electronic address, concerning the subject application. Please remember to check your security settings to be sure you can receive e-mails from agency addresses. Also, please notify the agency if your e-mail address changes.

## PART II: SITE INFORMATION

Street address (if applicable): \_\_\_\_\_  
 Name of water body (if applicable): Niantic River \_\_\_\_\_  
 City: Waterford State: CT Zip Code: 06385

Will the project be located within a designated shellfish lease or franchise? Yes  No

If yes, specify the type of lease: State CT Town Waterford

Lease or Lot Number: WELSCO 7\_\_

Are you the leaseholder or owner? Yes  No

If not, you must have a letter of permission from leaseholder or owner to proceed with the permitting process.

Will the project be located in a marina or attached to a private docking facility? Yes  No

Are you the owner of the facility? Yes  No

If not, you must have a letter of permission from the owner of the facility to proceed with the permitting process..

Is there submerged aquatic vegetation (i.e. eelgrass) within the proposed site? Yes  No  Unsure

If yes, please be aware that in most instances gear cannot be placed within submerged vegetation. Please site your gear

accordingly, and on your Project Map (see section V below) show the location of the vegetation relative to the gear

Is there other commercial or recreational activity within the proposed site? Yes  No  Unsure

If yes, please describe the activities and how the project will not interfere with these uses: \_\_\_\_\_



If land-based facility is used, will water be diverted to or discharged from the site? Yes \_\_\_\_\_ No \_\_\_\_\_  
Diversion volume (gallons per day) \_\_\_\_\_ Discharge volume (gallons per day) \_\_\_\_\_

### PART III: PROJECT INFORMATION

Proposed Start Date: 4/1/2016 Proposed End date (if applicable): \_\_\_\_\_

Commercial: X Research: \_\_\_\_\_ Educational: \_\_\_\_\_ Habitat Restoration: \_\_\_\_\_ Stock Enhancement: X

Species: (list) Eastern Oyster, Bay Scallop

Source of aquatic organisms: (list business, contact person and phone number): FIOF- Steve Malinowski 631-788-7899; NBSF Wilcox Hatchery- Timothy A. Londregan III 860-739-6273

### PART IV: PROJECT DESCRIPTION

Please provide a brief overview of your project here: Primary function of this site is to grow seed oysters and seed/mature bay scallops. Different gear used to narrow in on what is best for site. First year, 2 million seed oyster first year and 100,000 bay scallops. Second year, 3 million seed oysters and ideally 1 million bay scallops. After the third year, we will continue to grow the oyster seed aspect but will emphasize bay scallops. Site is essential to continue our successful bay grow-out site as well as develop the Wilcox hatchery as a reliable seed source for CT farmers. Currently, we are working with other farmers/businesses/commissions to vamp up bay scallop production but are restricted with current leases. The river has many competing uses, but over the last 12 months NBSF and WELSCO have intensively looked at the river and concluded this is the best area to operate out of.

Gear type: Super trays, table-top and bag, trays, floating bags

Total gear units: First Year 2,600 Second Year 3,600 Third Year 6,000 Fourth Year 9,000 Fifth year 12,000

Gear configuration: \_\_\_\_\_

### PART V: PROJECT MAP

This form is not complete unless a project map is included. The map can be hand drawn or you may use a free online mapping tool at: <http://clear2.uconn.edu/shellfish/>. The map is required to have a NOAA navigational chart with depth soundings on it as the base map. The following items (if applicable) should be included on the map:

- Draw lease perimeter
- Indicate lease area latitude/longitude coordinates (decimal degrees)
- Indicate lease area size (acres)
- Identify datum (if you obtain your latitude/longitude information from your GPS, the default is usually WGS84, unless you have changed this manually within the setup function. If you obtain your coordinates from a mapping website or other user, please ask for the datum the data was collected in).
- Draw proposed gear perimeter
- Indicate gear area latitude/longitude coordinates (decimal degrees)
- Indicate gear area size (acres)
- Mark closest location and distance to federal channel(s), if within 1000 feet of the gear perimeter
- Mark location and distance to closest landmark, if within 1000 feet of the proposed gear perimeter
- Mark location and distance to any submerged aquatic vegetation

**PART VI: AGENCY COMMENTS (TO BE COMPLETED BY THE REGULATORY AGENCIES)**

**DA/BA**

Name of Agency Reviewer: DHC

Date: 12/23/16

Comments: \_\_\_\_\_

**CT's first bay scallop project located in a known habitat for the wild populations**

**DEEP OLISP**

Name of Agency Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

Comments: \_\_\_\_\_

**DEEP Fisheries**

Name of Agency Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

Comments: \_\_\_\_\_

**DEEP Boating**

Name of Agency Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

Comments: \_\_\_\_\_

**USACE**

Name of Agency Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

Comments: \_\_\_\_\_

**PART VII: FINAL RECOMMENDATIONS:**

*DA/BA will complete this section and return this form along with applications (if applicable) to the applicant with copies to*

\_\_\_\_ Pre-screening form is incomplete.

Comments: \_\_\_\_\_

OR

\_\_\_\_ Pre-screening is complete. The following applications are attached and required to be completed in order for the regulatory agencies to continue the permitting process:

- \_\_\_\_ Importation License
- \_\_\_\_ Programmatic General Permit for Aquaculture (PGP)
- \_\_\_\_ Structures, Dredging, Fill & Tidal Wetlands Permit (SDF&TW)
- \_\_\_\_ Certificate of Permission (COP)
- \_\_\_\_ Individual Permit (IP)
- \_\_\_\_ Regulatory Marker Permit
- \_\_\_\_ Water Diversion Permit
- \_\_\_\_ Water Discharge Permit
- \_\_\_\_ List Other: (e.g. HACCP, Shipper, Inspection, Transplant etc.)

Additional comments: \_\_\_\_\_

\_\_\_\_ The following authorizations/exemptions were issued in response to this coordination.

- \_\_\_\_ Section 10 Authorization under the New England General Permit by the U.S. Army Corps of Engineers
- \_\_\_\_ CT Aquaculture Exemption per Sec. 22-11h(c) by CT DEEP Office of Long Island Sound Programs
- \_\_\_\_ Waiver from Regulatory Marker Permit from CT DEEP Boating Division

Niantic Bay Shellfish Farm  
Waterford East-Lyme Shellfish Commission  
WELSCO-7 Lease

**Lease Location Overview:**

WELSCO 7 is a 6.41 acre plot located in the Niantic River designated for "aquaculture projects." Located on the eastern portion of Squall Flats, this area presents a hard sand bottom with a depth anywhere from 12" to 2' at MLW with some areas becoming exposed during a blow-out tide. According to the most recent SAV surveys and recent observations, no SAV is present within the boundaries of WELSCO 7.

**Competing Uses:**

The Niantic River is a popular water body for many recreational purposes. Due to this reality, over the last 12 months NBSF and WELSCO have determined that WELSCO 7 is one of the most viable areas to carry out an aquaculture project.

**-Fishing:**

According to the Commission and Wardens, no recreational shellfishing occurs within WELSCO 7. The western part of the sand bar sees winter clamming activity but the eastern part is barren. No major commercial activity is conducted on the river besides one significant green crabber. When speaking with this gentleman, there is not a conflict between our goals. Furthermore, his traps are not placed in WELSCO 7. Recreational fishing on this flat is non-existent.

**-Boating:**

The most significant concern for this area is boating. While WELSCO 7 is well outside all marked or locally established channels, I can attest to the fact that unwary and inexperienced boaters may attempt to run the flat at low tide. This typically results in a beached vessel. Most individuals run the western half of the flat not the eastern part. Shallow draft vessels (18" or less draft) can run the entire river at high tide. Vessels mostly utilizing this area are small sailing vessels, jet skis and kayaks. The area of most concern would be the eastern boundary to the lease. While the lease is confined to the sand bar, it does hug the pseudo-channel or Indian channel. This does not represent a risk for larger vessels as they would run aground if they strayed outside of the Indian channel. Jet skiers launching from the State boat launch do typically disregard the Open Water Policies set by Waterford Harbor commission and do traverse this area at high speeds. At low tide this area would become impassible.

**Gear to be Deployed:**

First Year: 100 trays individually marked/placed, 4'x3' double stacked  
500 double stacked super trays 2'x2'- individually placed and secured to bottom  
2000 bags on two tier tables  
Second Year: 1000 bags  
Gear dependent on growth rates/findings with scallops in year one.  
Continuing gear deployment as outlined in application. By year 5 we want to have 12,000 serviceable units over the 6.41 acres

First year gear will be deployed in the 3 acre are noted on the maps. Trays will be deployed on the southern side. Super trays deployed along the western edge moving north into the center and the bags/tables will be in rows running north to south in the remaining area.



79 Elm Street • Hartford, CT 06106-5127

[www.ct.gov/deep](http://www.ct.gov/deep)

Affirmative Action/Equal Opportunity Employer

February 22, 2017

Timothy A. Londregan III  
Niantic Bay Shellfish, LLC  
59 Woodlawn Rd  
New London, CT 06320  
[timothy@nianticbayshellfishfarm.com](mailto:timothy@nianticbayshellfishfarm.com)

Project: WELSCO 7 installation of aquaculture gear at south eastern portion of Squall Flats in the Niantic River, Waterford  
NDDB Determination No.: 201701429

Dear Timothy A. Londregan III,

I have reviewed Natural Diversity Database (NDDB) maps and files regarding the area of work provided for the proposed WELSCO 7 installation of aquaculture gear at south eastern portion of Squall Flats in the Niantic River, Waterford, Connecticut. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for two years. Please re-submit a new NDDB Request for Review if the scope of work changes or if work has not begun on this project by February 22, 2019.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey, cooperating units of DEEP, landowners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDB should not be substitutes for on-site surveys necessary for a thorough environmental impact assessment. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the database as it becomes available.

Please contact me if you have further questions at (860) 424-3378, or [karen.zyko@ct.gov](mailto:karen.zyko@ct.gov) . Thank you for consulting the Natural Diversity Database.

Sincerely,

A handwritten signature in blue ink, appearing to read "Karen Zyko".

Karen Zyko  
Environmental Analyst



Connecticut Department of  
 Energy & Environmental Protection  
 Bureau of Water Protection & Land Reuse  
 Office of Long Island Sound Programs

## ATTACHMENT D: SHELLFISH COMMISSION DEEP PERMIT CONSULTATION FORM

*You need to complete and submit this form only if your town has a Shellfish Commission.*

**To the applicant-** Prior to the submission of your permit application to the Connecticut Department of Energy and Environmental Protection- Office of Long Island Sound Programs (DEEP-OLISP), please complete Part I and submit this form to your local shellfish commission (contact the town for the appropriate contact person) with a location map of your site and project plans. Once the commission returns the completed form to you, please submit it along with your permit application to the DEEP.

**Part I: To be completed by APPLICANT**

<b>1. List applicant information.</b>			
Name: Timothy A. Londregan III			
Mailing Address: PO Box 106			
City/Town: Niantic	State: CT	Zip Code: 06357	
Business Phone: 860-739-6273	ext.	Fax:	
Contact Person: Timothy A. Londregan III	Title: Managing Member		
Email: timothy@nianticbayshellfishfarm.com			
<b>2. List engineer/surveyor/agent information.</b>			
Name:			
Mailing Address:			
City/Town:	State:	Zip Code:	
Business Phone:	ext.	Fax:	
Contact Person:	Title:		
Service Provided:			
<b>3. Site Location:</b>			
Street Address or Location Description: WELSCO 7- Niantic River			
City/Town: Waterford	State: CT	Zip Code: 06385	
Tax Assessor's Reference: MapN/A	Block N/A	Lot N/A	
<b>4. Are plans attached?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    If Yes, provide date of plans: 11/21/2016			
<b>5. Provide or attach a brief, but thorough description of the project:</b> See attached Pre-Application Screening Form			

**Part II: To be completed by SHELLFISH COMMISSION**

This consultation form is required to be submitted as part of an application for a Structures, Dredging & Fill permit (section 22a-361 of the Connecticut General Statutes (CGS)) and/or Tidal Wetlands permit (CGS section 22a-32) to the DEEP-OLISP. The application has not yet been submitted to the DEEP. Please review the enclosed materials and determine whether the project will adversely impact shellfish beds. You may also provide comments or recommendations regarding the proposal. Should you have any questions regarding this process, please call DEEP-OLISP at (860) 424-3034 to speak with the analyst assigned to the town in which the work is proposed. Please return the completed form to the applicant.

**SHELLFISH COMMISSION DETERMINATION:**

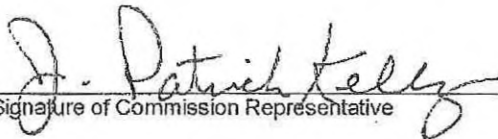
Project located on (check one):  natural bed    state bed    local bed    none  
 other, please specify:

If project is located upon a franchised or leased shellfish bed, please provide the owner or lessee's contact information below.

Check one of the following:

- I have determined that the work described in Part I of this form and attachments **WILL NOT** adversely impact a shellfish area.
- I have determined that the work described in Part I of this form and attachments **WILL** adversely impact a shellfish area. A summary of the Shellfish Commission's project-specific concerns/comments is described below or attached.

COMMENTS/RECOMMENDATIONS (check the box if attached: ):

  
Signature of Commission Representative

MARCH 16, 2017  
Date

JAMES PATRICK KELLY  
Print Name of Commission Representative

CD-CHAIRMAN  
Title



# Verification of Receipt

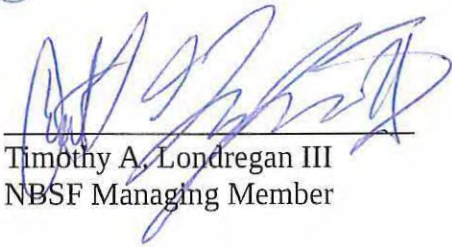
The Waterford Harbor Management Commission (WHMC) has received the full SDF application from Niantic Bay Shellfish Farm (NBSF) on September 9<sup>th</sup> 2017. Jane Adams, chair of WHMC, has taken receipt of the full application at her personal residence so as to facilitate the applications circulation to the members of the WHMC prior to their next meeting on September 14<sup>th</sup> 2017.



Jane Adams  
WHMC Chair

9-8-17

Date



Timothy A. Londregan III  
NBSF Managing Member

9/8/17

Date

## Attachment E-1 NBSF Structures, Dredging, Fill application

### Waterford Harbor Management Commission Review

#### I. Inconsistencies with the Waterford Harbor Management Plan

Waterford East Lyme Shellfish Commission (WELSCO) in violation of CT General Statutes Section 22a-113p of the Harbor Management Act (and Section 2.82.010 of the Ordinance Creating a Harbor Management Commission)

WELSCO did not comply with the CT general Statutes nor with the Waterford enabling ordinance for the Harbor Management Commission (HMC) given its failure to notify the HMC of its proposal to (a) lease 6.4 acres of the Niantic River or (b) approve the project for the DEEP Structures, Dredging and Fill (SDF) application.

Sec. 22a-113p. Action on applications to municipal agencies referred to commission. The commission may review and make recommendations, consistent with the plan, on any proposal affecting the real property on, in or contiguous to the harbor that is received by any zoning commission, planning commission or combined planning and zoning commission, zoning board of appeals, historic district commissions, flood and erosion control board, harbor improvement agency, port authority, redevelopment agency, shellfish commission, sewer commission, water pollution control authority or special district with zoning or other land use authority. Such agencies shall send a copy of any such proposal to the commission upon the request of such commission. **The commission shall be notified of any such proposal at least thirty-five days prior to the commencement of the hearing thereon or where no hearing is held, at least thirty-five days prior to the taking of any final action on the proposal. The local agency authorized to act on the proposal shall consider the recommendations of the commission.** A two-thirds vote of all the members of the local agency having authority to act on the proposal shall be required to approve a proposal which has not received a favorable recommendation from the commission, provided that the provisions of this section shall not be deemed to alter the authority of the agency having primary jurisdiction over the proposal to deny, modify or condition the proposal. Failure of the commission to submit a recommendation shall be deemed to be approval of the proposal. [Bold emphasis added.]

#### Public Safety

The Waterford Police Department has advised the HMC that the proposed siting of the NBSF raises public safety concerns given "restricted public use for this area as well as greater congestion of marine vessels". Please see Attachment E-2 from Lt. David Burton.

#### Public Access

#### Public Access

The HMP states:

##### D. Public Access

Consistent with the Connecticut Coastal Management Act and the Waterford Coastal Program, public access to Waterford waters should be preserved and improved together with all proposed waterfront use and development. Accordingly, the following policies shall apply:

- (1) No proposed structures or uses shall restrict existing public access.

The proposed location of the NBSF would restrict existing public access.

#### *Open Water Area*

Article II, Section 16, Open Water, of the Waterways Regulations (Enabling Ordinance of the HMC) states that "There shall be no moorings or anchorages in any area so designated. Furthermore, there shall be no structural encroachments that would limit the use of these areas." The proposed NBSF project would place 6.4 acres of structures in Open Water areas.

#### *Shellfishing*

The NBSF is in a designated shellfish concentration area. Our HMP provides that "New navigation channels, turning basins, fairways, berthing areas, mooring areas and anchorages shall not be dredged in designated shellfish concentration areas nor should any new structures such as docks, pilings, breakwaters, groins, or sea walls be placed in designated shellfish concentration areas unless it is demonstrated that the effected resource area has been permanently depleted or that no other feasible alternative exists and that any adverse impact to the shellfish resources are fully mitigated to the satisfaction of the Waterford and Waterford-East Lyme Shellfish Commissions." We have received testimony that the proposed NBSF is in a winter shellfishing area for native clams (vs. seeded).

#### *Intertidal Flats*

This SDF conflicts with the HMP in its failure to preserve intertidal flats. in Part III, #4 (Page 5 of 13), the SDF notes that the proposal site is an intertidal flat. Waterford's Water Use Plan focuses on the preservation of coastal resources and while acknowledging that structures may be permitted that should be only in the case that the impacts are minimal and there are no feasible alternatives. This SDF proposal would have significant impact on this intertidal flat. There are feasible alternatives.

#### 1.A. (2) Tidal Wetlands, Intertidal Flats, Eel Grass and Other Submerged Aquatic Vegetation

Tidal wetlands and intertidal flats are to be construed as one of the Town of Waterford's greatest assets and the following policy shall apply:

(a) **The priority use for tidal wetlands and intertidal flats is preservation, limited uses and structures may receive regulatory approval if the resource impacts are minimal, no feasible alternatives exist and the use is of utmost importance to the well being of the community.**

(b) The ecological values of intertidal resources for habitat, breeding, nutrient productivity, storm water retention and pollution control are well established and as such the use of these areas should be discouraged except in extreme cases of importance. This habitat is a non-renewable resource and the eel grass is of utmost importance in the production, growth and survival of the Niantic Bay scallop larvae. [Bold emphasis added.]

## Pilings

### Ownership interest unverified

Mr. Londregan has asserted that he has legal title to the pilings which he obtained through a Quit Claim deed he received from Paul Pimento. The HMC needs to refer to Town Counsel any claim to legal right and past title history.

### Authority of DEEP to issue COP for pilings

The pilings that are included in the SDF application appear to be within the jurisdiction of the Waterford Harbormaster. The HMC questions the authority of DEEP to permit these as the pilings do not meet the definition of a Non-harbor mooring. *General Permit for Minor Coastal Structures* (DEEP-OSLIP-GP 2015-01), page 4, defines a "Non-harbor mooring" as

[M]eans a mooring placed where the location of such mooring is not subject to the jurisdiction of a harbormaster or of a harbor management plan approved pursuant to section 221-113m of the General Statutes.

### Current and proposed use of pilings is not consistent with the Minor Coastal Structures provisions

The use of the pilings for commercial purposes and by a structure or vessel that is not capable of safe navigation appears to directly conflict with items (3) and (5) of the *General Permit for Minor Coastal Structures* (DEEP-OSLIP-GP 2015-01), page 12 which addresses the special conditions for placement, removal and replacement of a non-harbor mooring:

(b) Special Conditions for PLACEMENT, REMOVAL AND REPLACEMENT OF A NON-HARBOR MOORING authorized in Section 3(a)(2) of this general permit.

- . (1) Such mooring shall not be placed within a federally-designated navigation channel and shall not create a hazard to or interfere with existing navigation uses in any waterway, including channels, turn basins, fairways, or transient anchorages.
- . (2) Such mooring shall not be located on or over submerged aquatic vegetation.
- . **(3) Such mooring is not rented and no other charge by the permittee is made for its use, and it is not used for any commercial purpose.**
- . (4) Such mooring shall be easily identified by boaters and shall be maintained on tackle and anchors sufficient to prevent such mooring from changing position.
- . **(5) Such mooring shall not be used by any boat, barge, or other structure or vessel which is neither used for nor capable of safe navigation except for emergency purposes.**
- . (6) Such mooring shall be inspected annually to ensure the integrity of the components.
- . (7) Any such mooring located in the Connecticut River shall not interfere with existing drift net shad fisheries. [Bold emphasis added.]

## II. Mischaracterizations or omissions in SDF and attachments

The HMC would like to offer the following corrections to statements included in the SDF application:

### May 16, 2016 meeting of HMC with Tim Londregan

The HMC reached no conclusion regarding the potential siting of aquaculture in WELSCO areas 4 and 5. The HMC expected Mr. Londregan to return to discuss equipment and be accompanied by a member of WELSCO. Mr. Londregan did not meet again with the HMC until May 2017. (The Experimental Area Agreement with WELSCO was signed in November 17, 2016.) The HMC neither strongly resisted nor contested any site as stated in Attachment Mi.

### Absence of Shellfishing in Area

In WELSCO-7 Lease Competing Uses discussion it is stated that "According to the Commission and Wardens, no recreational shellfishing occurs within WELSCO-7." In Attachment Mvii it states that "Another reason the commission selected this location is due to the fact that there is little to no natural product on this sand bar which is inhospitable to a natural population." The HMC received comments that contradict these statements,

### Part III, #3 (Page 5 of 13) "Economic Development to Continue the Active Waterfront"

In describing the purpose of, need for, and intended use of the proposed activities, one of the items cited is economic development to continue the active waterfront. We have received comments from business entities in Niantic and Waterford that anticipate negative economic consequences from this project. For example, the majority (for some this is close to 80%) of the 650 commercial slips on the Niantic side of the river rely on drawing boat owners from out of town.

### Part III, #4 (Page 5 of 13) Identify and describe all coastal or aquatic resources on the site.

The SDF states that Shellfish Concentration Areas are "Adjacent." We have received comments that indeed this is both an actual and historic area in coastal waters in which one or more species of shellfish aggregate [Definition of "Shellfish Concentration Area", Reference Guide To Coastal Policies And Definitions, page 5.] In addition, the SDF states that there is Submerged Aquatic Vegetation (SAV) adjacent to the area but not on-site. We have received comments that the site itself does have SAV.

### Part III, #5 (Page 6 of 13) Improvement of coastal and inland navigation for all vessels, including small craft for recreational purposes

In Attachment Mvii, Mr. Londregan states that "With the marking of the lease perimeter, it will be evident that this area is not an area one should attempt to cross. (sic) Thus eliminating one of the biggest navigational hazards present on the Niantic River for your weekend warrior. Furthermore, being within the vicinity of the State Boat launch it will allow boaters unfamiliar with the area to avoid this hazard." The HMC has been advised by the Waterford Police Department that the proposed NBSF will increase the navigational hazards in the area. Personal watercraft (jet skis), kayaks, stand-up paddle boards (SUPs)

often use this area and will now be pushed into the waters trafficked by powerboats. The attachment does not address these types of crafts.

**Part III, #5 (Page 6 of 13) Proposed activities impact on Recreational Use of public water**

Attachment Mvii addresses only the impact on shellfishing. This is an area frequently used for recreational purposes by personal watercraft (at a higher speed than the 6 mph of the channel), kayaks, canoes, and SUPs.

**Part III, #6 (Page 6 of 13) Identify and evaluate any potential beneficial and adverse impacts to public access to, and public use of ...waters waterward of mean high water.**

- The SDF states that “Use would be restricted but it is currently not utilized by recreational anglers, shellfishers, or trappers.” The HMC has received comments that contradict this statement and specifically cite the use of these area for fishing and shellfishing.
- The SDF states that it “does not represent a risk to kayaks” however by pushing those vessels into the more congested waters accessed by boat ramp users as well as vessels from the mooring field north of the boat ramp, kayaks and SUPS as well as personal watercraft would be at an increased risk.
- The SDF does not address the increase in risk to personal watercraft that frequently cross this area at higher speeds. Their current access to this area will be eliminated or inadvertent crossovers will occur, possibly resulting in personal watercraft running into half-submerged equipment.
- The SDF states that “This project may help the Commission keep speed in this area at a minimum while creating a safer environment around the Indian Channel and State Boat Launch.” As we have been advised by the Waterford Police Department, this project will increase risk to the public and create a public safety concern.

**Part III, #7 (Page 7 of 13) Describe how the proposed work will be a water-dependent use(s) of the property or will physically support water-dependent use(s) of the property, such as marinas, recreational and commercial fishing, boating facilities, shipyards and boat building facilities.**

While the SDF states that it uses many local businesses to keep gear maintained and to sell product, it is anticipated to actually undermine—not support—the water-dependent uses of area marinas, recreational fishing and potentially boat-dependent operations.

**Part III, #8 (Page 7 of 13) Identify and evaluate the potential adverse impacts of the proposed work upon future water-dependent development opportunities and activities.**

The SDF states that “The area was identified by the WELSCO and the Shellfish Warden as non-utilized space, over the other six pre-existing aquaculture leases within the River. This area is too shallow for boat traffic or moorings.” As we have been informed, the HMC believes that there are a number of potential adverse impacts that the SDF does not mention. Those include, as discussed elsewhere, public safety, removal of Open Water area from the public, the failure to preserve an intertidal flat, and removal of a shellfishing area from the public.

#### Attachment M Authority of WELSCO is not exclusive

The SDF states that “it should be clear that the The (sic) Waterford East Lyme Shellfish Commission has the right to exercise it’s (sic) authority over equitable use of the river with regards to shellfishing and Aquaculture.” WELSCO does not have exclusive authority.

2.82.100 Waterways Regulations (amended and adopted by the RTM on 05/07/12), Article I, General Provisions, provides that

Section 3. Authorities

- b. The harbor management commission shall review and may make recommendations regarding all applications for permits or approvals for all floats, structures, and other marine facilities within waters and land under its jurisdiction.

Based on these points I would entertain a motion that

#### Consistency with Harbor Management Plan

##### **Not consistent**

On September 14, 2017, the Waterford Harbor Management Commission deliberated and determined that the Structures, Dredging and Fill application (SDF) of the Niantic Bay Shellfish Farm (NBSF) is not consistent with the Waterford Harbor Management Plan (HMP).

While our HMP embraces aquaculture, that support does not abrogate the responsibilities of the HMC and the HMP. The HMC believes that public safety and public access must inform decisions on the size, location and nature of equipment for responsible aquaculture. The HMC desires to be part of the discussion to identify a location that would be consistent with the HMP.





**Part I: To be completed by APPLICANT (continued)**

5. Provide or attach a brief, but thorough description of the project. Please refer to the Pre-App on file at DA/BA submitted on 12/21/2016. Placement of Aquaculture gear in the Niantic River.

**Part II: To be completed by DEPARTMENT OF AGRICULTURE / BUREAU OF AQUACULTURE**

This consultation form is required to be submitted as part of an application for a Structures, Dredging & Fill permit (section 22a-361 of the Connecticut General Statutes (CGS)) and/or Tidal Wetlands permit (CGS section 22a-32) to the DEEP- OLISP. The application has not yet been submitted to the DEEP. Please review the enclosed materials and determine whether the project will significantly impact shellfish beds. You may also provide comments or recommendations regarding the proposal. Should you have any questions regarding this process, please call DEEP-OLISP at (860) 424-3034 to speak with the analyst assigned to the town in which the work is proposed. **Please return the completed form to the applicant.**

Section 22a-361(b) of the Connecticut General Statutes requires that the Commissioner of the DEEP shall hold a public hearing on permit applications submitted pursuant to CGS section 22a-361 provided that a petition requesting such hearing signed by 25 or more persons is received and if the project will significantly impact any shellfish area, as determined by the Director of the Bureau of Aquaculture at the Department of Agriculture.

**DEPARTMENT OF AGRICULTURE/ BUREAU OF AQUACULTURE DETERMINATION:**

Project located on (check one):  natural bed  state bed  local bed  none  
 other, please specify:

If project is located upon a franchised or leased shellfish bed, please provide the owner or lessee's contact information below.

Check one of the following:

- I have determined that the work described in Part I of this form and attachments **WILL NOT** significantly impact any shellfish area.
- I have determined that the work described in Part I of this form and attachments **WILL** significantly impact any shellfish area and that a public hearing must be held if the DEEP issues a public notice for the project as currently designed and a qualified petition is received.

COMMENTS/RECOMMENDATIONS (or check here if attached: ):

  
Signature of Commission Representative

3/9/2017  
Date

Print Name of Commission Representative

  
Title

Niantic Bay Shellfish Farm  
Waterford East-Lyme Shellfish Commission  
WELSCO-7 Lease

**Lease Location Overview:**

WELSCO 7 is a 6.41 acre plot located in the Niantic River designated for "aquaculture projects." Located on the eastern portion of Squali Flats, this area presents a hard sand bottom with a depth anywhere from 12" to 2' at MLW with some areas becoming exposed during a blow-out tide. According to the most recent SAV surveys and recent observations, no SAV is present within the boundaries of WELSCO 7.

**Competing Uses:**

The Niantic River is a popular water body for many recreational purposes. Due to this reality, over the last 12 months NBSF and WELSCO have determined that WELSCO 7 is one of the most viable areas to carry out an aquaculture project.

**-Fishing:**

According to the Commission and Wardens, no recreational shellfishing occurs within WELSCO 7. The western part of the sand bar sees winter clamming activity but the eastern part is barren. No major commercial activity is conducted on the river besides one significant green crabber. When speaking with this gentleman, there is not a conflict between our goals. Furthermore, his traps are not placed in WELSCO 7. Recreational fishing on this flat is non-existent.

**-Boating:**

The most significant concern for this area is boating. While WELSCO 7 is well outside all marked or locally established channels, I can attest to the fact that unwary and inexperienced boaters may attempt to run the flat at low tide. This typically results in a beached vessel. Most individuals run the western half of the flat not the eastern part. Shallow draft vessels (18" or less draft) can run the entire river at high tide. Vessels mostly utilizing this area are small sailing vessels, jet skis and kayaks. The area of most concern would be the eastern boundary to the lease. While the lease is confined to the sand bar, it does hug the pseudo-channel or Indian channel. This does not represent a risk for larger vessels as they would run-around if they strayed outside of the Indian channel. Jet skiers launching from the State boat launch do typically disregard the Open Water Policies set by Waterford Harbor commission and do traverse this area at high speeds. At low tide this area would become impassible.

**Gear to be Deployed:**

First Year: 100 trays individually marked/placed. 4'x3' double stacked  
500 double stacked super trays 2'x2'- individually placed and secured to bottom  
2000 bags on two tier tables  
Second Year: 1000 bags  
Gear dependent on growth rates/findings with scallops in year one.  
Continuing gear deployment as outlined in application. By year 5 we want to have 12,000 serviceable units over the 6.41 acres

First year gear will be deployed in the 3 acre area noted on the maps. Trays will be deployed on the southern side. Super trays deployed along the western edge moving north into the center and the bags/tables will be in rows running north to south in the remaining area.

## Attachment K:

The proposed work is entirely waterward of mean high water, and outside of the apparent riparian/littoral area of any shoreline property. This is evident due to the fact that the proposed work is located waterward of the Wadsworth Channel. No landowner can extend their rights past this channel as demonstrated by the construction of the new docking facility at 1 First Street, Waterford, CT 06385 by Gary Smith.

However, these are the names and addresses of property owners within 500 feet of the leased site area.

Gary Smith  
PO Box 833  
Old Lyme, CT 06371  
(Subject property 1 First Street, Waterford CT 06385)

Bob Wadsworth  
Mago Point Marina  
20 First Street  
Waterford, CT 06385

David Sylvestre  
110 Goodwin Road  
Canterbury, CT 06331  
(Subject Property 9 First Street, Waterford CT 06385)

## Attachment M:

Attachments Mi-Mv are to give sufficient evidence that the selected area is the most suited for the proposed project. While land owners, boaters, anglers and all other parties have certain rights to the use of the River, it should also be clear that the The Waterford East Lyme Shellfish Commission has the right to exercise its authority over equitable use of the river with regards to shellfishing and Aquaculture. Furthermore, WELSCO has the obligation to “sustain and enhance recreational shellfishing.” as well as “...emphasize the restoration of native shellfish.”<sup>1</sup> It should also be noted that “...Foster[ing] sustainable development of shellfish resources...restoration and enhancement are critical to the Commission’s mission.”<sup>2</sup> Lastly, “The Cultivation, transplantation, harvest and general management of shellfish shall have priority over all other uses within designated shellfish resource areas. This should not, however, be constructed to deny a riparian owner's access to navigable waters...”<sup>3</sup> These direct exerts give proof that the multiple commissions within the general area, based on their own management plans, are welcoming to an operation dedicated to enhancement and restoration.

Attachment Mi: WELSCO lease areas considered and rejected due to eel grass, user conflicts (boating, recreational shellfishing, moorings, proximity to channel, unsuitable for aquaculture.

Attachment Mii: Areas considered for new lease areas and rejected due to user conflicts.

Attachment Miii: Summation of progress to WELSCO- evident that a new area needs to be sought to avoid user conflicts/other interests.

Attachment Miv: Application Submitted to WELSCO at July meeting- rejected due to concerns- WELSCO identified necessary changes needed before the project could move forward

Attachment Mv: After more complications in August, September and October (each meeting new and updated plans were put forth by NBSF and are available upon request. It is clear that a great effort went into the site selection process and any more documentation would simply be bulky) Minutes documenting addition of WELSCO 7 and map. Area added by WELSCO after 12 months of debate and deliberation. It was determined that this area, while not the best area for the growth of animals, is the least productive area of the River (not utilized by recreational harvesters according to the Chief Shellfish Warden), limited in user conflicts, and, frankly, the safest area to place gear.

Attachment Mvi: DEP-OLISP-APP-200. Additional information regarding the piles and floating structure mentioned in the SDF.

Attachment Mvii: SDF Part III question 5 explanation.

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1 WELSCO 2016 Policy Statement

2 East Lyme Shellfish Management Plan 2005

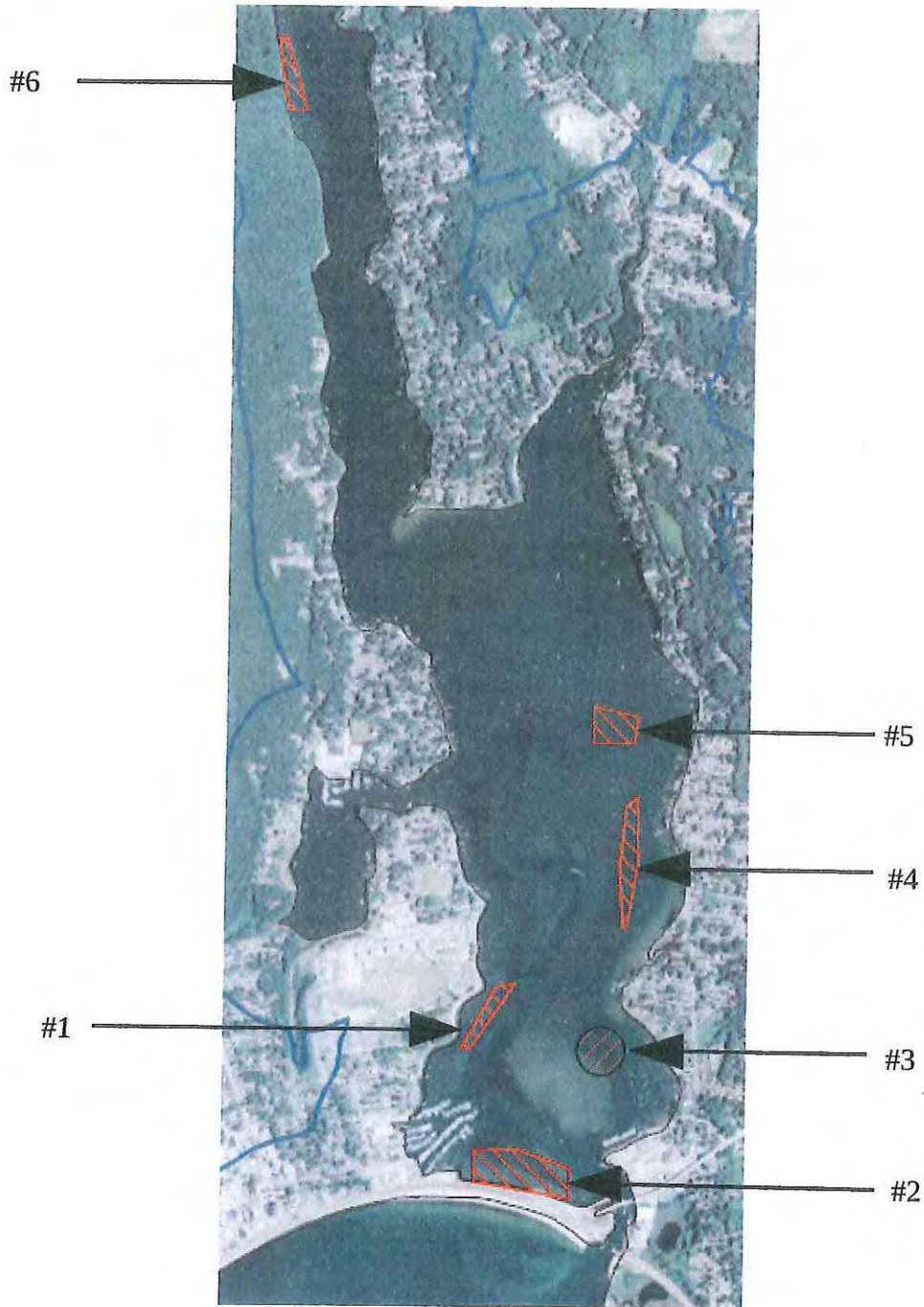
3 Waterford Harbor Management Plan 1999

## Attachment Mi:

(This original document was created for WELSCO and The Waterford Harbor Management Commission. Both commission have view this document. 2/18/2016)

The six shaded areas have been identified by WELSCO in the 2002 Policy Statement as possible areas for Aquaculture Projects

### Lease Locations Overview



### Lease Location #1:



#### Negatives:

- Close to Channel.
- Established mooring field in southern half.
- Northern half used by recreational shellfishers.

#### Conclusion:

- Current state of area does not allow for reasonable development.
- Can be used as area for restoration.

#### WELSCO Conclusion:

Unsuitable- popular recreational use

### Lease Location #2:



#### Negatives:

- NE corner close to channel.
- Southern portion of site may hinder recreational shellfishers.
- Shallow- poaching.

#### Positives:

- Very sparse ell grass.
- Mud/sand bottom
- Shallow- accessibility

#### Conclusions:

- Suitable for Type II aquaculture- rack and bag system for juveniles
- Suitable for final grow out cages.

#### WELSCO Conclusion:

Unsuitable- popular recreational use

### Lease Location #3



#### Negatives:

- May encroach on popular recreational shellfishing grounds

#### Positives:

- No ell grass.
- Removed from conflicting boat traffic
- Ample room for residential dock owners to navigate to slip.

#### Conclusions:

- Suitable for aquaculture

#### WELSCO & NBSF Final Conclusion:

Unsuitable- Does not encroach on recreational shellfishing. However, this is located in the Indian Channel/Pseudo Channel as visible by the map coloration.

### Lease Location #4



#### Negatives:

- Established mooring field within perimeter.
- Awkward trapezoid, poor layout for aquaculture.
- Crowds existing docks.

#### Positives:

- Removed from high boat traffic.
- Sparse ell grass.

#### Conclusions:

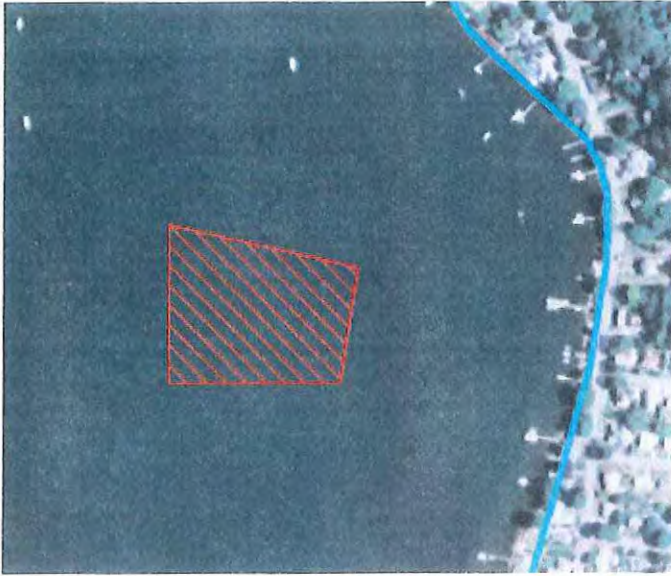
- Suitable for restoration activities.
- Current state does not allow for reasonable Type II aquaculture.

#### WELSCO Conclusion:

Unsuitable- proximity to shore/docks/moorings, located in Indian Channel/Pseudo Channel



## Lease Location #5



Unsuitable- Waterford Harbor Management seemed to strongly resist this site

### Positives:

- Depth 6-10'.
- No eel grass.
- Removed from heavy boat traffic.
- Ample room for boats to access nearby docks safely.
- 450' to nearest mooring (off NW corner)
- Good size and shape for Type II gear layout.

### Negatives:

- Jet Ski traffic

### Conclusions:

- Suitable for aquaculture.
- Suitable for restoration activities

### WELSCO Conclusion:

## Lease Location #6



### Negatives:

- Removed- poaching.
- Not ideal shape or size for gear layout.
- Silted in bottom
- Popular water skiing/tubing area/high speed boating

### Positives:

- Removed from heavy boat traffic.
- Closed area to recreational shellfishing.
- Slightly lower salinity.

### Conclusions:

- Suitable for aquaculture

### NBSF Conclusion:

Unsuitable- Only gear usable is surface gear and given the high speed boating NBSF does not think this is a safe combination.

## Other Lease Locations

There are benefits and drawbacks of every lease area. It is Niantic Bay Shellfish Farm's goal to mitigate such conflicts while, at the same time, gauging these conflicts against the net gain an aquaculture presence in the river will bring to the towns and estuary. The below areas of consideration are for the sake of conversation so as to find the best possible fit while appeasing all interested parties.



**Conclusions:** The North and East areas were contested by the Waterford Harbor Management Commission. The East area is also located on popular scallop grounds as well as some clamming grounds. It is also located near shore. The Western area, Smith Cove, is silted in and freezes over in the winter. It also have a prohibited classification and lacks sufficient water flow. The Southern area occupies popular winter clamming grounds on the western half of the area.



Attachment Miii:  
WELSCO Meeting  
6/16/2016

History of Events:

January 21<sup>st</sup>- Indicated NBSF interest in a Project

February 18<sup>th</sup>- Present concepts concerning pre-selected areas as indicated in 2002 WELSCO plan

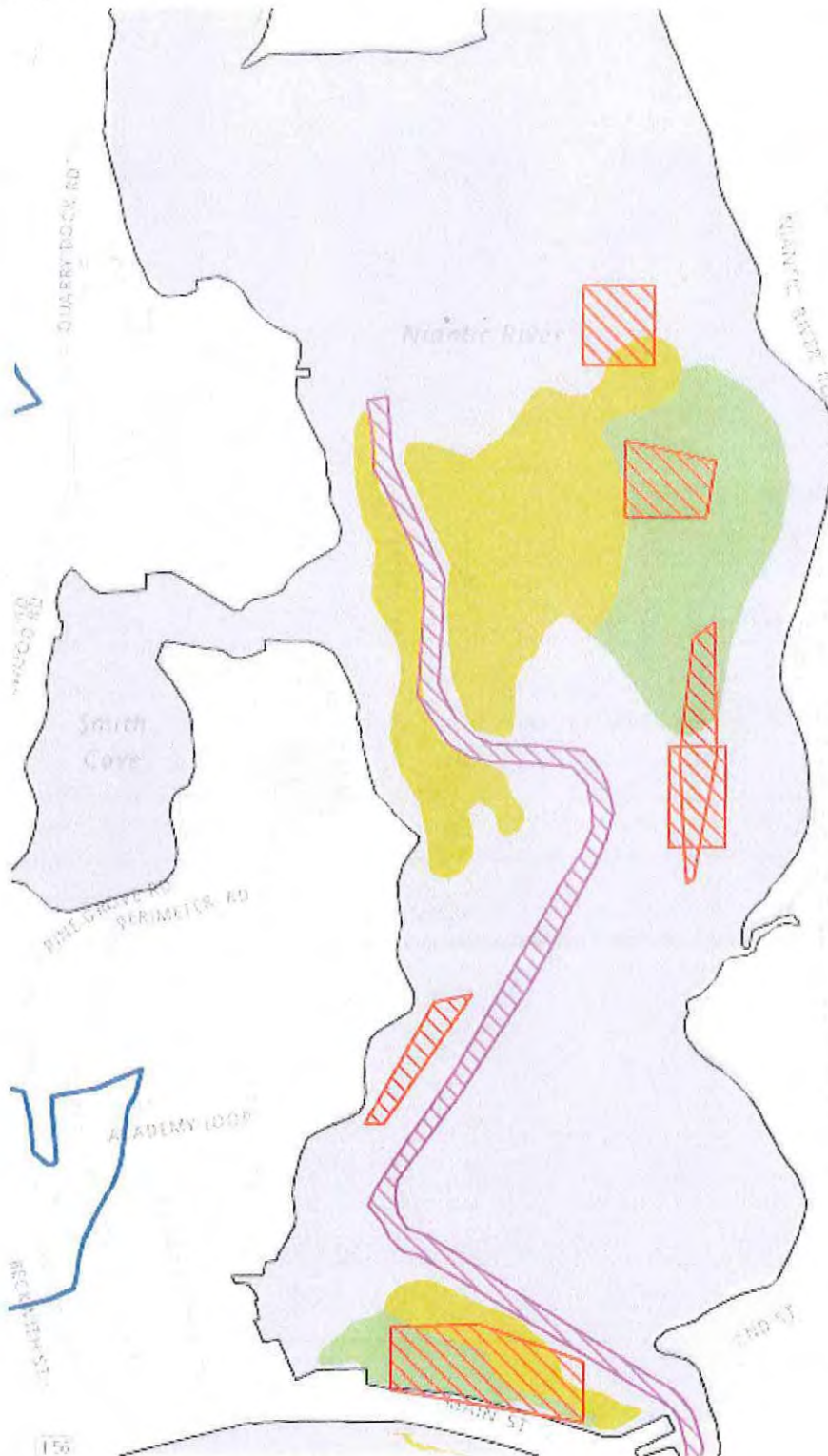
March 17<sup>th</sup>- Present Proposal

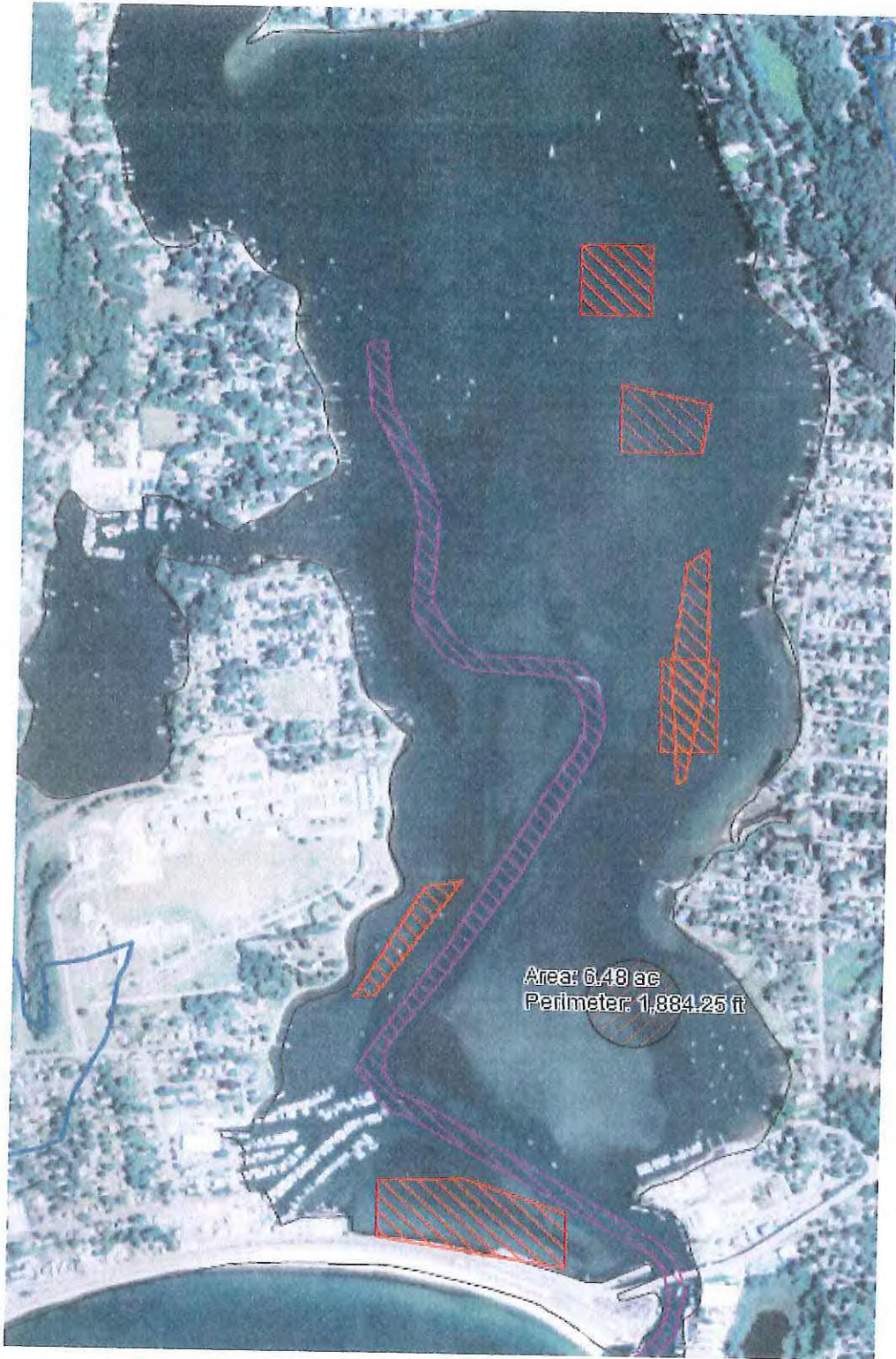
April 21<sup>st</sup>- Present modified Proposal. Told to speak with Waterford Harbor Management Commission.

May 19<sup>th</sup>- Tabled

June 16<sup>th</sup>- Present more information and discuss further my finding at the Harbor Management meeting.

Purple indicates channel  
Green/mustard indicates eel grass  
Red indicates previous areas considered





Considered areas- Conclusion- WELSCO, NBSF: none are appropriate.

**Attachment Wiv:**

(submitted to WELSCO after previous June meeting in an attempt to rectify issues identified above)

# **The Wadsworth Initiative**

**Restoring the Niantic River Shellfish Population**

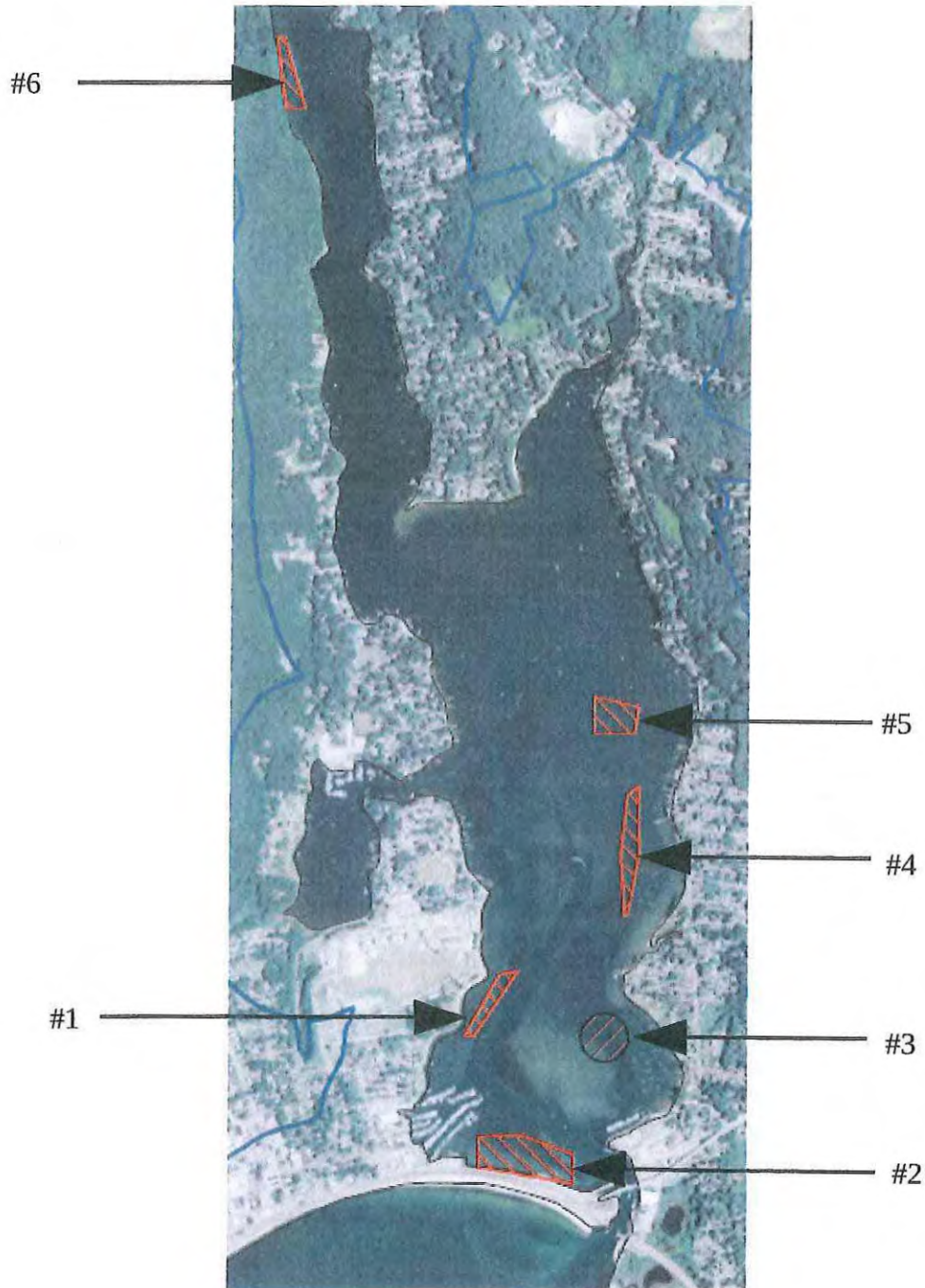
**A WELSCO (Waterford-East Lyme Shellfish Commission) & NBSF (Niantic Bay Shellfish Farm)  
Venture**

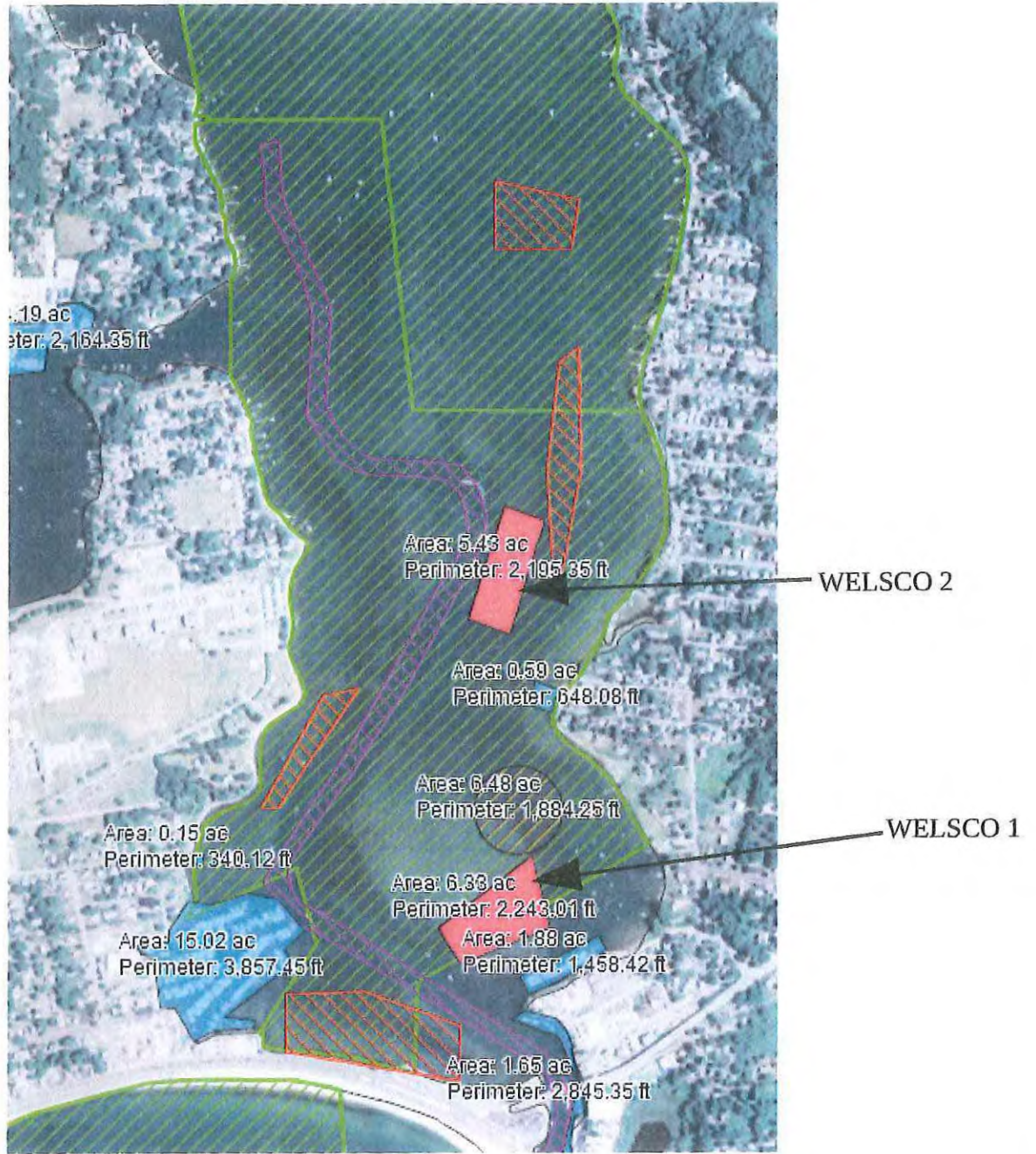
**Prepared by Timothy A. Londregan III  
for WELSCO  
7/21/2016**

### Overview Recap

- 44.36 acres dedicated to stationary docks
- 23.51 acres classified as dedicated aquaculture zones
  - Location 1 (2.94 acres) not available – moorings, prime clamming area
  - Location 2 (12.07 acres) not available – WELSCO assessment
  - Location 3 (6.48 acres) Located in false channel, heavy traffic
  - Location 4 (5.62 acres) requested by WELSCO to be moved W, moved S due to eel grass
  - Location 5 (5.05 acres) not available- mooring field, recreational activity, eel grass
  - Location 6 (3.33 acres) poor bottom – unsuitable for preferred gear

### Lease Locations Overview





- Blue areas- Marinas
- Red slashed areas- WELSCO's designated aquaculture areas
- Purple slashed areas- Channel
- Solid Pink areas- NBSF project areas



## Project Areas

- Due to the current use of the River, the areas in pink have been identified by WELSCO and NBSF as appropriate areas to conduct aquaculture operations. These areas have been chosen because:
  - Certain 2002 proposed areas have been deemed as inappropriate for the following reasons:
    - located in eel grass beds
    - located in popular clamming areas
    - currently adorned with moorings
    - located in high traffic areas
  - Locations provide proper water depths and sediment for cultivation of shellfish
  - Locations are strategically placed so as to not disrupt current activities.
    - “WELSCO 1” (South site) replaces “WELSCO 3” (the 6.48 acre circle). The circle is not only hard to layout and mark but it sits in the middle of the false channel which sees significant traffic when compared to the shallows of the sand bar WELSCO 1 sits on. Similar acreage has been maintained.
    - “WELSCO 2” (North site) replaces “WELSCO 4” (the 5.62 acres trapezoid to the East). Once again, the shift moves the project area out of the false channel into shallower water. Furthermore, this shift moves the project footprint outside of popular clamming grounds as well as SAV areas.
- NBSF recognizes the fact that it is the desire of the Commission to “sustain and enhance recreational shellfishing.” Due to this desire, NBSF will be conducting an ongoing and open experiment so as to enhance natural stock within the River. The project start date is set for 03/01/2017; there is no project end date set.
- Leases will expire after 5 years and shall be renewed with preference so long as the lessee has adhered to the obligations set forth.
- See attached sheet entitled *Figure 1* for coordinates for project areas. (“Area 1” is WELSCO 1, “Polygon 2” is WELSCO 2)
- After approval from WELSCO, the DA/BA must approve plan along with associated State and Federal agencies. The total acreage will most likely not be approved by the DA/BA. What will most likely happen is the DA/BA will put NBSF on a yearly development plan. That is, more acreage will be released to NBSF as operations continue to go smoothly over the years.

## Methods

- NBSF intends to use a table and bag system at WELSCO 1 to grow oyster seed to no greater than 1.75” before it is removed from the river. Trays will be used in conjunction with FLUPSY's to grow seed up to 2” before it is moved to the bay for final grow out. No more than 30% of market oysters produced per year by NBSF will be grown out to 3” within the River, all other grow out must occur outside of the experimental areas. (seed would most likely be moved out to the bay site in late May or early June)
- However, if a significant weather event will impact the area, NBSF has the authority to move compromised gear from the Bay into the River project areas for the duration of the significant weather event and must be removed within two weeks after the said event.
- NBSF intends to cultivate scallops by 2019. Scallops that are grown by NBSF are not required to be moved outside of the River project areas for final grow out. This will guarantee that the public will benefit to the highest degree before the product is harvested.

- While Scallops will be cultivated with similar practices, the deeper areas of WELSCO 2 will be used for floating hanging gear for experimental methods of rearing scallops. (Lantern nets and ear marking)

#### Experimental Activity

- Rearing of juvenile shellfish and then relaying them for final grow out to the Bay classifies this project, by its very nature, experimental and thus acceptable to WELSCO. Furthermore, WELSCO reviews "...applications for aquaculture projects on a case-by-case basis and approval is based solely on the discretion of the Waterford-East Lyme Shellfish Commission."
- By year three, NBSF plans to have identified an open area where the commission desires to begin a natural oyster reef which NBSF will stock while attempting to ensure its success.
- Different methods of growing will be used to narrow in on the best methods allowing for decreased mortality and thus a more pervasive stock.
- Upon establishment of the Hatchery, NBSF will attempt to spawn native scallops.
- Scallops grown by NBSF will be allowed to spawn within the River with the hopes of bolstering natural populations.

#### Payment

- NBSF shall pay WELSCO \$5 per acre per year so long as NBSF continues its experimental activity as explained above.
- Furthermore, in-kind payments shall be made to WELSCO as follows:
  - Establishment of an oyster bed in open waters for the public benefit
  - The attempt to spawn native scallops.
    - The increase of mature bio-mass and bi-product of spawning (natural set)
  - The establishment of spawning sanctuaries in the river for both scallops and oysters.
- NBSF remains open to the idea of growing out seed for WELSCO if an agreeable arrangement can be arrived at by both parties.
- Yearly fees are due in January of each year. Each January NBSF shall present on progress/status of operations occurring within WELSCO waters.

NBSF and WELSCO agree to operate in the above manner according to sections "Project Areas," "Methods," "Experimental Activity," and "Payment" any changes to project areas or significant gear modifications must receive approval from WELSCO prior to said changes:

---

Timothy A. Londregan III  
NBSF Managing Member

7/21/2016  
Date

---

Peter Harris  
WELSCO Chairman

7/21/2016  
Date

Mv:

(Minutes available online-New Approved Plan available from WELSCO)

<http://eltonhall.com/wp-content/uploads/2015/12/WELSCO-November-17-2016-Minutes.pdf>

FILED IN EAST LYME  
CONNECTICUT  
NOV 21 2016 AT 4:00 AM PM  
EAST LYME TOWN CLERK

- e) According to M. Harrell of Aeros Oyster they can provide 25 bags of mixed seed. P. Harris will contact owner J. Markow about the purchase.
- 7) Sub-committee –
- a) The commission reviewed the final changes to the 2002 Aquaculture Policy. Motion made by P. Kelly to approve the revision's to the current Aquaculture Policy, seconded by P. Spakowski; all in favor, motion passed.
- 8) Correspondence –
- a) The State of CT website has the updated the jurisdictional rules for local shellfish commissions and bait harvesting regulations. Some concerns discussed will be brought up at the Annual Shellfish Gathering.

New WELSCO map including WELSCO 7

WELSCO 2016 Sites



February 3, 2017

Connecticut Towns  
Coastal Boundary

1:45,862  
0 0.5 1 2 mi  
0 0.75 1.5 3 km

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

## Attachment Mvi:

The following is a copy of the DEP-OLISP-APP-200 which was filled with the DEEP under the advisement of Krista L. Romero. However, after submission, the DEEP and ACoE saw it prudent, to continue the permitting process via this SDF permit due to the interconnected nature of both applications. Niantic Bay Shellfish farm has opted to attach the full application so as to provide the most complete and accurate information possible.

8/10/2017



Connecticut Department of Energy & Environmental Protection  
Bureau of Water Protection & Land Reuse  
Office of Long Island Sound Programs

Certificate of Permission Application Form  
IMPORTANT - Please refer to the [instructions](#) (DEP-OLISP-INST-200) for completing this application form to ensure that all required information is provided. Print or type all information within the form, providing additional pages as necessary.

- If your town has a Harbor Management Commission, you must submit a copy of this application **by certified mail** to the Commission. Please check here to indicate you have done so.
- My town does not have a Harbor Management Commission.

CPPU USE ONLY	
App #:	_____
Doc #:	_____
Check #:	_____
Program: <b>Certificate of Permission</b>	

**Part I: Application Description**

Town where site is located:	<u>Waterford, Connecticut</u>
Brief Description of Project:	<u>Permitting for 6 water dependent use pilings in the Niantic River</u>

**Part II: Fee Information**

A fee of \$375.00 must be submitted with this application form. Note: The fee for municipalities is \$187.50. [#410]  
The application will not be processed without the initial fee. The fee shall be non-refundable and shall be paid by check or money order to the Department of Energy and Environmental Protection.

**Part III: Applicant Information**

- If an applicant is a corporation, limited liability company, limited partnership, limited liability partnership, or a statutory trust, it must be registered with the Secretary of State. If applicable, applicant's name shall be stated **exactly** as it is registered with the Secretary of State. This information can be accessed at [CONCORD](#). See 1.a) ii, below.
- If an applicant is an individual, provide the legal name (include suffix) in the following format: First Name; Middle Initial; Last Name; Suffix (Jr, Sr., II, III, etc.)
- If there are any changes or corrections to your company/facility or individual mailing or billing address or contact information, please complete and submit the [Request to Change Company/Individual Information](#) to the address indicated on the form. If there is a change in name of the entity holding a DEEP license or a change in ownership, contact the Office of Planning and Program Development (OPPD) at 860-424-3003. For any other changes you must contact the specific program from which you hold a current DEEP license.

**Part III: Applicant Information (continued)**

**1. Applicant Name: Niantic Bay Shellfish Farm LLC**

Mailing Address: **59 Woodlawn Road**

City/Town: **New London**

State: **CT**

Zip Code: **06320**

Business Phone: **860-739-6273**

ext.

Contact Person: **Timothy Londregan III**

Title:

\*E-mail: **timothy@nianticbayshellfishfarm.com**

\*By providing this e-mail address you are agreeing to receive official correspondence from the department, at this electronic address, concerning the subject application. Please remember to check your security settings to be sure you can receive e-mails from "ct.gov" addresses. Also, please notify the department if your e-mail address changes.

a) Applicant Type (check one):

individual       federal agency       state agency       municipality       tribal

\*business entity (\*If a business entity, complete i through iii):

i) check type:  corporation       limited liability company       limited partnership

limited liability partnership       statutory trust       Other: \_\_\_\_\_

ii) provide Secretary of the State business ID #: 1162555 This information can be accessed at the Secretary of State's database (CONCORD). ([www.concord-sots.ct.gov/CONCORD/index.jsp](http://www.concord-sots.ct.gov/CONCORD/index.jsp))

iii)  Check here if your business is **NOT** registered with the Secretary of State's office.

b) Applicant's interest in the property at which the proposed activity is to be located:

owner       option holder       lessee       other (specify): \_\_\_\_\_

Check here if there are co-applicants. If so, label and attach additional sheet(s) with the required information as Attachment E.

**2. Billing Contact, if different than the applicant.**

Name:

Mailing Address:

City/Town:

State:

Zip Code:

Business Phone:

ext.

Contact Person:

Title:

E-mail:

**3. Primary contact for departmental correspondence and inquiries, if different than applicant:**

Name:

Mailing Address:

City/Town:

State:

Zip Code:

Business Phone:

ext.

Contact Person:

Title:

\*E-mail:

\*By providing this e-mail address you are agreeing to receive official correspondence from the department, at this electronic address, concerning the subject application. Please remember to check your security settings to be sure you can receive e-mails from "ct.gov" addresses. Also, please notify the department if your e-mail address changes.

**Part III: Applicant Information (continued)**

**4. List Site Owner, if different than applicant:**

Name:

Mailing Address:

City/Town:

State:

Zip Code:

Business Phone:

ext.

Contact Person:

Title:

E-mail:

**5. List Facility Owner, if different than applicant:**

Name:

Mailing Address:

City/Town:

State:

Zip Code:

Business Phone:

ext.

Contact Person:

Title:

E-mail:

**6. List attorney or other representative, if applicable:**

Firm Name:

Mailing Address:

City/Town:

State:

Zip Code:

Business Phone:

ext.

Attorney:

E-mail:

**7. List all engineer(s), surveyor(s) and/or other consultant(s) employed or retained to assist in preparing the application and designing or constructing the activity.  Check here if additional sheets are necessary, and label and attach them as Attachment G.**

Name:

Mailing Address:

City/Town:

State:

Zip Code:

Business Phone:

ext.

Contact Person:

Title:

E-mail:

Service Provided:

**Part III: Applicant Information (continued)**

8. Provide abutting or adjacent property owners' names and addresses as Attachment C.

9. If you met with Office of Long Island Sound Program (OLISP) staff in a pre-application meeting, please note the meeting date and OLISP staff person's name:

Staff Name: \_\_\_\_\_ Meeting Date: \_\_\_\_\_

**Part IV: Site Information and Resource Information**

1. **SITE NAME AND LOCATION:**

Name of Site: NA

Street Address or Location Description: **On the South East Edge of Squal Flats, Niantic River**

City or Town: **Waterford** State: **CT** Zip Code: **06385**

Tax Assessor's Reference: Map **NA** Block **NA** Lot **NA**

Latitude and longitude of the exact location of the proposed activity in degrees, minutes, and seconds or in decimal degrees: Latitude: **41 19 35** Longitude: **72 10 44.5**

Method of determination (check one): \_\_\_\_\_

GPS  USGS Map  Other (please specify): **Aquaculture Mapping Atlas**

If a USGS Map was used, provide the quadrangle name: \_\_\_\_\_

2. **IS THE PROJECT SITE LOCATED IN A MUNICIPALITY WITHIN THE COASTAL AREA** (check town list in the instructions)?

Yes  No

3. **ENDANGERED OR THREATENED SPECIES:** According to the most current "State and Federal Listed Species and Natural Communities Map", is the project site located within an area identified as a habitat for endangered, threatened or special concern species?  Yes  No Date of Map: **1/17/2017**

If yes, complete and submit a *Request for NDDB State Listed Species Review Form* (DEP-APP-007) to the address specified on the form. **Please note NDDB review generally takes 4 to 6 weeks and may require additional documentation from the applicant.**

A copy of the completed *Request for NDDB State Listed Species Review Form* and the CT NDDB response **must** be submitted with this completed application as Attachment D.

For more information visit the DEEP website at [www.ct.gov/deep/nddbrequest](http://www.ct.gov/deep/nddbrequest) or call the NDDB at 860-424-3011.

4. **AQUIFER PROTECTION AREAS:** Is the site located within a town required to establish Aquifer Protection Areas, as defined in section 22a-354a through 354bb of the General Statutes (CGS)?

Yes  No To view the applicable list of towns and maps visit the DEEP website at [www.ct.gov/deep/aquiferprotection](http://www.ct.gov/deep/aquiferprotection)

If yes, is the site within an area identified on a Level A map?  Yes  No

If yes, is the site within an area identified on a Level B map?  Yes  No

If your site is on a Level A map, check the DEEP website, [Business and Industry Information](#) to determine if your activity is required to be registered under the Aquifer Protection Area Program.

If your site is on a Level B map, no action is required at this time, however you may be required to register under the Aquifer Protection Area Program in the future when the area is delineated as Level A.



Part IV: Site Information and Resource Information (continued)

5. **CONSERVATION OR PRESERVATION RESTRICTION:** Is the property subject to a conservation or preservation restriction?  Yes  No

If Yes, proof of written notice of this application to the holder of such restriction or a letter from the holder of such restriction verifying that this application is in compliance with the terms of the restriction, must be included as Attachment G.

6. **Indicate the number and date of issuance of any previous state coastal permits or certificates issued by DEEP authorizing work at the site and the names to whom they were issued:**

<i>Permit/COP Number</i>	<i>Date Issued</i>	<i>Name of Permittee/Certificate Holder</i>
NA	NA	NA

If information on prior state coastal permits and certificates is unknown, list names of the owners of the property since 1939 and the years owned:

NA

7. Identify any changes in conditions of the site (including ownership, development, use, or natural resources) since the issuance of the most recent DEEP coastal permit or certificate authorizing work at the site:

NA

8. Describe the *existing* structures, conditions and uses at the site of the proposed work. Provide photographs showing existing conditions as Attachment B:

Four wooden pilings driven into sand bar. Pilings in straight line NW to SE. Distance from first piling to last is 45'. Distance from first to second and third to fourth is approximately 13'. Please see Addendum I for more information.

9. Provide the name of the waterbody at the site of proposed work: **Nainctic River**

10. Provide the elevation of the applicable regulatory limit for your project referenced to NAVD88. Refer to the [instructions](#) for more information.

Tidal Wetlands Limit (TWL) = NA  Coastal Jurisdiction Limit (CJL) = NA

11. How was the regulatory limit identified above determined? Please check one of the following:

**DEEP-calculated elevation**

**Self-calculated elevation** (If a self-calculated elevation is used, please provide the additional information and calculations per the instructions.)

**Mean High Water elevation** (use only if project is upstream of a tide gate, dam or weir) (If a MHW elevation is used, provide a discussion of the location of the tide gate, dam or weir.)

If other than a DEEP calculated elevation was used to calculate the CJL, please provide the additional information and calculations per the instructions and label and attach them as Attachment G.

#### Part IV: Site Information and Resource Information (continued)

12. Provide the elevations of the mean high water and mean low water at the site and the reference datum used. Refer to the instructions regarding elevation datum.

MHW = 44"                      MLW = 12"                      Datum = NAVD88

Check here if NAVD88 is not referenced, and provide an orthometric conversion table in Attachment G.

13. Identify all aquatic resources on and adjacent to the site and describe the characteristics and condition of each resource (identify location of resources on plans submitted as Attachment A):

**NA- located on an unproductive sand bar**

14. Identify the locations of any osprey nesting platforms within 500 feet of the site.

**NA**

#### Part V: Project Information

1. Describe the proposed regulated work and activities including construction methodology and sequencing and plans to minimize erosion and sedimentation.

**Replace the four damaged pilings with new pilings, add two tie off pilings. The pilings work will be carried out by P and L Marine and Niantic Dock Builders. The method of removal: pulled out by crane/jetted out with water if necessary, done from a work barge. The method of installment: pile driving crane with gravity hammer. The replacement pilings will be placed into the same holes from which the old pilings were removed. Once one piling is removed the new one will be placed immediately. The two additional pilings will be placed 45' apart and 20 feet to the south of the existing pilings so to form a 45x20 square to ensure birthing vessel does not break free during a weather or icing event.**

2. Provide plans of the project as Attachment A. They must be 8 1/2" x 11" scaled plans of the site and proposed work including:
- A Vicinity Map;
  - A Tax Assessor's map showing the subject property and immediately adjacent properties;
  - Plan Views showing existing and proposed conditions; and
  - An Elevation or Cross-Section View showing existing and proposed conditions.

*Please refer to instructions for identification of plan components.*

3. Describe the purpose, need and use of the proposed work.

**Ensure pilings are in good repair capable of securing vessels, work platform, barge, or any floating structure which needs to be made fast. NBSF is an aquaculture company, consequently NBSF is water dependent. NBSF intends to use these pilings to support its' operations to grow sustainable shellfish and promote its' shellfish restoration activities. Activities include but are not limited to, drying gear, cleaning gear, assembling gear, sorting shellfish, cleaning shellfish, tumbling shellfish, processing shellfish, growing shellfish, protecting shellfish, as well as any other basic activities required in the cultivation/sale of shellfish.**

4. Identify and evaluate the adverse environmental impacts associated with proposed work and mitigation measures to be employed.

**None.**

Part V: Project Information (continued)

5. Check each category of eligible activities that applies to this application:

**CGS section 22a-363b(a):**

- 1. Substantial maintenance or repair of existing structures, fill, obstructions or encroachments authorized pursuant to the Structures, Dredging and Fill Statutes, CGS section 22a-361, and/or the Tidal Wetlands Act, CGS section 22a-32.
- 2. Substantial maintenance of any structures, fill, obstructions or encroachments in place prior to June 24, 1939, and continuously maintained and serviceable since such time.
- 3. Maintenance dredging of areas which have been dredged and continuously maintained and serviceable as authorized pursuant to the Structures, Dredging and Fill Statutes, CGS section 22a-361, and/or the Tidal Wetlands Act, CGS section 22a-32.
- 4. Activities allowed pursuant to a perimeter permit and requiring authorization by the Commissioner of Energy & Environmental Protection.
- 5. The removal of derelict structures or vessels.
- 6. Minor alterations or amendments to activities permitted pursuant to CGS section 22a-361 and/or CGS section 22a-32 consistent with the original permit.
- 7. Minor alterations or amendments to activities completed prior to June 24, 1939.
- 8. Placement of temporary structures for water-dependent uses as defined in CGS section 22a-93(16).
- 9. Open water marsh management, tidal wetland restoration, resource restoration or enhancement activity, as defined in subsection (a) of section 22a-361, as amended by this act, and conservation activities undertaken by or under the supervision of the Department of Energy & Environmental Protection.
- 10. Placement or reconfiguration of piers, floats, docks, and moorings within existing waterward boundaries of recreational marinas or yacht clubs which have been authorized pursuant to Section 22a-361 and/or CGS section 22a-32.
- 11. Substantial maintenance or repair of structures, fill, obstructions or encroachments placed landward of the mean high waterline and waterward of the coastal jurisdiction line, completed prior to October 1, 1987, and continuously maintained and serviceable since said date.

**CGS section 22a-363b(b):**

- 12. Retention of pre-1995 unauthorized activities which do not interfere with navigation or littoral or riparian rights, and do not cause adverse impacts to coastal resources.
- 13. Substantial maintenance or repair of pre-1995 unauthorized activities which do not interfere with navigation or littoral or riparian rights, and do not cause adverse impacts to coastal resources.
- 14. Minor alterations or amendments to pre-1995 unauthorized activities which do not interfere with navigation or littoral or riparian rights, and do not cause adverse impacts to coastal resources.

6. In question 5, if item numbers 2 and/or 7 were checked, demonstrate that the structure(s) or activity for which work is proposed has been continuously maintained and serviceable since 1939. Check the box if documents have been provided in Attachment G.

**Part V: Project Information (continued)**

7. In question 5, if item numbers 1, 3, 4, 6 or 10 were checked, demonstrate that the structure(s) or activity has a prior authorization and has been continuously maintained and serviceable.

8. In question 5, if item numbers 11, 12, 13, or 14 were checked, please provide the date of installation of the structure(s) or the date the activity occurred and indicate how you made this determination.

**Structures can be dated to the late 60's according to the Town's historian. Furthermore, testimony can be provided from many sources indicating existence of pilings well before 1995. Please see attachment G for more information.**

9. In question 5, if item numbers 11, 12, 13, or 14 were checked, demonstrate that the structure(s) or activity for which retention or work is proposed complies with all applicable standards and criteria.

Check the box if documents have been provided in Attachment G.

**Location is well outside of channel. Thus this does not interfere with other land-owners rights nor navigation. In the 50 plus year history of these pilings there have been no navigational complaints nor have the local authorities taken action to remove said pilings. As for coastal resources, these pilings are located on an unproductive sandbar just outside of a historical commercial fishing vessel mooring area. It should be noted that the current pilings fall within NBSF WELSCO 7 Shellfish bed lease .**

10. In question 5, if item numbers 11, 12, 13, or 14 were checked, demonstrate that the structure(s) or activity has been continuously maintained and serviceable since January 1995.

Check the box if documents have been provided in Attachment G.

**Still serviceable due to the fact that they are currently being utilized as a berth. Over the years many boats have occupied these pilings including, but not limited to, the Blue Chaser and the Phyllis Anne.**

11. In question 5, if item numbers 12, 13, or 14 were checked, state whether the applicant conducted or was responsible for the unauthorized activity, or whether the applicant knew or had reason to know of the unauthorized activity at the time the property which is the site of the unauthorized activity was acquired.

Check the box if documents have been provided in Attachment G.

**I was told the then "owner" had a deeded right to these pilings along with a 200x200 plot of land located around the pilings. This story was affirmed by an individual I trusted. However, as time went along I began to question this, after I asked to see the deed and it was not produced. Upon investigation I could not find any documentation. I then contacted Cori Rose and Michael Grzywinski and we have moved to the COP.**

**Part V: Project Information (continued)**

12. a. Is any portion of work for which authorization is being sought now complete or under construction?

Yes     No

If Yes, specify what parts of the proposed work have been completed or are under construction and indicate when such work was undertaken or completed. Identify completed portions on the plans submitted.

**The four current pilings were installed prior to 1995**

b. If yes, is the application associated with an enforcement action pending with DEEP?

Yes     No    If yes, explain:

Check here, if documents have been provided in Attachment G. Also please complete *Applicant Compliance Information Form* (DEP-APP-002).

13. Provide other relevant information you deem important to consider in the review of this application.

Check the box if documents have been provided in Attachment G:

**Part VI: Supporting Documents**

Check the applicable box below for each attachment being submitted with this application form. The specific information required in each attachment is described in the *Instructions for Completing a Certificate of Permission Application for the Office of Long Island Sound Programs* (DEP-OLISP-INST-200).

- Attachment A: Plans in accordance with Part V, item 2 of the instructions
- Attachment B: Photographs showing existing conditions of the site
- Attachment C: Abutting or adjacent property owner information; including names and mailing addresses
- Attachment D: **Copy** of the completed *Request for NDDB State Listed Species Review Form* (DEP-APP-007) and the NDDB response, if applicable.
- Attachment E: [Applicant Background Information Form](#) (DEP-APP-008) (if applicable)
- Attachment F: [Applicant Compliance Information Form](#) (DEP-APP-002)
- Attachment G: Other Information (if applicable)

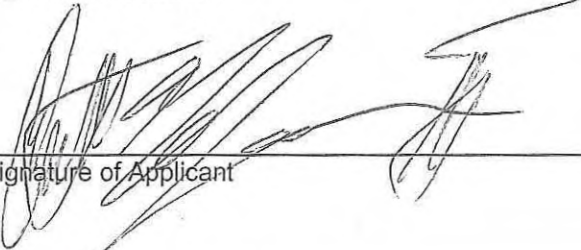
**Part VI: Application Certification**

The applicant(s) and the individual(s) responsible for actually preparing the application must sign this part. An application will be considered insufficient unless all required signatures are provided.

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief.

I understand that a false statement in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the General Statutes, pursuant to section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

I certify that this application is on complete and accurate forms as prescribed by the commissioner without alteration of the text."



Date 7/21/2017

**Timothy A Londregan III**  
Name of Applicant (print or type)

**Managing Member**  
Title (if applicable)

Signature of Preparer (if different than above)

Date

Name of Preparer (print or type)

Title (if applicable)

Check here if additional signatures are required. If so, please reproduce this sheet and attach signed copies to this sheet. You must include signatures of any person preparing any report or parts thereof required in this application (i.e., professional engineers, surveyors, soil scientists, consultants, etc.)

Note: Please submit the completed Application Form, Fee, and all Supporting Documents to:

CENTRAL PERMIT PROCESSING UNIT  
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION  
79 ELM STREET  
HARTFORD, CT 06106-5127

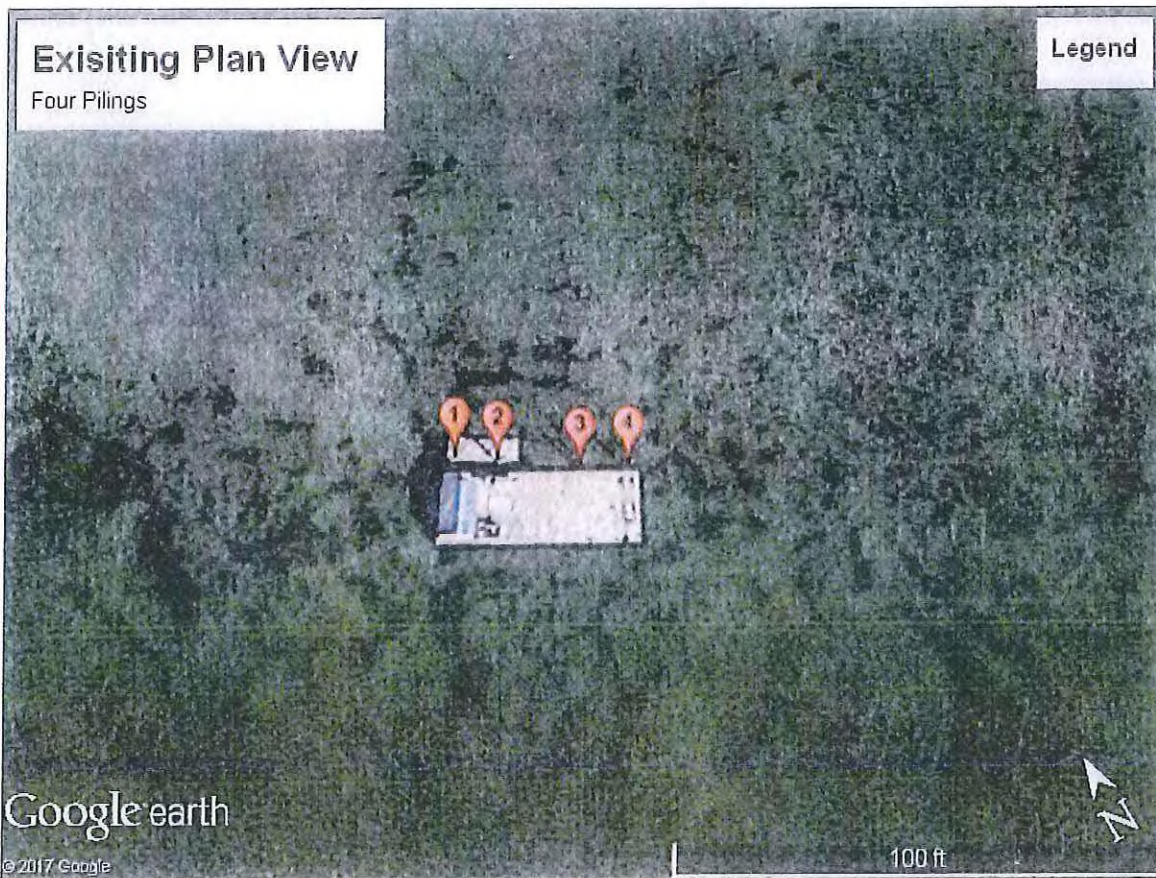
If your town has a Harbor Management Commission, you must submit a copy of this completed application by certified mail to the Commission and include a copy of the receipt with your application materials indicating that such documents were sent certified.

Submit one complete application copy to the U.S. Army Corps of Engineers, Regulatory Division, 696 Virginia Road, Concord, MA, 01742

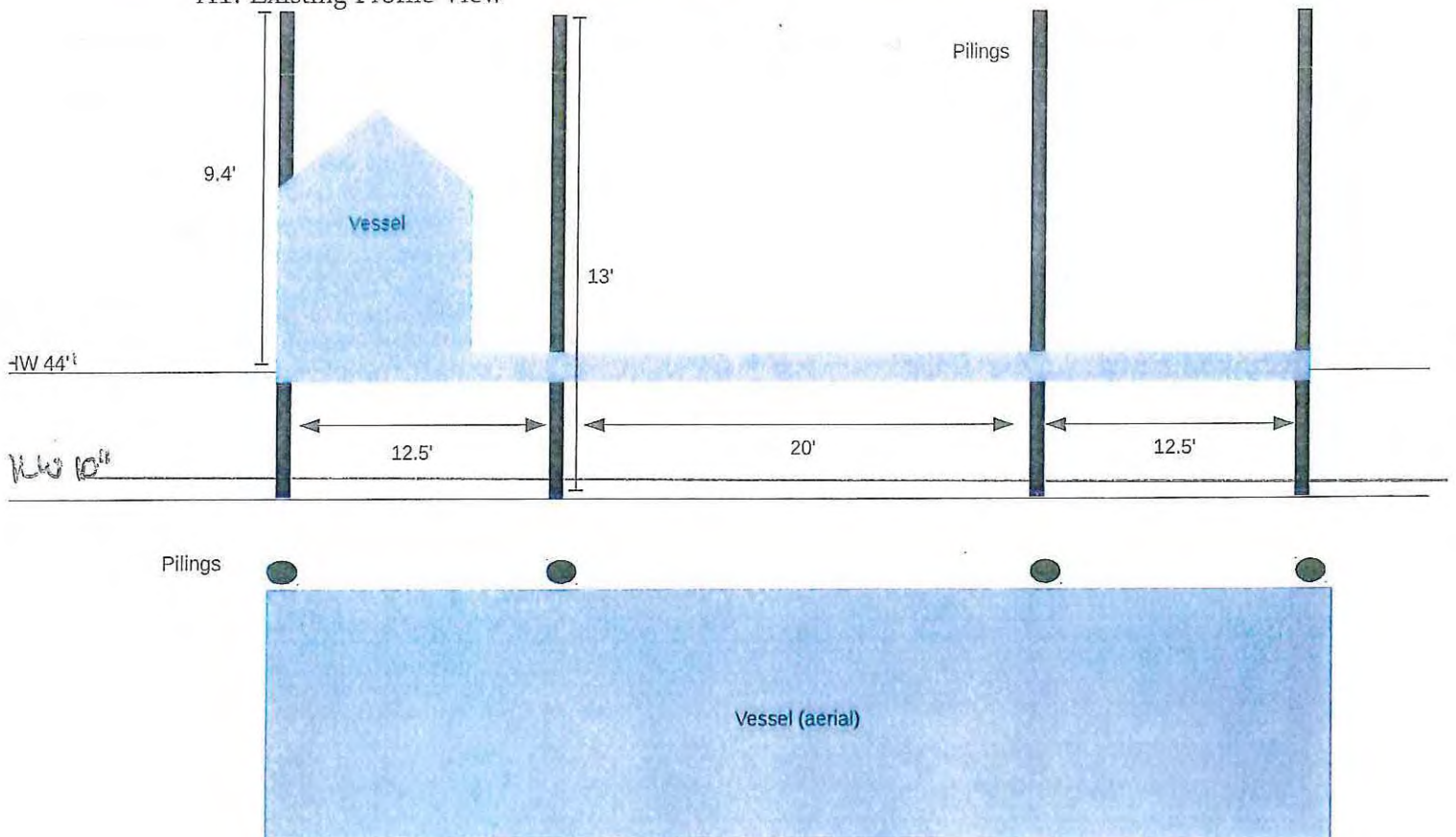
# Attachment A

2)

A: Existing Plan View



A1: Existing Profile View

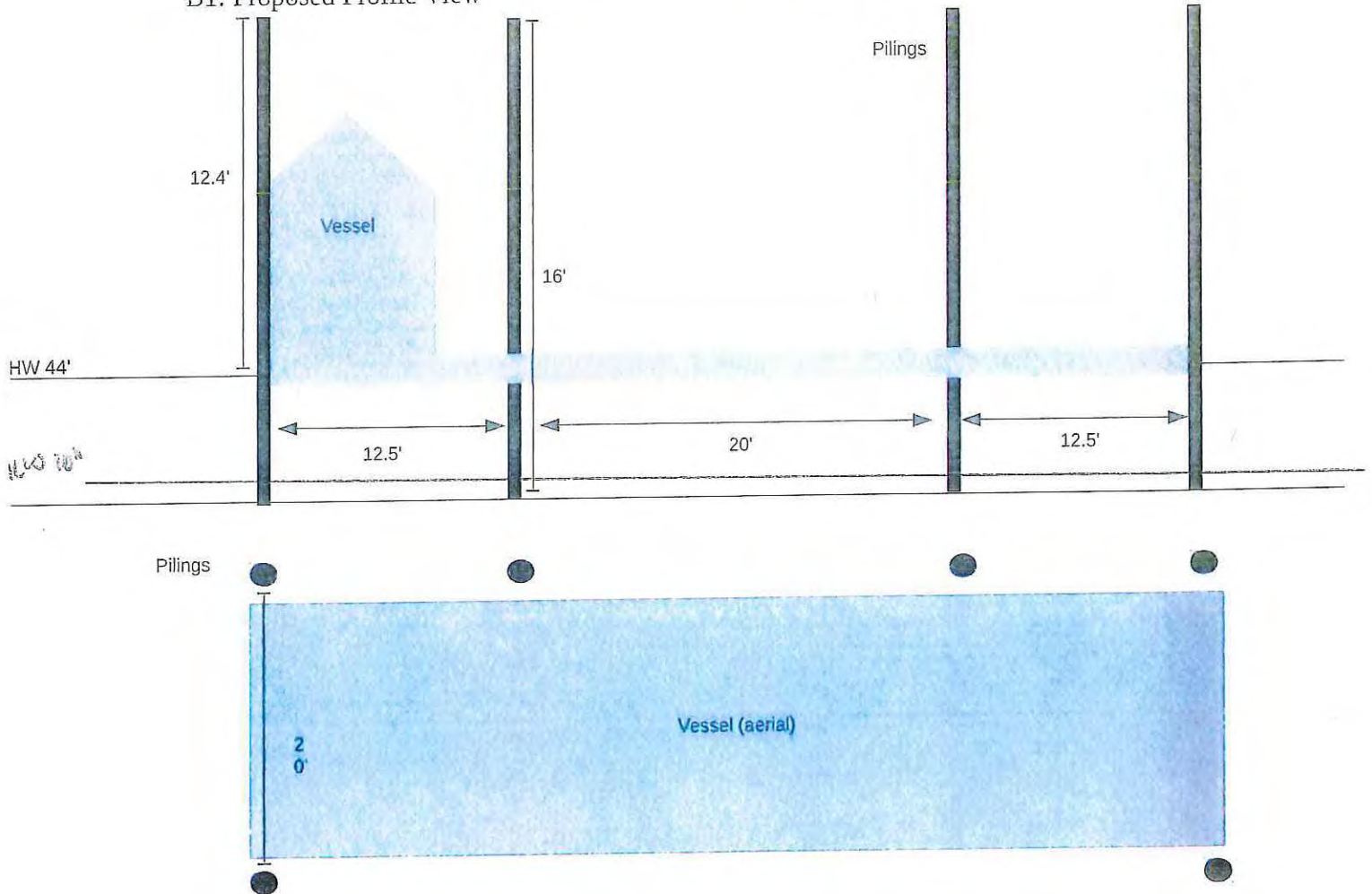




B: Proposed Plan View



B1: Proposed Profile View



Attachment B



Picture of four existing Pilings and Vessel-looking SSW.

## Attachment G

I)

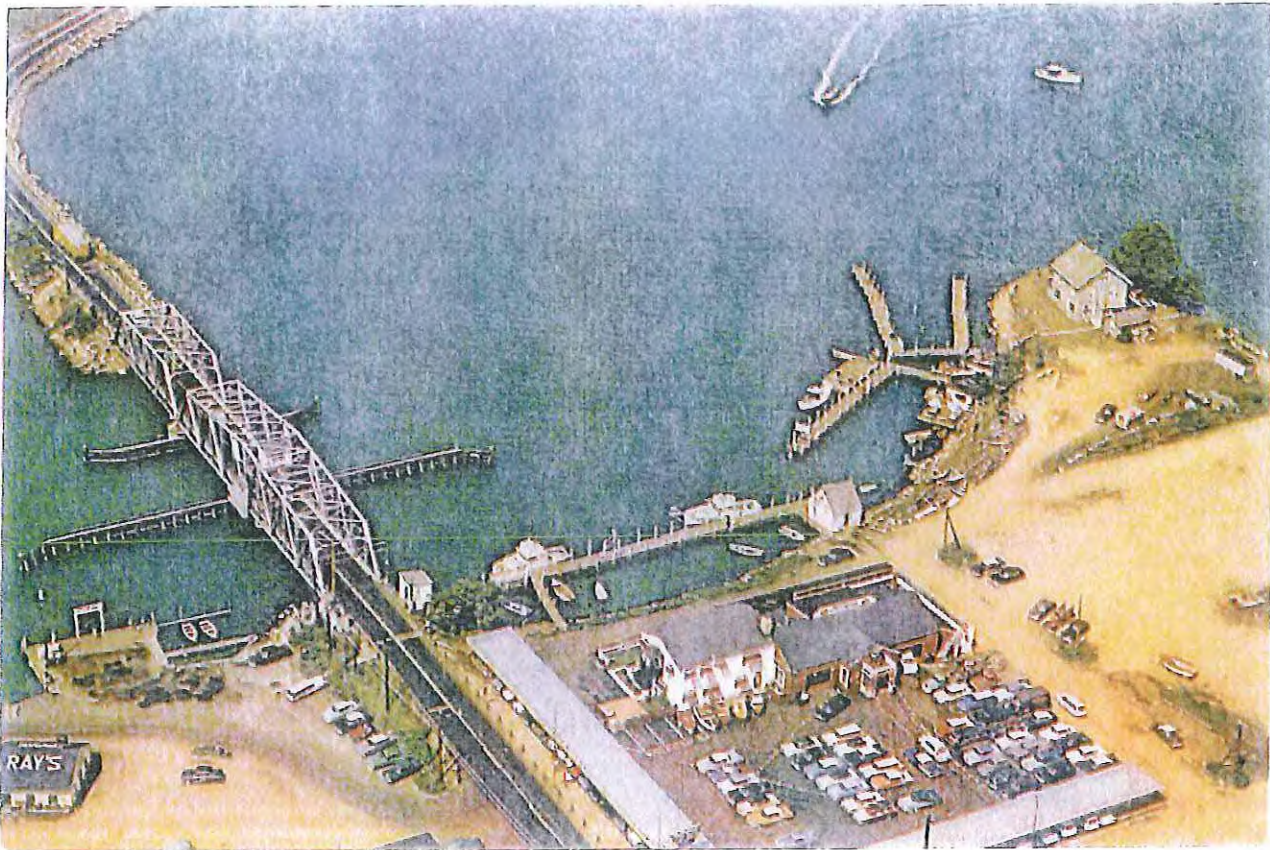
Email from the Waterford Town Historian, Elizabeth Kochte, after meeting with her 10-2-2016

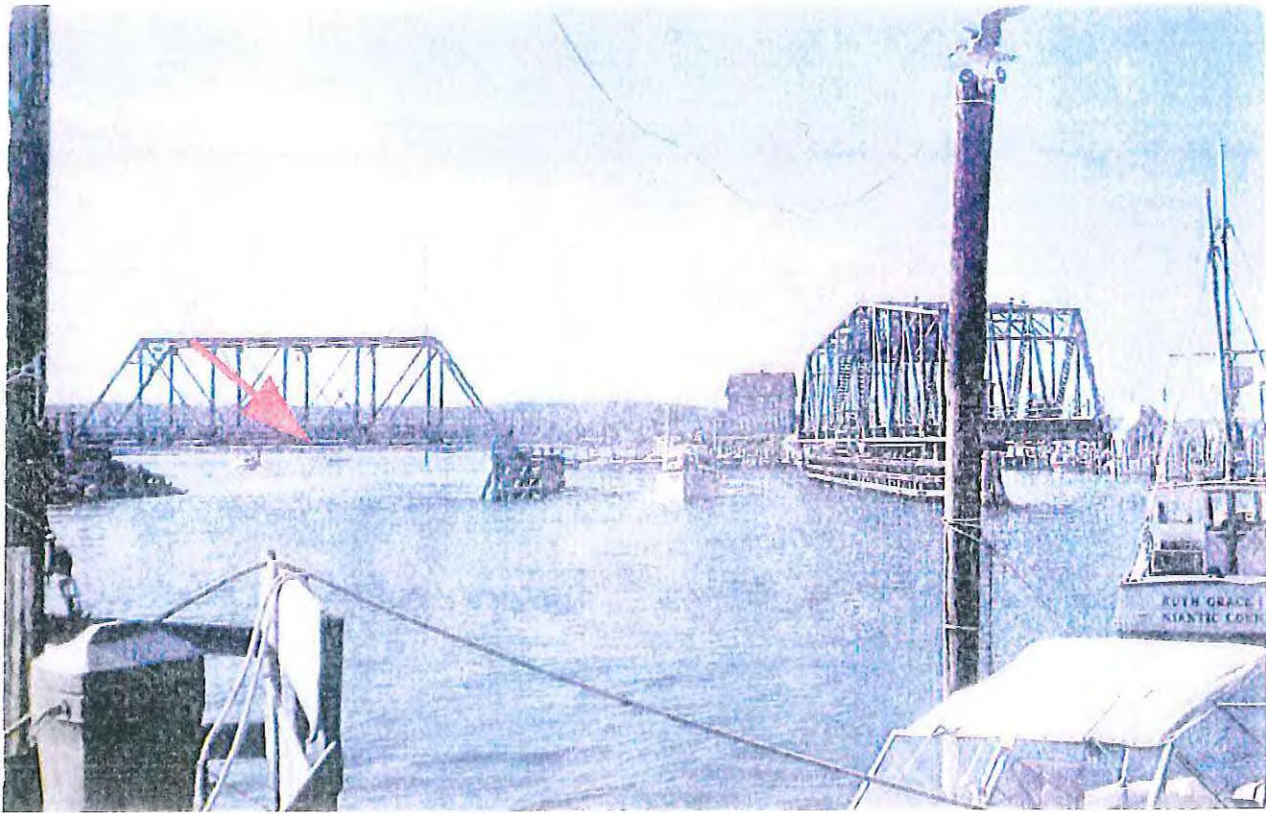
Hi Tim,

I was sure nice to meet you today. I will keep looking in some old albums over the next day or two and maybe something will show up. I will let you know one way or the other if I find anything.

Attached is the picture of the bridge that you saw at the Library. The other picture is the aerial I mentioned. In that you can see the car dealership which was called Drawbridge Auto. I think just to the left of the white boat that is tied up in the top right corner there are 2 pilings. Maybe if you enlarge you can see better. I suspect the aerial was taken about 1960 and the bridge a little later in the 60's. Good luck with your oysters.

Liz





*Open Bridge in Southern New England*

*Photo by D. L. Gordon*

The bottom picture is a scan of a postcard available at the Waterford Town Library and has been identified by the Town Historian to be from the late 60's. As you can see the pilings are visible.

II) An e-mail from Cori Rose, 10-26-2016

Hi Tim, here is the photo that I found. Very curious what this could have been or if the owner knows about the history of the piles.

As I mentioned, they appear to be grandfathered structures under Corps regulation because they were present prior to December 18, 1968 and their presence in that location without concern indicates that they have not contributed to an obstruction to navigation.

Respectfully,

Cori M. Rose, Senior PM/PWS  
U.S. Army Corps of Engineers New England District  
Regulatory Division  
Phone: [\(978\)318-8306](tel:(978)318-8306)

### Neighborhood Change in Connecticut, 1934 to Present

Want to compare 1934, 1990, 2004, 2006, 2008, and 2012 using a transparency tool? [Check out our Connecticut Aerial Photography Interactive Map Interface](#)

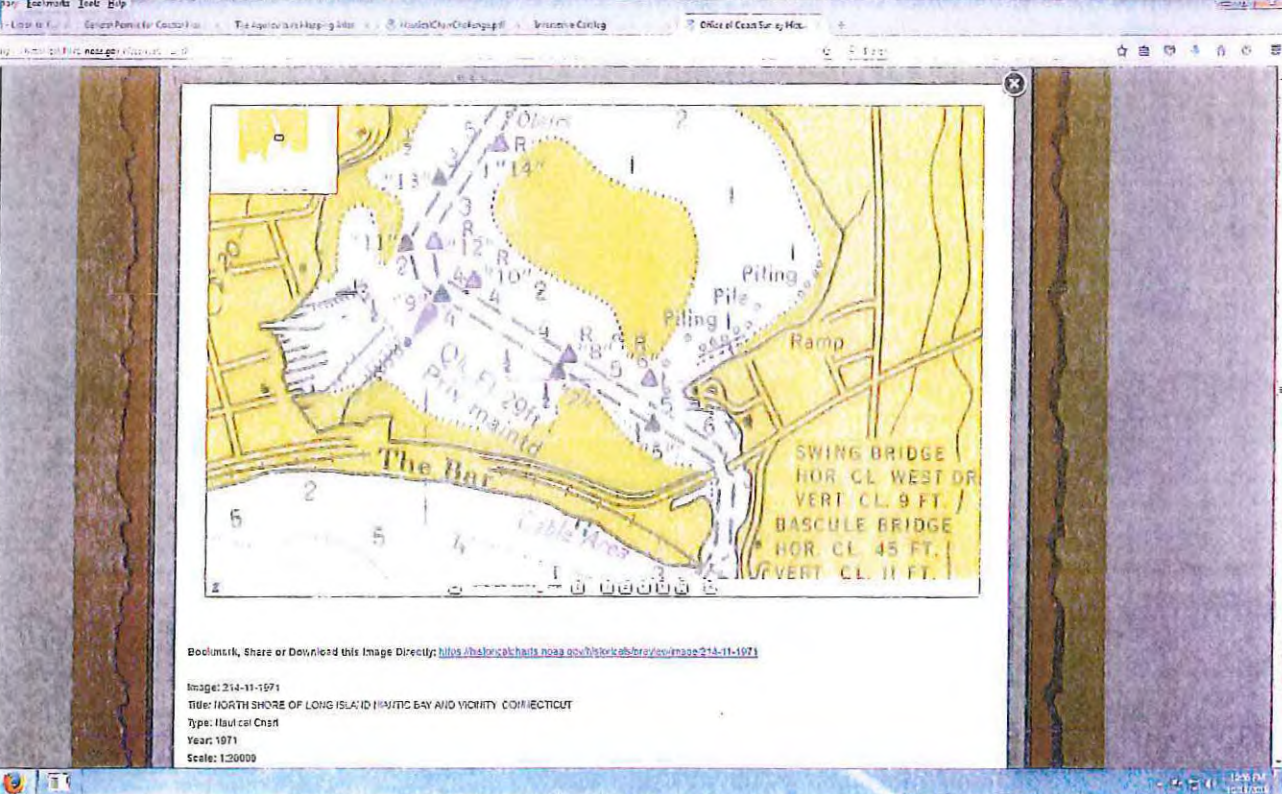
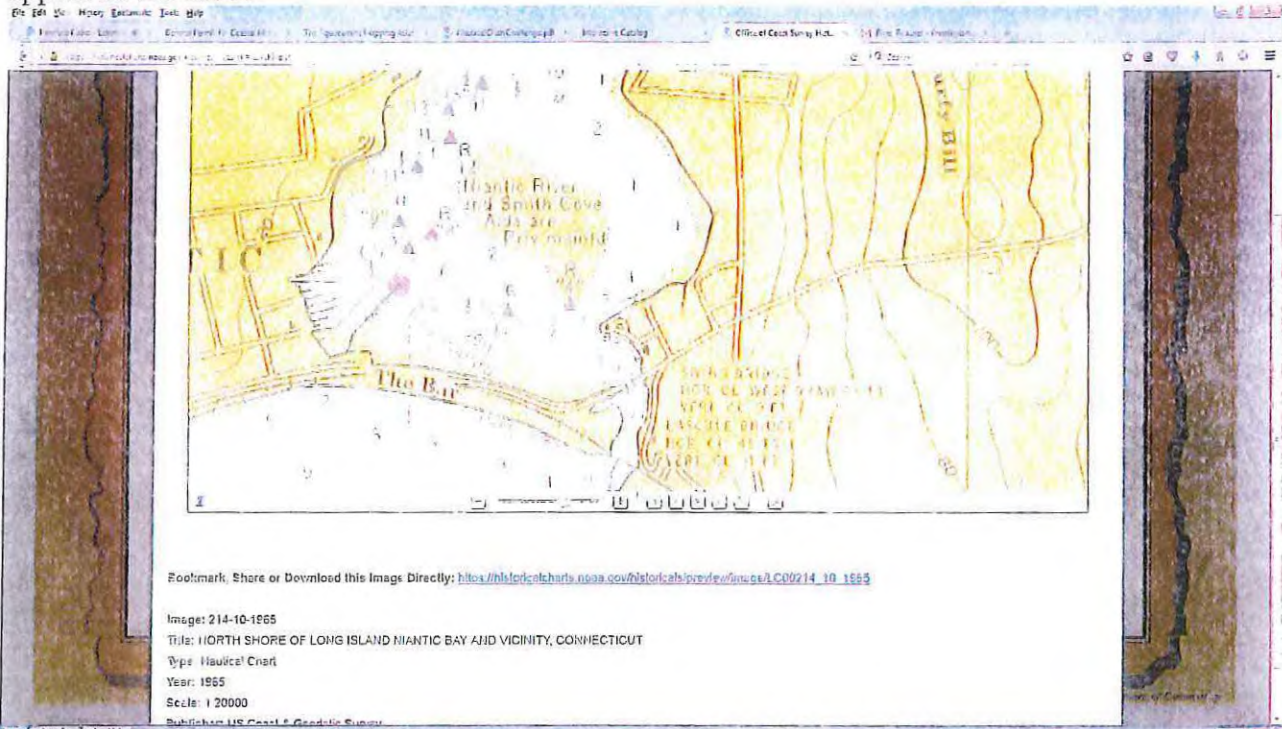
Attention ArcGIS and other GIS software users! The 1934 Aerial Photography layer is available via [MAGIC's WMS](#)



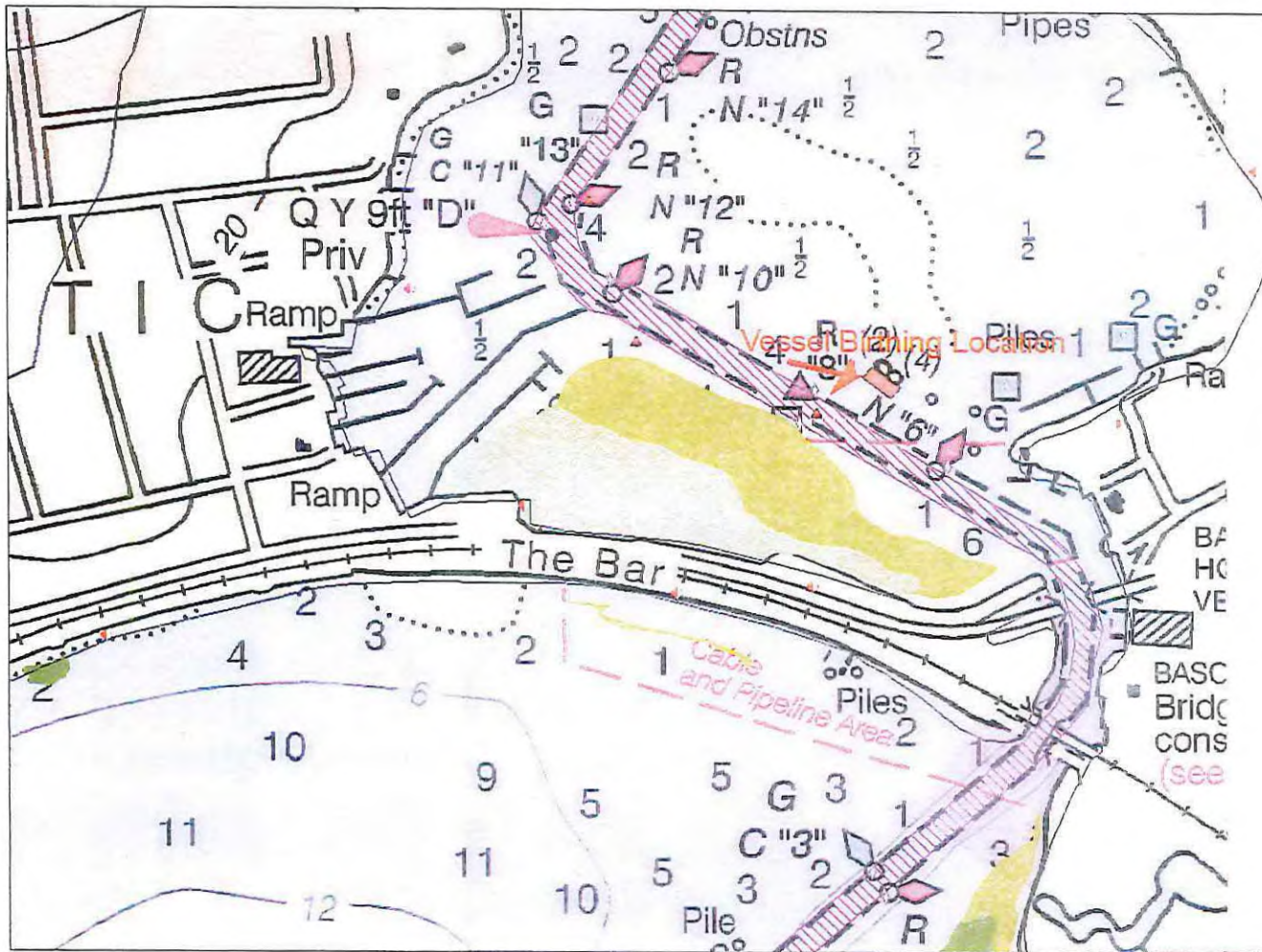
Fax: [\(978\)318-8303](tel:(978)318-8303)  
[cori.m.rose@usace.army.mil](mailto:cori.m.rose@usace.army.mil)

III) If necessary, I can provide contact information of about ten individuals who can personally attest to the pilings existing prior to 1995. The hard photos should be sufficient.

IV) From the available maps, it can be seen that they the pilings do not show on the 1965 map but do appear on the 1971.



### v) Vessel Birthing Location



Consult U.S. Coast  
supplemental/informatic  
navigation.

**WARN**  
The prudent marine  
any single aid to nav  
floating aids. See U.S.  
and U.S. Coast Pilot fo

**CAUTI**  
Temporary changes  
navigation are not indica  
Local Notice to Mariners.  
During some winter m  
gered by ice, certain a  
replaced by other types o  
see U.S. Coast Guard Lia

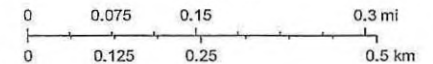
June 29, 2017

CT Shellfish Area Marker

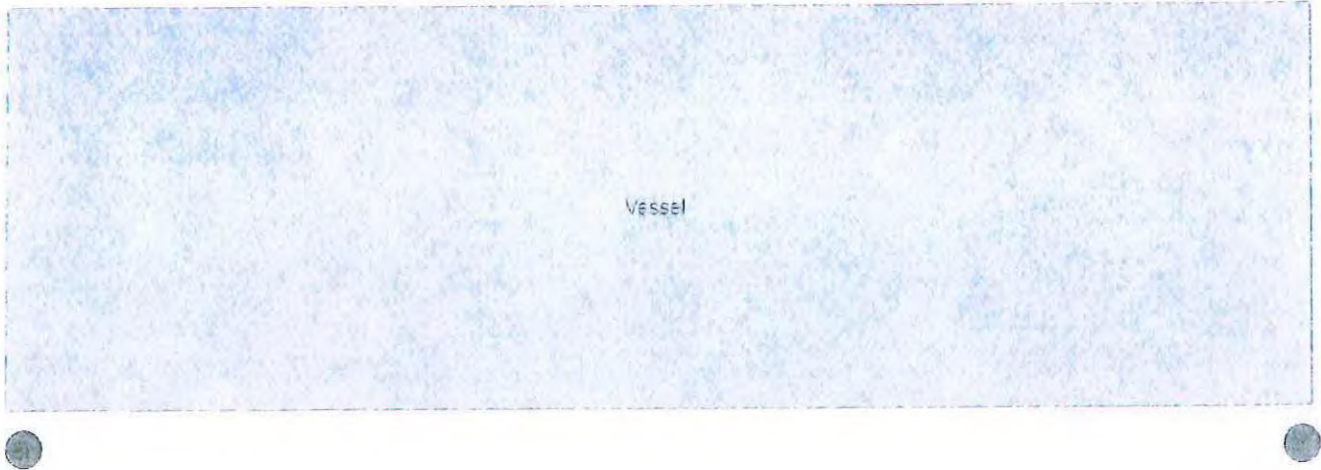
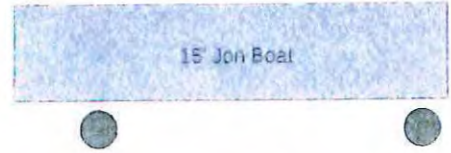
- Demarcation Sign
- Status Signs: Open/Closed
- Navigational Buoy
- Aids to Navigation (2013)
- Channels, Basins, Anchorage Areas (DEEP)

- Connecticut Towns
- Coastal Boundary
- Eelgrass Beds (2012)**
- High
- Medium
- Low

1:6,906



V) Birthing Configuration





## ADDENDUM I

Niantic Nay Shellfish Farm (NBSF) is a licensed Aquaculture company primarily operating in East Lyme/Waterford Connecticut. Currently NBSF owns and operates an Oyster-plex moored to four pilings within the estuary of Niantic. This vessel is registered with the State of CT and is capable of moving under its own power. NBSF is seeking a Floating Structures Permit due to the advice of Krista L. Romero so as to ease any concerns of legality/use from the public, local, state, or federal agencies. NBSF maintains that this is indeed a vessel, registered, mobile and specifically designed as a vessel. Furthermore, prior to deployment and construction, the DA/BA and Army Corps of Engineers was consulted and the determination was that if the structure in question was indeed mobile it should and could be authorized by acquiring a HIN. To be clear, under Connecticut Public Act 14-63, this vessel is not defined as a floating structure.

It should be noted that such structures/vessels are not common in CT, this is the second one that the DA/BA is aware of in the State. Such structures/vessels are much more common in states that have much more robust small-scale aquaculture operations. Such states include, RI, MA and ME. Consequently, NBSF understands the verbal/legal gymnastics of such a revolutionary development within CT waters, after all Connecticut is "still revolutionary."

Such a vessel is crucial for a water dependent use, namely aquaculture. NBSF is requesting a temporary authorization to birth its vessel/soon-to-be floating structure (measuring 45'x20') at the site in question under the suggestion of Krista L. Romero. NBSF will be submitting a full SDF for this structure within one year of this application for this soon-to-be floating structure for *aquaculture activities only*, once again under the advice of Krista L. Romero.

The following are bullet points of why such a structure is necessary, how it is secured and what equipment will be stored/utilized on the structure:

- The vessel is primarily secured at four points. The Vessel is secured independently to all four pilings using Merco Marine products. The vessel is secured to each piling as follows. Two single male eye plates are through bolted with ½ bolts with ¼ backing plates. Each eye has a SS 1" bow shackle from which ¾ chain is run from to to other shackle. Each shackle is locked with SS locking wire. The chain has PVC rollers. In between the two eye plates there is an 8" high density plastic roller through bolted to the vessel so as to facilitate movement during tidal flux. This system allows for a fast disconnect while ensuring the vessel maintains a fixed position. Furthermore, the weak point of the design is the shackles which have a working load of 6,000 lbs, typically the breaking point for overhead rated hardware is 5x the working load. The pilings will break before the tether system does. Consequently, this is why NBSF wishes to obtain a COP for the pilings and replace them. Lastly, if a blow is coming, the deck is secured and secondary ½ lines are used as spring lines. These lines go from each piling to their associated 10" cleat which is through bolted into the main braces of the deck. The vessel has approximately 2,000 bolts and is through bolted at all points of contact. Extreme care was taken when building this vessel, it is extremely overbuilt.
- Gear to be stored on vessel include items such as, inverter generator, 2" trash pump, fish totes/baskets, power washer, trays and other gear deployed to rear shellfish, as well as mechanical equipment to sort/process shellfish. It should be noted that NBSF currently has 300 trays deployed. 300 trays would never fit on the vessel. NBSF store excess gear off-site and primarily only stores gear which is drying(so as to not bring fouled gear to land and have complaints of smell) or gear which is going to be redeployed in the near future.
- During named storms (hurricanes) NBSF has the option to move the vessel to two different locations which offer more shelter. First, Marker 7 Marina. This marina is nested inbetween the "Bar" and four other commercial marinas thus greatly sheltering the vessel from winds and chop. Second, Cpt. Johns Sport Fishing Dock or known as the Sunbeam Fleet Docks. This

dock is tucked away behind Mago Point and the Highway Bridge.

- During any named event, the deck is cleared of all items not bolted down, screwed down or lashed with 3/8 line.
- Such a structure is necessary for a water dependent use for the following reasons.
  - First, convenience/environmentally friendly.
    - Such a structure offers a superior platform to accomplish work tasks thus resulting in a more efficient work-place.
    - Due to the placement of NBSF's privately owned piles the amount of resources devoted to moving gear and oysters is greatly reduced thus reducing NBSF's carbon footprint.
    - If placed on a mooring the associated hardware would undoubtedly scour the seafloor of any fauna.
  - Secondly, safety:
    - While such a vessel can legally be moored on a 600lbs mushroom it is not advisable. This vessel is much more secure on 6 piles than one mushroom. Furthermore, such a vessel with the required bottom-chain, top-chain and pendant would have a swing about the size of a football field. This could present a navigational hazard.
    - Because NBSF operates year-round, our reduced travel time/distance minimizes our increased boat traffic, thus freeing up channel room for recreational vessels.
  - Thirdly, Public good
    - The Piles are located within the Waterfront Development District. Thus any noise originating from the operation is within the standards/limits defined by the town of Waterford.
    - The piles are located in the historically commercial vessel mooring area thus not infringing a the historically recreational area.
    - The piles have been present for over 60 years, consequently NBSF is not utilizing space that was otherwise open. Furthermore, no other vessel could reasonable birth here due to the 12" water depth at MLW. NBSF designed this vessel so that it does not hit bottom even during a blow-out-tide.
    - This position is just within the prohibited Shellfishing area, thus not harming recreational shellfishing. Also this location is not nearly as productive for fishing (shell and fin) as are the popular areas in the river.
    - Due to restrictions placed on shellfishing operation, this vessel allows NBSF to quickly clean, pack, and ice shellfish withing the time restriction put in place by the FDA. Consequently, we can produce a safe product for public consumption.
  - Fourth. Need for over-water processing/structure.
    - Due to the waterfront development of the area, all waters near/around the Water Front Development District are restricted/prohibited. Thus to use such water to clean/sort any shellfish is detrimental to the process. The waters North of the location in question are conditionally approved during the off-season allowing for the direct use of this water for cleaning/sorting market oysters.
    - By deploying trays in the bay we create an artificial reef. With the increased bio diversity, NBSF inevitably has "bi-catch." By being located over the water, we can minimize the death of many species caught in the "bi-catch;" just toss any non-cultured shellfish into the water.
    - Upon completion of a Structures Permit, the now vessel can be legally utilized to facilitate natural spat collection to increase production which will also increase natural product availability due to our in-kind-payment agreement with Waterford-East Lyme-

Shellfish-Commission (WELSCO). (placement of shellfish in public beds as payment for a lease so as to benefit the ecosystem and the recreational harvesters.)

- Such operations as NBSF pride themselves on minimal environmental impact, this is why we prefer to source natural sea water than consume thousands of gallons of purified fresh municipal water. This is a waste of energy and resources if it can be avoided within reason.
- WELSCO lease #7, which NBSF holds, is currently being permitted for the rearing of oysters and bay scallops. While oysters can remain topside for well over 24 hours, bay scallops will become over-stressed around the two hour mark (mature scallops, less for juveniles). Currently, NBSF and WELSCO are working on a bay scallop restoration project to help nurture the estuary back to its historical numbers. Without such a floating structure within close proximity to the lease, (the current piles are located on the edge of WELSCO 7) the ability to achieve a proper biomass to facilitate notable increases in native stock is next to impossible due to the sensitive nature of bay scallops.
- While NBSF is not permitted to dispose of shell remnants in areas other than held leases, the sorting process does create shell chippings and detritus. This by-product is not always completely caught in our retention system. The DA/BA has indicated that such a process over non-leased grounds is fully permissible after the local commission inquired. By deploying our vessel in a high flow area the debris is dispersed and is pulled south-ward to the bay on the outgoing tide. Thus were are not creating “deposits” in the River. If we were to process on land as others do, the sediment typically builds up around the processing area. The sediment is nutrient rich and natural so it does not really impose a concern.
- Lastly, once the WELSCO 7 lease is being utilized, a lease NBSF holds within the Niantic River, this vessel was designed to move to various parts of the lease to help carry out farm operations. Currently, NBSF is past the two year mark for permits.

## Attachment Mvii:

### Prevention or alleviation of shoreline erosion and coastal flooding:

Due to the location of the proposed project, the structures, given they are in shallow waters, will act as a break and mitigate wave action before they make landfall on the North face of Cini park. Mitigation is already noticeable with a vessel moored on the south side of the site. North/North East winds have a couple mile fetch before making land fall on the South side of Cini park, the old bridge causeway. With some mitigation the erosion of this causeway will be less. Most importantly the public kayak dock, deployed year-round, will have less wave action. Furthermore, if the plans for the public slips/dingy dock at Cini park come to fruition this will serve to protect that structure and the vessels berthed there.

### Improvement of coastal and inland navigation for all vessels, including small craft for recreational purposes:

This site is the shallowest area within the River, one of the primary reasons WELSCO and NBSF believe this area to have the least amount of user conflict. I have seen unwary/inept boaters beach their boats even on this network of sand bars even though the channel is very well marked. I have never seen a beach boat on the proposed area, because it is so far out of the way. However I have seen boats break props and others which were dragged/pushed off before a lower tide set in. With the marking of the lease perimeter, it will be evident that this area is not an area one should attempt to cross. Thus eliminating one of the biggest navigational hazards present on the Niantic River for your weekend warrior. Furthermore, with this area being within the vicinity of the State Boat launch it will allow boaters unfamiliar with the area to avoid this hazard.

### Pollution control:

While limited on the grand scale, the benefits of such an aquaculture operation are well known. Especially, if nitrogen is considered a pollutant. Local agencies and Town committees such as, Save the River Save the Hills, have taken a liking to this project for the fundamental reason that, as a cornerstone species, oysters and other bivalves do improve water quality

### Water Quality:

As noted above, this project is not only aimed at production but benefiting the local ecosystem and better it for the public good/enjoyment.

### Recreational use of public water:

While recreational harvesting of shellfish from a leased lot is prohibited, this project will not hinder the overall catch of recreational harvests. Another reason the commission selected this location is due to the fact that there is little to no natural product on this sand bar which is inhospitable to a natural population. While taking the least productive area of the river and place millions of juvenile shellfish into this area the river will gain the trillions of gametes produced by the cultured shellfish. Furthermore, the WELSCO requires an "in-kind-payment" or that a certain percentage of NBSF product be release into the public grounds, clearly a

positive. Lastly, with the access to a hatchery, NBSF, has committed to spawn native scallops and work along side WELSCO in the most aggressive Bay Scallop restoration project to date. This initiative is really aimed at restoration rather than capital gains; NBSF is more than a business we are aiming to improve the ecosystem and thus recreational use.

Management of coastal resources:

WELSCO and NBSF have discussed our options to establish an oyster reef, oyster restocking program and a Bay Scallop restoration project- all aiming to manage the Town's Shellfish resources better.

Public health and welfare:

With the presence of commercial activity the public health and welfare will increase. More public awareness about proper handling and harvesting of shellfish from local water. Just the other day I have a recreational shellfisher I met out on the water call me about proper handling and storage. Because of NBSF presence in the area, the BA has devoted more resources to the area resulting in a new rain gauge in a better location to monitor precipitation events to ensure more accurate closures. Areas of the Bay are now being considered for upgrades due to NBSF activity which will increase the fortune, or welfare, of recreational harvesters.



Connecticut Department of  
Energy & Environmental Protection  
Bureau of Water Protection & Land Reuse  
Office of Long Island Sound Programs

## ATTACHMENT N: U.S. ARMY CORPS OF ENGINEERS DEEP PERMIT CONSULTATION FORM

**To the applicant-** Prior to the submission of your permit application to the Connecticut Department of Energy and Environmental Protection - Office of Long Island Sound Programs (DEEP- OLISP), please complete Part I and submit this form to the U.S. Army Corps of Engineers (USACE), Regulatory Division, Attn: Diane M. Ray, 696 Virginia Road, Concord, MA 01742, with a location map of your site and project plans. Once they return the completed form to you, please submit it along with your permit application to the DEEP.

### Part I: Applicant Information

To be completed by applicant.

<p><b>1. List applicant information:</b> Name: <u>Niantic Bay Shellfish Farm LLC</u> Mailing Address: <u>59 Woodlawn Road</u> City/Town: <u>New London</u> State: <u>CT</u> Zip Code: <u>06320</u> Business Phone: <u>860-287-0770</u> ext. _____ Fax: _____ Contact Person: <u>Timothy A. Londregan III</u> Title: <u>Managing Member</u> E-mail: <u>timothy@nianticbayshellfishfarm.com</u></p> <p><b>2. List engineer, surveyor or agent information:</b> Name: _____ Mailing Address: _____ City/Town: _____ State: _____ Zip Code: _____ Business Phone: _____ ext. _____ Fax: _____ Contact Person: _____ Title: _____ E-mail: _____ Service provided: _____</p> <p><b>3. Site location:</b> Name of site : <u>WELSCO 7</u> Street Address or Location Description: <u>Eastern part of Squall Flats Niantic River</u> City/Town: <u>Waterford</u> State: <u>CT</u> Zip Code: <u>06385</u> Tax Assessor's Reference: Map _____ Block _____ Lot _____</p> <p><b>4. Are plans attached?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide date of plans: _____</p>
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**Part I: Applicant Information (continued)**

**5. Provide or attach a brief, but thorough description of the project:**  
**Placement of type II aquaculture gear for the growing of oysters and scallops. Primarily used as a seed operation where the majority of seed/gear is sold, idle by early winter.**

**Part II: To be Completed by US Army Corps of Engineers**

This consultation form is required to be submitted as part of an application for a Structures, Dredging & Fill permit (section 22a-361 of the Connecticut general Statutes (CGS)) and/or Tidal Wetlands permit (CGS section 22a-32) to the DEEP- OLISP. The application has not yet been submitted to the DEEP. Please review the enclosed materials with regard to the U.S. Army Corp of Engineers review process pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act; and provide any comments or recommendations you may have with regard to this proposal. Please call DEEP-OLISP at 860-424-3034 to speak with the analyst assigned to the town in which the work is proposed if you have any questions. **Please return the completed form to the applicant.**

**COMMENTS/RECOMMENDATIONS:**

The Corps of Engineers will review this application as an Individual Permit with issuance of a 60-day Public Notice, opportunity for comment. If the Corps determines that issuance of a permit for this project is within the public interest, a permit fee of \$100 will be requested at the time that a permit is issued.

We will need a statement of Coastal Zone Consistency from the applicant. This form and minor changes to the project plans has been requested in a letter dated May 23, 2017.

This project will require individual consultation with the National Marine Fisheries Service for the project's potential to impact sea turtles and sturgeon under the Endangered Species Act. Additional information to assist in this analysis may be required, such as: 1) size, draft and speed of attending vessel, 2) the number and type (sinking, neutrally buoyant) of vertical or horizontal lines present in the water column.

See the related letter requesting additional information.

USACE Application number: NAE-2017-00205

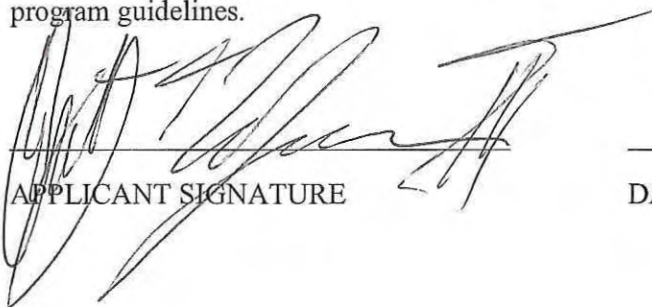
  
\_\_\_\_\_  
Signature of Project Manager

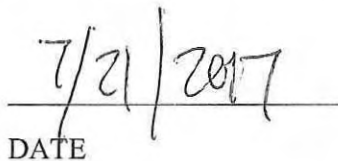
MAY 23, 2017  
\_\_\_\_\_  
Date

CORI M. ROSE  
\_\_\_\_\_  
Printed Name of Project Manager

CONNECTICUT - STATEMENT OF COASTAL ZONE CONSISTENCY  
NIANTIC BAY SHELLFISH FARM - NE-2017-00205

Timothy A. Londregan III, for a proposed shellfish aquaculture-shellfish nursery in the Niantic River, Waterford, Connecticut near Mago Point, certifies that to the best of its knowledge and belief that the proposed project which includes the installation of a maximum of a total of 6,547 racks and trays supported by rebar or pvc over a 6.41 acre shellfish lease and associated boating-hazard aids to navigation, complies with the Connecticut Coastal Zone Management Program. All activities associated with this project will be conducted in a manner consistent with the program guidelines.

  
\_\_\_\_\_  
APPLICANT SIGNATURE

  
\_\_\_\_\_  
DATE





Niantic Bay Shellfish Farm LLC: Wadsworth Initiative  
 EFH Worksheet and Supporting Documents  
 Prepared by Timothy A. Londregan III  
 3/27/2017

Executive Summary

The proposed project, type II aquaculture for bay scallops and oysters, will occur on the leased bed designated WELSCO 7. The lessor is Waterford East Lyme Shellfish Commission (WELSCO) and the lessee is Niantic Bay Shellfish Farm LLC. WELSCO 7 is located on the eastern portion of Squall Flats in the Niantic River within waters of the Town of Waterford. This lease was the result of WELSCO's desire to exercise their rights to lease bottom to responsible commercial agriculturists. Furthermore, this site was leased after a 15 month process eliminating the other six identified aquaculture sites within the River under WELSCO's jurisdiction due to user conflicts (boating, navigational hazards, shellfishing, fishing, recreational sports, unfit for aquaculture, and other lesser issues), presences of SAV, and the presences of significant natural resources.

WELSCO 7 is located on an unproductive sand bar. MLL water ranges from 0" to 15" while MHHW ranges from 25.1" to 51.1". Currents at this site are relatively high due to the narrow single entrance to the river and due to the jutting nature of Mago Point. According to both WELSCO and the Bureau of Aquaculture, this area is a "natural bed" but the proposed project will not adversely affect shellfish due to the lack of any natural set. Rich Chimel, head Shellfish Warden of WELSCO, has also identified this spot as lacking natural resources thus making it an unfrequented recreational area. The bottom is primarily packed sand with the outlying areas to the south and east of the site mud/silt. There are not outcroppings or rocky bottom to speak of. Don Landers, of Millstone Environmental Lab, has stated that the primary concern for this area is SAV, however, he was quick to add no SAV has been surveyed in this area.

The current Pre-Application Screening Form is on file with the BA and is identified as CT 092a AO and was filed on 11/21/2016. The plan calls for the placement of structures over the 6.41 acre lease over the course of a few years. The NDDB determination resulted in a no conflict assessment filed under 201701429 on 2/22/2017. *This site will act as a nursery site to serve the NBSF lease in Niantic Bay designated as EL-3 which has been work for the past year.* WELSCO 7 will also serve as the rearing grounds for the native Niantic Bay Scallop which NBSF and WELSCO are truly excited about with the anticipation of stock enhancement. The three primary gear types to be used are rack and bag, trays, and Deep Sea trays.

The bio-diversity of this site is limited due to its' exposure and high energy. Based off of the lack of diversity due to the lack of a hospitable environment, it is in our opinion that this project will increase sanctuary for juvenile species while also adding trillions of shellfish larvae to the estuary.

Index:

EFH Assessment Worksheet  
 Attachment A: Approximate Site Location  
 Attachment B: WELSCO 7 Site Detail Location  
 NBSF WELSCO 7 Gear Deployment: Gear Locations  
 NBSF Niantic River Lease Gear Overview: Gear Specifics  
 NBSF WELSCO 7 Spacial Gear Deployment  
 Cross Section of Gear: Average MLLW and MHHW  
 Hydrography of Site at MLLW  
 WELSCO 7 Data Map: Information Provided by the Sea Grant Mapping Tool  
 Existing Conditions: Historical Eel Grass Presence  
 Existing Conditions: Fish Species within Niantic River

**NOAA FISHERIES**  
**GREATER ATLANTIC REGIONAL FISHERIES OFFICE**  
**Essential Fish Habitat (EFH) Consultation Guidance**  
**EFH ASSESSMENT WORKSHEET**

**Introduction:**

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) mandates that federal agencies conduct an essential fish habitat (EFH) consultation with NOAA Fisheries regarding any of their actions authorized, funded, or undertaken that may adversely affect EFH. An adverse effect means any impact that reduces the quality and/or quantity of EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

This worksheet has been designed to assist in determining whether a consultation is necessary and in preparing EFH assessments. This worksheet should be used as your EFH assessment or as a guideline for the development of your EFH assessment. At a minimum, all the information required to complete this worksheet should be included in your EFH assessment. If the answers in the worksheet do not fully evaluate the adverse effects to EFH, we may request additional information in order to complete the consultation.

An expanded EFH assessment may be required for more complex projects in order to fully characterize the effects of the project and the avoidance and minimization of impacts to EFH. While the EFH worksheet may be used for larger projects, the format may not be sufficient to incorporate the extent of detail required, and a separate EFH assessment may be developed. However, regardless of format, the analysis outlined in this worksheet should be included for an expanded EFH assessment, along with additional information that may be necessary. This additional information includes:

- the results of on-site inspections to evaluate the habitat and site-specific effects
- the views of recognized experts on the habitat or the species that may be affected
- a review of pertinent literature and related information
- an analysis of alternatives to the action that could avoid or minimize the adverse effects on EFH.

**Your analysis of adverse effects to EFH under the MSA should focus on impacts to the habitat for all life stages of species with designated EFH, rather than individual responses of fish species. Fish habitat includes the substrate and benthic resources (e.g., submerged aquatic vegetation, shellfish beds, salt marsh wetlands), as well as the water column and prey species.**

Consultation with us may also be necessary if a proposed action results in adverse impacts to other NOAA-trust resources. Part 6 of the worksheet is designed to help assess the effects of the action on other NOAA-trust resources. This helps maintain efficiency in our interagency coordination process. In addition, further consultation may be required if a proposed action impacts marine mammals or threatened and endangered species for which we are responsible. Staff from our Greater Atlantic Regional Fisheries Office, Protected

Resources Division should be contacted regarding potential impacts to marine mammals or threatened and endangered species.

**Instructions for Use:**

Federal agencies must submit an EFH assessment to NOAA Fisheries as part of the EFH consultation. Your EFH assessment must include:

- 1) A description of the proposed action.
- 2) An analysis of the potential adverse effects of the action on EFH, and the managed species.
- 3) The federal agency's conclusions regarding the effects of the action on EFH.
- 4) Proposed mitigation if applicable.

In order for this worksheet to be considered as your EFH assessment, you must answer the questions in this worksheet fully and with as much detail as available. Give brief explanations for each answer.

Federal action agencies or the non-federal designated lead agency should submit the completed worksheet to NOAA Fisheries Greater Atlantic Regional Fisheries Office, Habitat Conservation Division (HCD) with the public notice or project application. Include project plans showing existing and proposed conditions, all waters of the U.S. on the project site, with mean low water (MLW), mean high water (MHW), high tide line (HTL), and water depths clearly marked and sensitive habitats mapped, including special aquatic sites (submerged aquatic vegetation, saltmarsh, mudflats, riffles and pools, coral reefs, and sanctuaries and refuges), hard bottom habitat areas and shellfish beds, as well as any available site photographs.

For most consultations, NOAA Fisheries has 30 days to provide EFH conservation recommendations once we receive a complete EFH assessment. Submitting all necessary information at once minimizes delays in review and keeps review timelines consistent. Delays in providing a complete EFH assessment can result in our consultation review period extending beyond the public comment period for a particular project.

The information contained on the HCD website (<http://www.greateratlantic.fisheries.noaa.gov/habitat/>) will assist you in completing this worksheet. The HCD website contains information regarding: the EFH consultation process; Guide to EFH Designations which provides a geographic species list; Guide to EFH Species Descriptions which provides the legal description of EFH as well as important ecological information for each species and life stage; and other EFH reference documents including examples of EFH assessments and EFH consultations.

Our website also includes a link to the NOAA EFH Mapper

(<http://www.habitat.noaa.gov/protection/efh/efhmapper/index.html>). We would note that the EFH Mapper is currently being updated and revised. Should you use the EFH Mapper to identify federally managed species with designated EFH in your project area, we recommend checking this list against the Guide to Essential Fish Habitat Designations in the Northeast (<http://www.greateratlantic.fisheries.noaa.gov/hcd/index2a.htm>) to ensure a complete and accurate list is provided.

**EFH ASSESSMENT WORKSHEET FOR FEDERAL AGENCIES** (modified 3/2016)

PROJECT NAME: Niantic Bay Shellfish Farm, Wadsworth Initiative

DATE: 03/27/2017

PROJECT NO.:

LOCATION (Water body, county, physical address): Niantic River, Waterford CT, Eastern portion of Squall Flats

PREPARER: Timothy A Londregan III (Managing Member)

**Step 1:** Use the Habitat Conservation Division EFH webpage's Guide to Essential Fish Habitat Designations in the Northeastern United States to generate the list of designated EFH for federally-managed species for the geographic area of interest (<http://www.greateratlantic.fisheries.noaa.gov/hcd/index2a.htm>). Use the species list as part of the initial screening process to determine if EFH for those species occurs in the vicinity of the proposed action. The list can be included as an attachment to the worksheet. Make a preliminary determination on the need to conduct an EFH consultation.

1. INITIAL CONSIDERATIONS		
EFH Designations	Yes	No
<b>Is the action located in or adjacent to EFH designated for eggs?</b> List the species: Adjacent, Red Hake, Winter Flounder, Yellow Flounder, Windowpane Flounder	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Is the action located in or adjacent to EFH designated for larvae?</b> List the species: Adjacent, Red Hake, Winter Flounder, Yellow Flounder, Windowpane Flounder	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Is the action located in or adjacent to EFH designated for juveniles?</b> List the species: Adjacent, Red Hake, Winter Flounder, Yellow Flounder, Windowpane Flounder	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Is the action located in or adjacent to EFH designated for adults or spawning adults?</b> List the species: Adjacent, Red Hake, Winter Flounder, Yellow Flounder, Windowpane Flounder, King Mackerel, Spanish Mackerel, Atlantic Croaker	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If you answered no to all questions above, then EFH consultation is not required - go to Section 5. If you answered yes to any of the above questions proceed to Section 2 and complete remainder of the worksheet.	<input type="checkbox"/>	<input type="checkbox"/>

**Step 2:** In order to assess impacts, it is critical to know the habitat characteristics of the site before the activity is undertaken. Use existing information, to the extent possible, in answering these questions. Identify the sources of the information provided and provide as much description as available. These should not be yes or no answers. Please note that there may be circumstances in which new information must be collected to appropriately characterize the site and assess impacts. Project plans that show the location and extent of sensitive habitats, as well as water depths, the HTL, MHW and MLW should be provided.

<b>2. SITE CHARACTERISTICS</b>	
<b>Site Characteristics</b>	<b>Description</b>
<b>Is the site intertidal, sub-tidal, or water column?</b>	Intertidal (3 acres appx, subtidal 3.41 appx acres but very shallow)
<b>What are the sediment characteristics?</b>	sand bar, mud.silt bottom (not mud flat) See attached, "WELSCO 7 Data Map
<b>Is there submerged aquatic vegetation (SAV) at or adjacent to project site? If so describe the SAV species and spatial extent.</b>	No
<b>Are there wetlands present on or adjacent to the site? If so, describe the spatial extent and vegetation types.</b>	No
<b>Is there shellfish present at or adjacent to the project site? If so, please describe the spatial extent and species present.</b>	Yes, very few scallops, clams, jack knives - very easy access for gulls they clean out the site every low tide.
<b>Are there mudflats present at or adjacent to the project site? If so please describe the spatial extent.</b>	no- flats but they are sand. Characteristics are more consistent with a sand bar.
<b>Is there rocky or cobble bottom habitat present at or adjacent to the project site? If so, please describe the spatial extent.</b>	no
<b>Is Habitat Area of Particular Concern (HAPC) designated at or near the site? If so for which species, what type habitat type, size, characteristics?</b>	no (NDDDB resulted in non-issue for listed species). Area is technically part of an estuary, not a river (due to the very limited freshwater inputs, Latimers Brook, the river which is technically an estuary is better described as an embayment; this is consistent with salinity readings after rain events. The FMC does not consider estuaries along the East-Coast to be HAPCs
<b>What is the typical salinity, depth and water temperature regime/range?</b>	28-32ppt (unless rain-fall event) MHHW ranges from 39.1"-51.1" MLLW ranges from 0"-15"; see attached maps. Temp 28-80
<b>What is the normal frequency of site disturbance, both natural and man-made?</b>	High-natural, Low-man. Strong currents move sediment across the site every change in the tide. Site is not currently utilized by man. Very shallow (limits boating activities), lack of shellfish/fish to warrant any recreational fishing activity.

What is the area of proposed impact (work footprint & far afield)?	6.41 acres for overall site. Contact with bottom is limited across site. of actual bottom contact there is less than 0.20 acres
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**Step 3:** This section is used to describe the anticipated impacts from the proposed action on the physical/chemical/biological environment at the project site and areas adjacent to the site that may be affected.

3. DESCRIPTION OF IMPACTS			
Impacts	Y	N	Description
Nature and duration of activity(s). Clearly describe the activities proposed and the duration of any disturbances.			Duration-life of Niantic Bay Shellfish Farm (NBSF)/company. Placement of Type II aquaculture gear to raise shellfish. Use of bottom trays, rack and bag, as well as deep sea trays. Use gear to raise juvenile shellfish which will be primarily grown out in bay or sold. However, native scallops produced will remain in River if possible. We are working with the Local
Will the benthic community be disturbed? If no, why not? If yes, describe in detail how the benthos will be impacted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	When gear is initially placed the benthic community will be disturbed but with limited affects. For example, the 3/8th inch rebar racks will make contact with the sand bar at four points. The Deep Sea trays will have four contact points by way of four 1/2 inch pvc anchoring pipes. the trays will have feet made from aquamesh (1" mesh 2" wide 2' long)
Will SAV be impacted? If no, why not? If yes, describe in detail how the SAV will be impacted. Consider both direct and indirect impacts. Provide details of any SAV survey conducted at the site.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No SAV on site- see 2012 study for the area or refer to the Annual Report 2015 published by Millstone Power Station Marine Environmental Lab, contact Don Landers. Mr. Landers also indicated that the only issue he could foresee in this process would be eel grass. However, he was quick to note that eel grass has not been documented in this area. See attached, "Existing Conditions: Historical Eelgrass Presence and WELSCO 7 Data Map.
Will salt marsh habitat be impacted? If no, why not? If yes, describe in detail how wetlands will be impacted. What is the aerial extent of the impacts? Are the effects temporary or permanent?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No, no salt marsh presence see WELSCO 7 Data Map
Will mudflat habitat be impacted? If no, why not? If yes, describe in detail how mudflats will be impacted. What is the aerial extent of the impacts? Are the effects temporary or permanent?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No, project area on an unproductive sand bar lacking the properties associated with a mud flat. See "WELSCO 7 Data Map" for sediment type.
Will shellfish habitat be impacted? If so, provide in detail how the shellfish habitat will be impacted. What is the aerial extent of the impact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	A positive impact. As noted this site is located on an unproductive sandbar. The Local Commissions and Shellfish Wardens along with NBSF looked at all Aquaculture sites identified in the River by WELSCO and after 15 months concluded this site offered minimal conflicts. All parties have indicated there is very little product in this area and a commercial operation aiming

Provide details of any shellfish survey conducted at the site.	<input type="checkbox"/>	<input type="checkbox"/>	No one shellfishes in this area. As noted, gulls have long ago picked this area clean. In four hours I was able to only find 3 jack knife clams
Will hard bottom (rocky, cobble, gravel) habitat be impacted at the site? If so, provide in detail how the hard bottom will be impacted. What is the aerial extent of the impact?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Will sediments be altered and/or sedimentation rates change? If no, why not? If yes, describe how.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not dumping sediment into the waters to increase sedimentation. Any sedimentation will negatively impact this project. There is no run-off from this project.
Will turbidity increase? If no, why not? If yes, describe the causes, the extent of the effects, and the duration.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Do not run engines in a way to stir up bottom. This is in reality the only way any significant turbidity would occur. All gear placement is by hand, no heavy equipment to stir bottom.
Will water depth change? What are the current and proposed depths?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Current depths as discussed earlier 0"-51.1"
Will contaminants be released into sediments or water column? If yes, describe the nature of the contaminants and the extent of the effects.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Will tidal flow, currents, or wave patterns be altered? If no, why not? If yes, describe in detail how.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Not constructing and structures that could alter flow/currents. Wave action at a low tide may be damped because waves may break on gear instead of the moorings/ Cini Park kayak dock/seawall- This will not truly have any great impact, if any, on wave action. The
Will water quality be altered? If no, why not? If yes, describe in detail how. If the effects are temporary, describe the duration of the impact.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Shellfish filter water removing excess Co2 (shell growth), excess nitrogen which form phytoplankton which in turn cloud the water not allowing for sunlight penetration and/or create anoxic zones. Water quality will improve when you begin to restore corner stone species.
Will ambient noise levels change? If no, why not? If yes, describe in detail how. If the effects are temporary, describe the duration and degree of impact.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	As operating as farm within the Water-front Development District, our noise levels/durations will be kept within the outlined parameters by the Town of Waterford. The ambient, or background, noise levels will not be affected.

Does the action have the potential to impact prey species of federally managed fish with EFH designations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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**Step 4:** This section is used to evaluate the consequences of the proposed action on the functions and values of EFH as well as the vulnerability of the EFH species and their life stages. Identify which species (from the list generated in Step 1) will be adversely impacted from the action. Assessment of EFH impacts should be based upon the site characteristics identified in Step 2 and the nature of the impacts described within Step 3. The Guide to EFH Descriptions webpage (<http://www.greateratlantic.fisheries.noaa.gov/hcd/list.htm>) should be used during this assessment to determine the ecological parameters/preferences associated with each species listed and the potential impact to those parameters.

4. EFH ASSESSMENT			
Functions and Values	Y	N	Describe habitat type, species and life stages to be adversely impacted
Will functions and values of EFH be impacted for:			
<u>Spawning</u> If yes, describe in detail how, and for which species. Describe how adverse effects will be avoided and minimized.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>Nursery</u> If yes, describe in detail how and for which species. Describe how adverse effects will be avoided and minimized.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>Forage</u> If yes, describe in detail how and for which species. Describe how adverse effects will be avoided and minimized.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<u>Shelter</u> If yes, describe in detail how and for which species. Describe how adverse effects will be avoided and minimized.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	



<p><b>Will impacts be temporary or permanent? Describe the duration of the impacts.</b></p>		<p>Gear will be deployed for the life of NBSF.</p>
<p><b>Will compensatory mitigation be used? If no, why not? Describe plans for mitigation and how this will offset impacts to EFH. Include a conceptual compensatory mitigation plan, if applicable.</b></p>	<p><input type="checkbox"/></p>	<p>No, nothing to mitigate. If anything these structures will attract life and produce trillions of shellfish larvae.</p> <p><input checked="" type="checkbox"/></p>

**Step 5:** This section provides the federal agency's determination on the degree of impact to EFH from the proposed action. The EFH determination also dictates the type of EFH consultation that will be required with NOAA Fisheries.

Please note: if information provided in the worksheet is insufficient to allow NOAA Fisheries to complete the EFH consultation additional information will be requested.

<p><b>5. DETERMINATION OF IMPACT</b></p>		
	/	<p><b>Federal Agency's EFH Determination</b></p>
<p><b>Overall degree of adverse effects on EFH (not including compensatory mitigation) will be:</b></p> <p>(check the appropriate statement)</p>	<p><input type="checkbox"/></p>	<p>There is no adverse effect on EFH or no EFH is designated at the project site.</p> <p>EFH Consultation is not required</p>
	<p><input type="checkbox"/></p>	<p>The adverse effect on EFH is not substantial. This means that the adverse effects are either no more than minimal, temporary, or that they can be alleviated with minor project modifications or conservation recommendations.</p> <p>This is a request for an abbreviated EFH consultation.</p>
	<p><input type="checkbox"/></p>	<p>The adverse effect on EFH is substantial.</p> <p>This is a request for an expanded EFH consultation</p>

**Step 6: Consultation with NOAA Fisheries may also be required if the proposed action results in adverse impacts to other NOAA-trust resources, such as anadromous fish, shellfish, crustaceans, or their habitats as part of the Fish and Wildlife Coordination Act. Some examples of other NOAA-trust resources are listed below. Inquiries regarding potential impacts to marine mammals or threatened/endangered species should be directed to NOAA Fisheries' Protected Resources Division.**

<b>6. OTHER NOAA-TRUST RESOURCES IMPACT ASSESSMENT</b>	
<b>Species known to occur at site (list others that may apply)</b>	<b>Describe habitat impact type (i.e., physical, chemical, or biological disruption of spawning and/or egg development habitat, juvenile nursery and/or adult feeding or migration habitat). Please note, impacts to federally listed species of fish, sea turtles, and marine mammals must be coordinated with the GARFO Protected Resources Division.</b>
alewife	
American eel	
American shad	
Atlantic menhaden	
blue crab	
blue mussel	
blueback herring	
Eastern oyster	
horseshoe crab	
quahog	
soft-shell clams	
striped bass	
other species:	

## Useful Links

National Wetland Inventory Maps

<http://www.fws.gov/wetlands/>

EPA's National Estuaries Program

<http://www.epa.gov/nep/information-about-local-estuary-programs>

Northeast Regional Ocean Council (NROC) Data Portal

<http://www.northeastoceandata.org/>

Mid-Atlantic Regional Council on the Ocean (MARCO) Data Portal

<http://portal.midatlanticocean.org/>

Resources by State:

### Maine

Eelgrass maps

<http://www.maine.gov/dmr/m/eelgrass/>

Maine Office of GIS Data Catalog

<http://www.maine.gov/megis/catalog/>

Casco Bay Estuary Partnership

<http://www.cascobayestuary.org/>

Maine GIS Stream Habitat Viewer

<http://mapserver.maine.gov/streamviewer/index.html>

### New Hampshire

New Hampshire's Statewide GIS Clearinghouse, NH GRANIT

<http://www.granit.unh.edu/>

New Hampshire Coastal Viewer

<http://www.granit.unh.edu/nhcoastalviewer/>

### Massachusetts

Eelgrass maps

[http://maps.massgis.state.ma.us/images/dep/eelgrass/eelgrass\\_map.htm](http://maps.massgis.state.ma.us/images/dep/eelgrass/eelgrass_map.htm)

MADMF Recommended Time of Year Restrictions Document

<http://www.mass.gov/eea/docs/dfg/dmf/publications/tr-47.pdf>

Massachusetts Bays National Estuary Program

<http://www.mass.gov/eea/agencies/mass-bays-program/>

Buzzards Bay National Estuary Program

<http://buzzardsbay.org/>

Massachusetts Division of Marine Fisheries

<http://www.mass.gov/eea/agencies/dfg/dmf/>

Massachusetts Office of Coastal Zone Management

<http://www.mass.gov/eea/agencies/czm/>

### Rhode Island

Eelgrass maps

[http://www.savebay.org/file/2012\\_Mapping\\_Submerged\\_Aquatic\\_Vegetation\\_final\\_report\\_4\\_2013.pdf](http://www.savebay.org/file/2012_Mapping_Submerged_Aquatic_Vegetation_final_report_4_2013.pdf)

Narragansett Bay Estuary Program

<http://www.dem.ri.gov/programs/benviron/water/wetlands/wetidocs.htm>

Rhode Island Division of Marine Fisheries

<http://www.dem.ri.gov/>

Rhode Island Coastal Resources Management Council

<http://www.crmc.ri.gov/>

## **Connecticut**

Eelgrass Maps

[https://www.fws.gov/northeast/ecologicalservices/pdf/wetlands/2012\\_CT\\_Eelgrass\\_Final\\_Report\\_11\\_26\\_2013.pdf](https://www.fws.gov/northeast/ecologicalservices/pdf/wetlands/2012_CT_Eelgrass_Final_Report_11_26_2013.pdf)

Long Island Sound Study

<http://longislandsoundstudy.net/>

CT GIS Resources

[http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav\\_GID=1707](http://www.ct.gov/deep/cwp/view.asp?a=2698&q=323342&deepNav_GID=1707)

CT DEEP Office of Long Island Sound Programs and Fisheries

<http://www.ct.gov/deep/>

CT Bureau of Aquaculture Shellfish Maps

<http://www.ct.gov/doag/cwp/view.asp?a=3768&q=451508&doagNav=>

CT River Watershed Council

<http://www.ctriver.org/>

## **New York**

Eelgrass report

[http://www.dec.ny.gov/docs/fish\\_marine\\_pdf/finaiseagrassreport.pdf](http://www.dec.ny.gov/docs/fish_marine_pdf/finaiseagrassreport.pdf)

Peconic Estuary Program

<http://www.peconicestuary.org/>

NY/NJ Harbor Estuary

<http://www.harborestuary.org/>

## **New Jersey**

Submerged Aquatic Vegetation mapping

<http://crssa.rutgers.edu/projects/coastal/sav/>

Barnegat Bay Partnership

<http://bbp.ocean.edu/pages/1.asp>

## **Delaware**

Partnership for the Delaware Estuary

<http://www.delawareestuary.org/>

Center for Delaware Inland Bays

<http://www.inlandbays.org/>

## **Maryland**

Submerged Aquatic Vegetation mapping

[http://data.imap.maryland.gov/datasets/da64df6bd4124ce9989e6c186a7906a7\\_0](http://data.imap.maryland.gov/datasets/da64df6bd4124ce9989e6c186a7906a7_0)

MERLIN

<http://geodata.md.gov/imaptemplate/?appid=a8ec7e2ff4c34a31bc1e9411ed8e7a7e>

Maryland Coastal Bays Program

<http://www.mdcoastalbays.org/>

## **Virginia**

Submerged Aquatic Vegetation mapping

<http://web.vims.edu/bio/sav/maps.html>

# WELSCO 7 Data Map



March 27, 2017

## CT Shellfish Area Marker

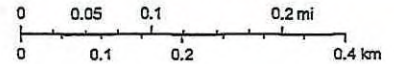
- Demarcation Sign
- Status Signs: Open/Closed
- Navigational Buoy
- Aids to Navigation (2013)
- Channels, Basins, Anchorage Areas (DEEP)
- Connecticut Towns

- Coastal Boundary
- Environmental Sensitivity Index (lines)**
  - 8B-Sheltered, solid man-made structures
  - 6B-Riprap
  - 5-Mixed sand & gravel beaches
  - 3A-Fine- to medium-grained sand beaches
  - 1B-Exposed, solid man-made structures

- U**
- Environmental Sensitivity Index (polygons)**
  - 10A-Salt- & brackish-water marshes
- Critical Coastal Habitats**
  - Beachshore, B
  - Estuarine Marine Wetlands (NWI)

- Eelgrass Beds (2012)**
  - Medium
  - Low
- LIS Surficial Sediment**
  - sand

1:5,733



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Nantic Bay Shellfish Farm  
Copyright Connecticut Sea Grant and UConn CLEAR

# Existing Conditions: Eelgrass Historical Presence

Millstone Annual Report 2015

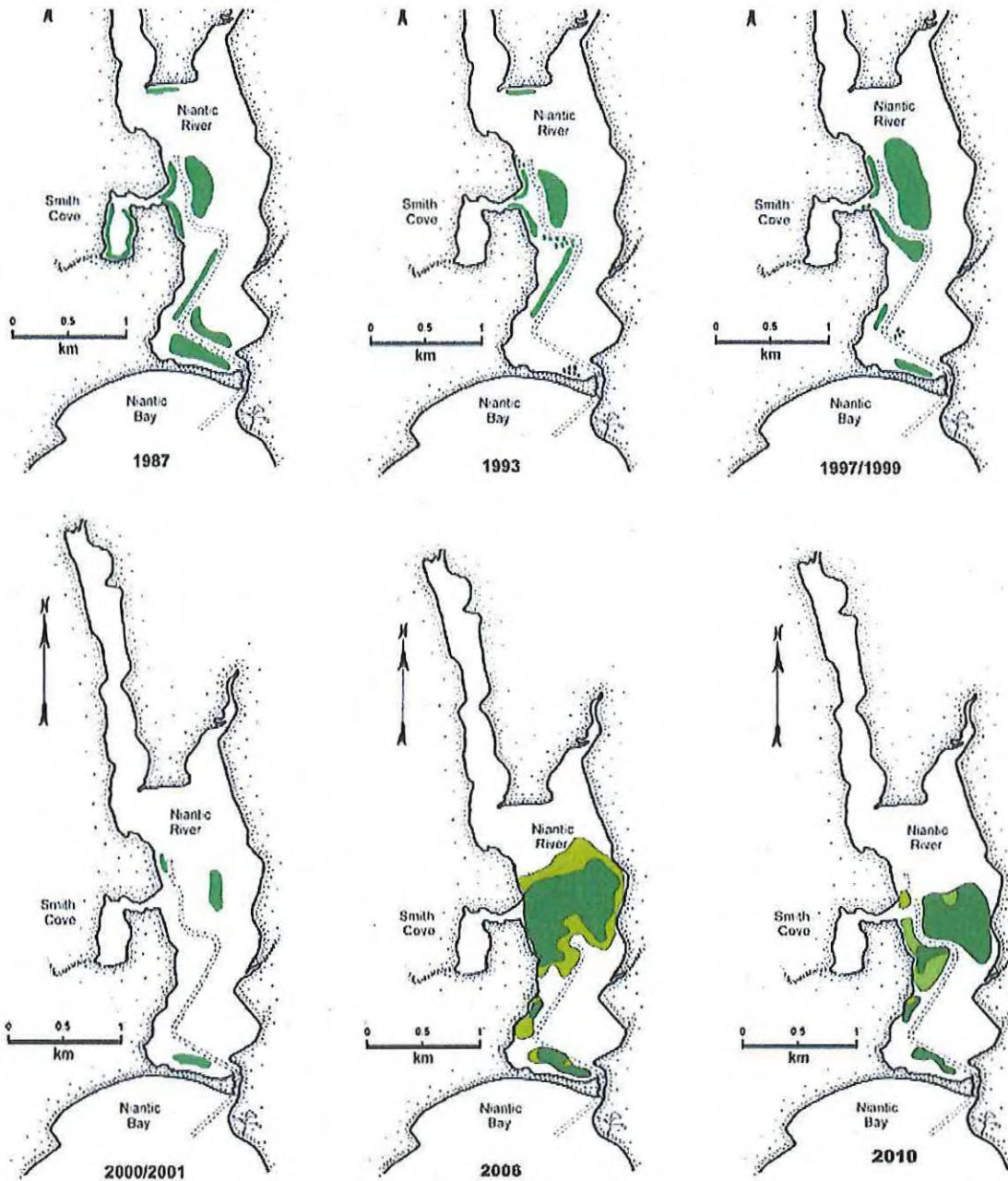


Fig. 8. Eelgrass (*Zostera marina*) distribution in the Nantic River based on surveys conducted during 1987-2015 (select years shown). Green areas on maps from 1987 to 2001 indicate presence of eelgrass. Lighter green areas in maps from later years indicate sparse ( $\leq 10\%$  cover) eelgrass abundance.

# Existing Conditions: Eelgrass Historical Presence

Millstone Annual Report 2015

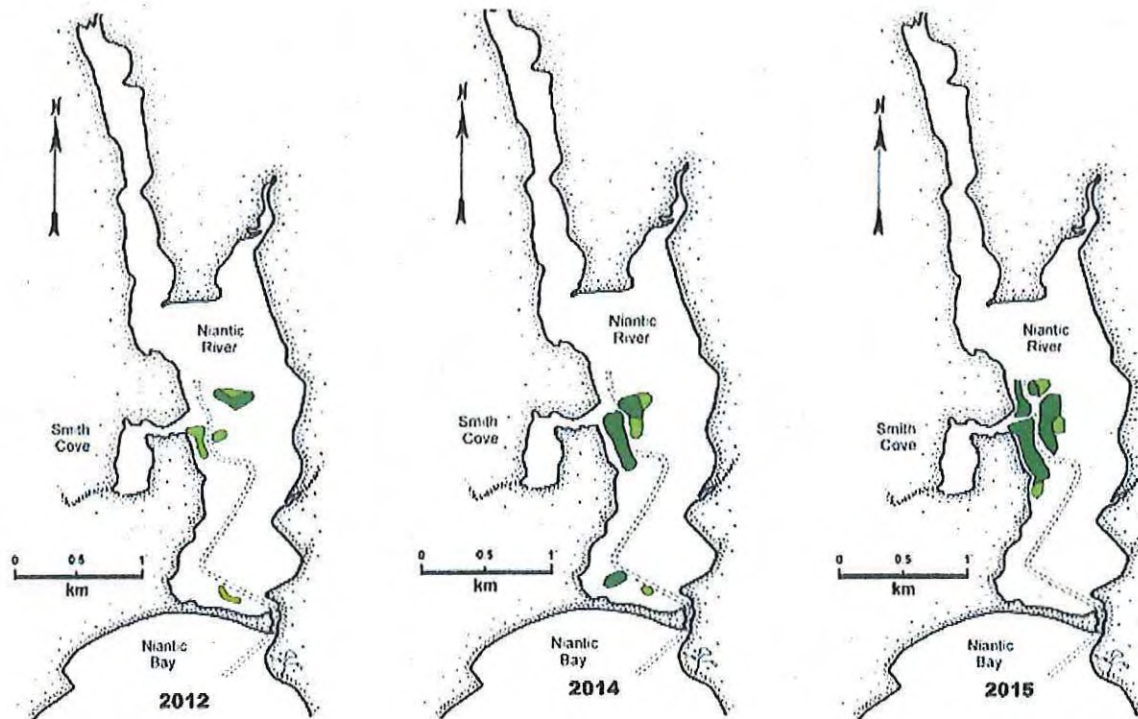


Fig. 8 continued.

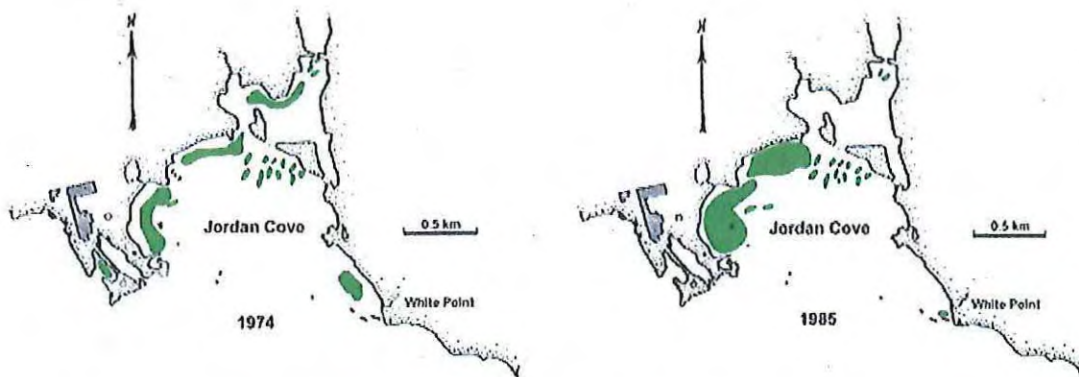


Fig. 9. Eelgrass (*Zostera marina*) distribution in Jordan Cove (select years shown). Green areas on maps from 1974 to 1997 indicate presence of eelgrass. Lighter green areas maps from later years indicate sparse ( $\leq 10\%$  cover) eelgrass abundance. The 1974 map was based on Knight and Lawton (1974).

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI Total number of samples taken and effort-adjusted<sup>a</sup> number of fish collected by trawl at station NR during each report year from June 1976 through December 2015.

Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Number of samples	45	78	78	78	81	78	78	78	78	78	78	77	77	76
Taxon <sup>b</sup>														
Winter Flounder	2,418	1,311	1,157	2,148	3,672	4,465	5,840	4,861	4,613	2,827	4,088	3,452	6,746	4,402
Silverside spp.	1,203	304	61	93	105	161	144	189	39	81	1,460	416	604	212
Grubby	37	32	34	65	230	336	390	418	236	281	366	282	439	622
Scup	58	10	11	5	6	38	27	57	2	3	22	15	3	5
Tautog	39	15	27	47	26	126	80	31	5	25	100	26	50	38
Summer Flounder	41	29	16	14	21	100	82	60	165	58	240	208	200	28
Windowpane	71	41	24	130	158	177	208	238	243	114	295	272	173	370
Black Sea Bass	18	0	0	1	2	3	2	0	1	8	112	0	3	1
Atlantic Menhaden	0	4	10	0	1	1	0	0	1	31	10	3	0	788
Northern Pipefish	19	9	14	22	62	177	100	97	63	101	102	205	148	68
Cunner	14	3	4	15	4	64	70	62	30	13	34	20	9	16
Striped Searobin	3	1	0	2	0	7	4	1	0	2	31	0	0	139
Threespine Stickleback	0	17	13	48	21	185	110	45	5	164	84	12	16	63
Anchovy spp.	10	195	0	0	2	0	11	2	5	15	9	11	168	734
Fourspine Stickleback	4	5	2	22	32	192	763	72	5	102	115	29	29	14
Rock Gummel	0	0	1	11	3	17	32	77	27	16	14	45	33	52
Atlantic Tomcod	3	6	8	11	101	164	66	50	11	46	15	0	30	21
Oyster Toadfish	95	22	6	16	28	34	20	26	16	33	53	49	58	32
Northern Searobin	92	22	1	5	4	3	249	1	2	1	13	0	19	13
Spotted Hake	0	0	0	0	0	0	1	3	0	3	4	0	6	1
Atlantic Cod	0	0	0	0	0	0	1	9	7	1	152	6	3	4
Northern Puffer	11	5	0	0	7	11	12	7	1	2	1	0	2	4
American Eel	16	11	7	4	8	23	14	21	16	25	24	18	20	5
Rainbow Smelt	55	86	2	0	6	13	14	17	3	31	8	7	34	5
Herring family spp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Goby spp.	3	0	0	0	4	0	0	2	2	12	3	3	12	2
River Herring spp.	0	0	0	0	0	0	0	0	0	0	0	0	1	3
Lined Seahorse	0	0	0	0	0	0	0	1	1	1	9	4	2	2
American Shad	2	0	0	3	2	1	0	9	0	0	0	0	0	0
Alawife	0	31	16	2	2	2	3	1	1	1	2	2	1	0
Smallmouth Flounder	0	0	0	0	1	0	0	1	2	0	4	2	4	3
American Sand Lance	1	0	1	74	4	0	2	14	1	0	0	0	1	0
Skate spp.	0	0	0	0	2	1	1	3	0	1	1	0	4	2
Sea Raven	0	0	0	2	5	9	6	32	24	3	1	0	0	0
Pollock	0	0	0	1	0	1	6	0	0	0	7	1	1	2
Codfish family spp.	0	1	1	2	0	40	2	0	0	0	0	0	0	0
White Hake	0	0	0	0	0	0	0	0	0	1	2	16	1	9
White Perch	2	1	0	1	5	2	0	0	0	0	0	0	2	8
Red Hake	0	0	0	0	0	3	0	7	0	4	0	0	7	1
Bluespotted Cornetfish	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Striped Bass	0	0	2	1	0	1	1	0	0	1	0	0	0	4
Blueback Herring	0	0	8	1	8	0	0	0	2	1	0	0	0	0
Flying Gurnard	2	0	0	0	0	1	3	0	0	1	1	0	0	0
Inshore Lizardfish	0	1	1	0	0	0	1	0	0	0	0	0	0	0
Atlantic Herring	0	0	0	0	0	0	0	0	3	0	0	1	0	0
Silver Hake	0	0	0	0	0	0	2	1	0	0	0	1	0	2
Butterfish	1	0	0	0	0	0	0	2	0	0	0	0	0	8
Snailfish spp.	0	0	0	0	0	1	0	0	0	0	0	0	0	9
Fourspot Flounder	0	0	0	2	0	0	0	0	0	0	0	0	2	8
Lumpfish	0	0	0	1	1	0	0	1	0	1	0	0	2	0



# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI (continued).

Year	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Number of samples	45	78	78	78	81	78	78	78	78	78	78	77	77	76
Taxon <sup>a</sup>														
Striped Cusk-eel	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Searobin spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Killifish spp.	0	0	0	0	0	4	3	0	0	0	2	0	0	1
Hake spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Spotfin Butterflyfish	0	0	0	0	0	0	0	1	0	0	0	0	1	0
Stickleback spp.	0	0	0	0	11	0	0	0	0	0	0	0	0	0
Weakfish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Kingfish	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Conger Eel	0	0	0	0	0	0	0	0	1	0	0	0	1	1
Bluefish	0	1	0	0	0	0	2	0	0	0	0	1	0	0
Clearnose Skate	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Seunet	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Ninespine Stickleback	0	0	0	0	0	1	1	0	0	0	1	0	0	0
Feather Blenny	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackspotted Stickleback	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Spot	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Planehead Filefish	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Striped Mullet	0	0	0	0	0	0	0	0	0	0	2	0	0	0
Boxfish spp.	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Yellowtail Flounder	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gag	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hogchoker	0	0	0	0	0	0	0	0	0	0	1	1	0	0
Mummichog	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hickory Shad	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eyed Flounder	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Crevalla Jack	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striped Burrfish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sheepshead Minnow	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Striped Killifish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Snapper spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Filefish spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smooth Dogfish	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Bigeye	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Short Bigeye	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown Trout	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Chain Dogfish	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Lookdown	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>NUMBER OF TAXA</b>	<b>28</b>	<b>27</b>	<b>25</b>	<b>30</b>	<b>33</b>	<b>34</b>	<b>37</b>	<b>35</b>	<b>32</b>	<b>36</b>	<b>37</b>	<b>29</b>	<b>40</b>	<b>44</b>
<b>TOTAL</b>	<b>4,221</b>	<b>2,165</b>	<b>1,428</b>	<b>2,770</b>	<b>4,545</b>	<b>6,364</b>	<b>8,274</b>	<b>6,409</b>	<b>5,534</b>	<b>4,011</b>	<b>7,388</b>	<b>5,109</b>	<b>8,845</b>	<b>7,708</b>

<sup>a</sup> See Materials and Methods for details.

<sup>b</sup> Fish were identified to lowest practical taxon. See Appendix I for a list of common and scientific names.

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI (continued).

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Number of samples	78	81	78	78	78	78	78	78	78	78	78	78	80	78
Taxon <sup>1</sup>														
Winter Flounder	3,754	5,145	5,871	1,728	2,354	1,553	1,820	720	1,130	1,305	1,394	383	344	721
Silverside spp.	217	542	456	144	108	58	269	213	84	606	897	197	259	492
Grubby	419	357	411	259	245	281	434	286	386	150	125	58	39	266
Scup	10	175	119	0	84	41	4	21	5	98	263	183	629	1,170
Tautog	89	67	22	17	14	163	62	44	144	246	324	175	238	280
Summer Flounder	143	171	257	103	243	75	177	310	94	166	254	130	112	275
Windowpane	379	236	228	293	119	149	133	138	82	46	43	14	2	6
Black Sea Bass	16	44	1	0	7	10	0	4	5	41	65	6	57	92
Atlantic Menhaden	0	179	26	19	16	28	2	1	2	106	101	18	28	303
Northern Pipefish	85	106	73	214	34	166	85	27	57	32	45	19	19	12
Cunner	12	4	13	11	9	17	3	18	107	37	24	85	32	67
Striped Seabream	82	239	23	14	255	18	8	48	30	480	65	5	116	98
Threespine Stickleback	11	11	433	111	23	76	3	116	53	80	3	6	1	0
Anchovy spp.	2	12	1	0	12	2	26	3	22	139	0	35	59	0
Fourspine Stickleback	9	26	107	30	3	8	2	13	1	47	7	8	5	1
Rock Gunnel	97	52	22	59	42	40	62	37	155	52	23	23	13	26
Atlantic Tomcod	32	2	0	10	15	5	79	63	126	12	3	18	3	8
Oyster Toadfish	52	23	4	10	17	21	10	10	11	6	7	9	12	1
Northern Seabream	13	21	11	0	10	54	4	17	0	7	6	0	0	0
Spotted Hake	4	2	2	2	0	22	5	2	8	39	128	14	1	75
Atlantic Cod	0	3	1	8	2	12	44	5	3	2	8	1	0	58
Northern Puffer	12	23	3	2	16	16	2	6	2	28	8	3	18	20
American Eel	14	3	1	5	10	10	14	2	7	8	3	8	16	7
Rainbow Smelt	1	6	13	1	1	4	1	4	0	3	1	0	1	1
Herring family spp.	0	0	0	0	0	0	258	0	0	0	0	0	7	0
Goby spp.	15	11	9	34	0	6	0	2	6	7	3	9	2	0
River Herring spp.	14	0	12	17	111	0	0	0	0	6	0	0	0	1
Lined Seahorse	6	36	1	0	0	0	0	0	6	12	25	0	2	1
American Shad	0	0	0	0	0	0	40	0	0	1	0	0	0	2
Alewife	3	0	0	0	0	2	1	0	0	0	0	0	1	2
Smallmouth Flounder	2	6	9	2	3	6	1	12	2	10	10	2	0	6
American Sand Lance	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Skate spp.	3	2	20	2	8	3	12	20	5	4	1	0	1	1
Sea Raven	0	0	0	0	1	2	1	0	1	0	0	0	0	0
Pollock	0	0	0	0	0	4	2	0	0	0	2	0	3	7
Codfish family spp.	0	0	12	0	0	0	0	0	0	0	0	0	0	0
White Hake	0	0	0	2	0	6	6	0	1	1	1	0	0	1
White Perch	1	0	1	2	0	0	0	0	0	1	0	0	0	14
Red Hake	3	1	1	0	0	0	0	0	4	1	0	6	0	0
Bluespotted Cornetfish	7	3	0	0	1	0	0	0	0	3	4	0	0	0
Striped Bass	1	0	0	2	3	0	6	1	0	1	0	0	0	1
Blueback Herring	0	0	9	0	0	3	0	0	0	0	0	0	0	0
Flying Gurnard	0	3	2	2	1	1	6	2	0	3	3	0	0	0
Inshore Lizardfish	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Atlantic Herring	0	0	0	0	0	0	0	0	0	2	1	0	8	2
Silver Hake	0	0	4	0	0	8	0	2	0	2	0	0	0	0
Butterfish	0	0	2	0	0	0	0	0	1	0	6	0	1	1
Snailfish spp.	0	1	0	0	1	1	0	0	1	0	0	2	1	0
Fourspot Flounder	0	1	0	0	0	0	0	0	0	2	0	0	0	0
Lumpfish	0	0	2	1	1	0	1	1	0	0	0	2	0	0

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI (continued)

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Number of samples	78	81	78	78	78	78	78	78	78	78	78	78	80	78
Taxon <sup>b</sup>														
Striped Cusk-eel	3	0	0	0	0	0	0	0	0	0	5	0	0	0
Searobin spp.	3	5	6	0	0	0	0	0	0	0	0	0	0	0
Killifish spp.	1	0	0	1	0	0	0	0	0	0	1	0	0	0
Hake spp.	0	1	0	2	0	2	0	0	1	0	1	1	0	0
Spotfin Butterflyfish	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Stickleback spp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weakfish	1	0	0	0	0	0	0	0	0	0	1	0	0	8
Northern Kingfish	1	0	0	0	0	3	0	0	1	0	0	0	0	0
Conger Eel	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Bluefish	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Clearnose Skate	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Northern Sanner	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ninespine Stickleback	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Feather Blenny	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Blackspotted Stickleback	0	1	0	0	0	0	0	0	0	0	0	1	0	0
Spot	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Planehead Filefish	0	0	1	0	1	0	0	0	0	0	0	0	0	0
Striped Mullet	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Boxfish spp.	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellowtail Flounder	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Gag	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hogchoker	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mummichog	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hickory Shad	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Eyed Flounder	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crevalla Jack	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Striped Burrfish	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Sheepshead Minnow	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Striped Killifish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Snapper spp.	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Filefish spp.	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Smooth Dogfish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bigeye	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Short Bigeye	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Brown Trout	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chain Dogfish	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lookdown	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>NUMBER OF TAXA</b>	<b>39</b>	<b>38</b>	<b>40</b>	<b>31</b>	<b>35</b>	<b>38</b>	<b>35</b>	<b>31</b>	<b>34</b>	<b>41</b>	<b>37</b>	<b>31</b>	<b>31</b>	<b>36</b>
<b>TOTAL</b>	<b>5,519</b>	<b>7,522</b>	<b>8,192</b>	<b>3,107</b>	<b>3,772</b>	<b>2,882</b>	<b>3,584</b>	<b>2,148</b>	<b>2,544</b>	<b>3,794</b>	<b>3,861</b>	<b>1,423</b>	<b>2,030</b>	<b>4,028</b>

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI (continued).

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Number of samples	78	78	78	78	78	78	78	78	78	78	81	78	3,094
Taxon <sup>a</sup>													
Winter Flounder	470	268	565	318	217	342	182	241	168	174	281	221	83,689
Silverside spp.	347	98	46	222	58	38	309	53	292	47	118	222	11,464
Grubby	371	97	30	278	243	29	112	24	16	5	75	26	8,790
Scup	306	125	180	259	159	107	25	88	86	223	794	393	5,809
Tautog	254	249	60	421	191	63	64	15	51	85	412	355	4,740
Summer Flounder	58	43	101	77	106	43	38	113	34	93	89	146	4,713
Windowpane	5	1	3	1	3	1	1	4	3	1	0	0	4,395
Black Sea Bass	16	3	119	92	65	87	45	24	206	239	1,263	608	3,266
Atlantic Menhaden	1	5	0	1	904	0	0	83	12	0	0	142	2,826
Northern Pipefish	7	9	12	6	19	14	61	23	21	34	30	22	2,419
Cunner	101	123	54	155	133	91	175	72	52	34	68	61	1,916
Striped Seabroin	4	13	13	3	6	6	4	1	2	13	11	67	1,814
Threespine Stickleback	1	0	1	2	1	1	4	9	2	0	1	0	1,732
Anchovy spp.	1	4	3	0	7	3	1	175	27	1	0	0	1,697
Fourspine Stickleback	0	0	0	0	1	0	3	21	0	0	0	0	1,678
Rock Gunnel	33	95	20	35	33	18	43	13	8	1	15	18	1,363
Atlantic Tomcod	21	10	2	5	10	1	4	6	1	0	7	0	975
Oyster Toadfish	2	2	4	5	2	1	8	6	3	1	1	1	717
Northern Seabroin	2	0	5	0	0	3	0	0	2	5	4	0	589
Spotted Hake	12	0	5	1	1	4	5	3	6	24	50	19	452
Atlantic Cod	19	6	0	1	2	39	5	21	0	3	8	0	434
Northern Puffer	1	3	11	14	3	4	1	1	10	5	28	63	366
American Eel	3	4	1	4	1	2	1	0	1	7	1	0	345
Rainbow Smelt	2	0	0	0	0	0	0	0	0	0	0	0	320
Herring family spp.	0	0	0	0	0	0	0	0	0	0	0	0	266
Goby spp.	3	8	3	9	3	2	3	1	2	6	3	1	191
River Herring spp.	0	0	0	0	0	0	0	0	2	0	0	3	170
Lined Seahorse	0	0	0	5	11	5	0	0	5	3	0	0	143
American Shad	46	3	0	2	0	0	0	0	0	0	0	0	111
Alawife	3	3	0	1	0	0	27	0	1	0	0	1	109
Smallmouth Flounder	1	0	0	0	1	2	0	0	0	8	1	2	103
American Sand Lance	0	0	0	0	0	0	0	2	0	0	0	0	101
Skate spp.	0	0	2	0	0	0	0	0	0	0	0	0	99
Sea Raven	0	0	1	1	0	0	1	0	1	1	0	0	92
Pollock	1	7	0	1	2	1	9	1	0	0	2	0	61
Codfish family spp.	0	0	0	0	0	0	0	0	0	0	0	0	58
White Hake	0	0	1	0	0	3	0	0	0	0	0	0	51
White Perch	0	0	1	0	2	0	0	0	0	0	0	0	43
Red Hake	0	0	0	0	0	1	0	3	0	0	0	1	43
Bluespotted Cornetfish	0	0	0	0	7	0	0	0	0	1	10	2	41
Striped Bass	0	0	4	0	9	1	0	0	0	0	0	0	39
Blueback Herring	0	0	0	0	0	1	0	0	0	0	0	0	38
Flying Gurnard	0	1	0	0	1	2	1	0	0	0	2	0	38
Inshore Lizardfish	1	0	7	1	1	1	0	0	0	2	19	0	36
Atlantic Herring	0	0	0	0	0	0	0	0	0	2	0	5	24
Silver Hake	0	0	0	0	1	0	0	0	0	0	0	0	23
Butterfish	0	1	0	0	0	0	0	0	0	0	0	0	23
Snailfish spp.	0	0	0	1	0	0	2	0	0	0	0	0	20
Fourspot Flounder	0	0	0	0	0	0	0	0	0	0	0	0	15
Lumpfish	0	0	0	0	0	0	0	0	0	0	0	0	14

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

APPENDIX VI (continued).

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Number of samples	78	78	78	78	78	78	78	78	78	78	81	78	1,094
Taxon													
Striped Cusk-eel	1	0	0	0	1	1	0	0	0	0	0	0	14
Searobin spp.	0	0	0	0	0	0	0	0	0	0	0	0	14
Killifish spp.	0	0	0	0	0	0	0	0	0	0	0	0	13
Hake spp.	0	0	0	0	0	0	0	0	0	1	0	0	12
Spottfin Butterflyfish	0	0	1	3	0	2	0	0	0	1	1	0	11
Stickleback spp.	0	0	0	0	0	0	0	0	0	0	0	0	11
Weakfish	0	0	0	0	0	0	0	0	0	0	0	0	10
Northern Kingfish	0	0	1	0	0	0	0	0	0	0	0	0	8
Conger Eel	0	0	0	0	0	0	0	0	0	0	0	4	8
Bluefish	0	0	1	0	0	0	0	0	0	0	0	0	7
Clearnose Skate	0	0	0	1	0	0	0	0	1	0	3	1	7
Northern Sannet	0	0	0	0	0	0	0	0	0	0	0	0	6
Ninespine Stickleback	0	0	0	1	1	0	0	0	0	0	0	0	5
Feather Blenny	0	0	0	0	0	0	0	0	1	2	1	0	4
Blackspotted Stickleback	0	0	0	0	0	0	0	0	0	0	0	0	3
Spot	0	0	1	0	0	0	0	0	0	0	1	0	3
Plainshead Filfish	0	0	0	0	0	0	0	0	0	0	0	0	3
Striped Mullet	0	0	0	0	0	0	0	0	0	0	0	0	3
Boxfish spp.	0	0	0	0	0	0	0	0	0	0	0	0	2
Yellowtail Flounder	0	0	0	0	0	0	0	0	0	0	0	0	2
Gag	0	2	0	0	0	0	0	0	0	0	0	0	2
Hogchoker	0	0	0	0	0	0	0	0	0	0	0	0	2
Mummichog	0	0	0	0	1	0	0	0	0	0	0	1	2
Hickory Shad	0	0	0	0	0	0	0	0	0	0	0	0	1
Eyed Flounder	0	0	0	0	0	0	0	0	0	0	0	0	1
Creville Jack	0	0	0	0	0	0	0	0	0	0	0	0	1
Striped Burrfish	0	0	0	0	0	0	0	0	0	0	0	0	1
Sheepshead Minnow	0	0	0	0	0	0	0	0	0	0	0	0	1
Striped Killifish	0	0	0	0	0	0	0	0	0	0	0	1	1
Snapper spp.	0	0	0	0	0	0	0	0	0	0	0	0	1
Filefish spp.	0	0	0	0	0	0	0	0	0	0	0	0	1
Smooth Dogfish	0	0	0	0	0	0	0	0	0	0	0	0	1
Bigeye	0	0	0	0	0	0	0	0	0	0	0	0	1
Short Bigeye	0	0	0	0	0	0	0	0	0	0	0	0	1
Brown Trout	0	0	0	0	0	0	0	0	0	0	0	0	1
Chain Dogfish	0	0	0	0	0	0	0	0	0	0	0	0	1
Lookdown	0	0	0	0	0	0	0	0	0	0	0	0	1
<b>NUMBER OF TAXA</b>	<b>30</b>	<b>26</b>	<b>31</b>	<b>31</b>	<b>35</b>	<b>33</b>	<b>27</b>	<b>25</b>	<b>28</b>	<b>29</b>	<b>29</b>	<b>26</b>	<b>87</b>
<b>TOTAL</b>	<b>2,093</b>	<b>1,183</b>	<b>1,258</b>	<b>1,926</b>	<b>2,206</b>	<b>919</b>	<b>1,134</b>	<b>1,003</b>	<b>1,016</b>	<b>1,027</b>	<b>3,299</b>	<b>2,386</b>	<b>148,627</b>

# Existing Conditions: Fish Species within Niantic River

Millstone Annual Report 2015

**NIANTIC RIVER (NR):**

Green crab	200	74	50	80	714	1,516	3,116	1,161	2,454	2,847	3,851	4,908	2,358	4,626
Spider crabs	781	3,583	243	266	1,730	1,527	1,105	1,147	984	1,157	821	691	2,331	1,604
Lady crab	32	101	107	178	476	328	606	428	233	76	20	75	356	439
Atlantic rock crab	24	26	30	23	43	109	334	378	133	276	18	59	140	395
Bay scallop	105	315	156	47	404	425	169	316	366	630	2,026	530	55	44
American lobster	8	7	10	9	9	8	210	53	14	13	74	8	110	825
Blue crab	19	3	3	10	105	23	30	18	20	17	41	18	17	29
Horseshoe crab	84	130	20	43	26	35	50	43	23	33	27	41	69	68
Flatclaw hermit crab	26	12	7	12	12	7	37	3	7	10	2	3	18	13
Longfin squid	4	7	4	23	75	6	1	10	0	10	2	4	7	1
Whelks	2	6	6	3	14	13	5	5	7	3	2	12	10	14
Moonsnails	0	1	5	2	1	0	0	2	0	1	4	0	0	1
Jonah crab	8	6	0	0	0	0	0	0	0	0	0	0	0	0
Mantis shrimp	0	0	0	0	0	0	0	0	0	0	2	0	1	1
Lesser blue crab	0	0	0	0	0	0	11	0	0	0	0	0	0	0
Asian shore crab	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown shrimp	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>1,293</b>	<b>4,271</b>	<b>641</b>	<b>696</b>	<b>3,609</b>	<b>3,997</b>	<b>5,674</b>	<b>3,564</b>	<b>4,241</b>	<b>5,073</b>	<b>6,890</b>	<b>6,349</b>	<b>5,472</b>	<b>8,060</b>

<sup>a</sup> See Materials and Methods for details and Appendices IV-VI for annual effort by station.

<sup>b</sup> Only selected macroinvertebrates were recorded in trawl catches. See Appendix II for a list of common and scientific names.