CRMC Application Review Sheet

File Number: 2017-12-086

Owner Name: Perry Raso

Site Address: Potter Pond, South Kingstown

Plat: ; Lot:

Administrative Review

Reviewer: WJM
Completed on 1/2/18

☑ Application Complete
☐ Application Deficient
☐ FONSI
☐ Enforcement compliance _____

☐ EXTENSION (Enforcement review)
_____

Missing
_____ Application
_____ Fee
_____ ISDS
_____ Proof of Ownership
_____ Building Permit
_____ Site Plans

Notes _____
_____

Team Review for Acceptance

Application Deficient
☐ Deficiency Letter Required
☐ Notified Via Phone Call – waiting for _____

(X) Application Accepted

Date 1/2/18

Assigned To:		Date Completed	Denial Recommendation	Management Sign-off
Engineer				
Biologist				
Geologist				
Aqua	DLB			
Dredge				
Other				

Category: 3

Project Type: 44

Water Type: 2

Water Area: Potter Pond

PGP Category: 1 2 IP ☐ Public Access 355 ☐ Public Access Easement

Short Project Description:

3 acre oyster and bay scallop farm

FILE COPY

State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900
(401) 783-3370
Fax (401) 783-2069

APPLICATION FOR STATE ASSENT

To perform work regulated by the provisions of Chapter 279 of the Public Laws of 1971 Amended.

Applicant's Name: Perry Raso.	File No (CRMC use only): 2017-12-086
Mailing Address: 69 Succotash Rd	Res. Tel. #
City/Town: Wakefield State: RI Zip Code 02879	Bus. Tel. #
Waterway: Potter Pond Est. Project Cost $ $10,000	Fee/Costs: $

Longitute/latitude of **all corners** of Proposed Aquaculture Project Location (preferably in decimal degrees):
NW 41.384204N, 71.53831W SE 41.382496 N, 71.53753W
NE 41.384133 N 71.53753W SW 41.382496 N, 71.53831W

Have you or any previous owner filed an application for and/or received an assent for any activity on this site? (If so please provide the file and/or assent numbers).
no

Is this application being submitted in response to a coastal violation?
Yes_____ No +

If yes, you must indicate NOV or C&D Number_____

Is this site within a designated historic district? no

Perry Raso
Owner's Signature (sign and print)

STORMTOOLS (Http://www.beachsamp.org/resources/stormtools/) is a planning tool to help applicants evaluate the impacts of sea level rise and storm surge on their projects. The Council encourages applicants to use STORMTOOLS to help them understand the risk that may be present at their site and make appropriate adjustments to the project design.

NOTE: The applicant acknowledges by evidence of their signature that they have reviewed the Rhode Island Coastal Resources Management Program, and have, where possible, adhered to the policies and standards of the program. Where variances or special exceptions are requested by the applicant, the applicant will be prepared to meet and present testimony on the criteria and burdens of proof for each of these relief provisions. The applicant also acknowledges by evidence of their signature that to the best of their knowledge the information contained in the application is true and valid. If the information provided to the CRMC for this review is inaccurate or did not reveal all necessary information or data, then the permit granted under this application may be found to be null and void. Applicant requires that as a condition to the granting of this assent, members of the CRMC or its staff shall have access to the applicant's property to make on-site inspections to insure compliance with the assent. This application is made under oath and subject to the penalties of perjury. 01/17

PLEASE REVIEW REVERSE SIDE OF APPLICATION FORM

STATEMENT OF DISCLOSURE AND APPLICANT AGREEMENT AS TO FEES

The fees which must be submitted to the Coastal Resources Management Council are based upon representations made to the Coastal Resources Management Council by the applicant. If after submission of this fee the Coastal Resources Management Council determines that an error has been made either in the applicant's submission or in determining the fee to be paid, the applicant understands that additional fees may be assessed by the Coastal Resources Management Council. These fees must be paid prior to the issuance of any assent by the Coastal Resources Management Council.

The applicant understands the above conditions and agrees to comply with them.

[signature] 12-27-17

Signature Date

Perry Raso 629 Succotash Rd
Wakefield RI 02879

Print Name and Mailing Address

Coastal Resources Management Program Section 300.1
Category B Requirements
All persons applying for a Category B Assent are required to:

(1) demonstrate the need for the proposed activity or alteration;
To produce Rhode Island farm raised shellfish to meet an increasing demand.

(2) demonstrate that all applicable local zoning ordinances, building codes, flood hazard standards, and all safety codes, fire codes, and environmental requirements have or will be met; local approvals are required for activities as specifically prescribed for nontidal portions of a project in Sections 300.2, 300.3, 300.6, 300.8, 300.9, 300.11, 300.13, 300.15 and 300.17; for projects on state land, the state building official, for the purposes of this section, is the building official, N/A

(3) describe the boundaries of the coastal waters and land area that are anticipated to be affected; The 3 acre area of Potter Pond is removed from boat traffic, away from the navigational channel. The seafloor in the proposed area is soft sediment. The long lines and floating cages will not interfere with boat traffic as there is no commercial assemblages of shellfish in the proposed area and no recreational attraction on the adjacent shoreline. The shoreline adjacent to the lease is very rocky and drops off to 5ft – 7ft within a short distance (approximately 10 ft) of mean low water.
The coordinates of the corner are listed below:
NW corner: 41.384204N, 71.53831W
NE corner: 41.384133N, 71.53753W
SE corner: 41.382496N, 71.53753W
SW corner: 41.382496N, 71.53831W

(4) The shellfish aquaculture proposed will not effect erosion or deposition along the shore.

(5) demonstrate that the alteration or activity will not result in significant impacts on the abundance and diversity of plant and animal life. Shellfish aquaculture increases biodiversity within the boundaries of the site. Native avian species are not negatively impacted by shellfish farms in terms of number of colonies or amount of habitat area including breeding and moulting areas (Booth and Rueggeberg, 1989). In fact studies have shown that native species are usually more abundant in areas that contain long line systems (Connolly and Colwell, 2005) similar to the proposed system.
Three dimensional structure from submerged structures similar to the shellfish growing apparatus proposed can serve as an artificial reefs and can increase the productivity of fish and macroinvertebrates (Clyncik, McKindsey and Archambault, 2008). In Rhode Island, studies have concluded that gear similar to that proposed have greater habitat value than seafloor without aquatic vegetation and is more and has equal or greater habitat value than eel grass (DeAlteris, Kilpatrick, Rheault, 2004). Shellfish farms have also shown to increase the abundance of eel grass in and around farms in Rhode Island.

(6) demonstrate that the alteration will not unreasonably interfere with, impair, or significantly impact existing public access to, or use of, tidal waters and/or the shore; The 3 acre area of Potter Pond is removed from boat traffic, away from the navigational channel. The site is positioned north of the inlet into Segar Cove there are three docks in the north part of the cove, one dock is approximately 150 yards north of the proposes lease and the other two approximately 250 yards north of the proposed lease. The narrowness of the lease prevent the possibility of the gear within the lease to interfere with navigation from those three docks to the Segar Cove inlet and the location of the proposed lease prevent it from interfering with navigation between those three docks and the other docks in the south side of the cove.

(7) demonstrate that the alteration will not result in significant impacts to water circulation, flushing, turbidity, and sedimentation; The proposed gear will allow for water to move through and around it. Shellfish aquaculture can control turbidity and sedimentation in an estuary like Potter Pond (Cranford, Dowd, Grant, Hargrave and McGladdery, 2003). Studies have proven that oysters actually reduce the amount of total suspended solids including chlorophyll a (Nelson et al 2004) in turn making more dissolved oxygen available to other organisms in the estuary.
The feeding process of suspension is extremely important in regulating water column processes as the feeding process reduces turbidity (Newell 2004) allowing more light to penetrate to the sea floor promoting aquatic vegetation which is essential fish habitat which does not currently exist in the proposed site.

(8) demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity as defined by DEM; Shellfish aquaculture improves water quality.

(9) demonstrate that the alteration or activity will not result in significant impacts to areas of historic and archaeological significance; There are no historic or archaeological areas in the vicinity of the proposed site.

(10) demonstrate that the alteration or activity will not result in significant conflicts with water-dependent uses and activities such as recreational boating, fishing, swimming, navigation, and commerce, and; The 3 acre area of Potter Pond is removed from boat traffic, away from the navigational channel. The site is positioned north of the inlet into Segar Cove there are three docks in the north part of the cove, one dock is approximately 150 yards north of the proposes lease and the other two approximately 250 yards north of the proposed lease. The narrowness of the lease prevent the possibility of the gear within the lease to interfere with navigation from those three docks to the Segar Cove inlet and the location of the proposed lease prevent it from interfering with navigation between those three docks and the other docks in the south side of the cove. The area in not listed designated recreational fishing or recreational shellfishing by RIDEM (map attached)
In 1998 I began to commercially harvest shellfish in Potter Pond specifically in the area around the docks in the southern half of Segar Cove, I would pass the proposed site daily. For 6 years I lived in Segar Cove commuting back and forth to work via boat passing the proposed area several times a day through out the year including the summer months. I have lived and worked on the Pond continuously for the last 19 years and over those

years I have seen only a occasional paddle craft in the proposed lease which will not be impeded if the lease is granted. I have never seen anyone fishing or shellfishing either commercially or recreationally in the proposed area. The seafloor in the proposed area is soft and not ideal for steamers or clams, there is no aquatic vegetation and no other habitat for finfish.

The long lines and floating cages will not interfere with boat traffic as there is no commercial assemblages of shellfish in the proposed area and no recreational attraction on the adjacent shoreline.

While the ecological carrying capacity of shellfish aquaculture in Potter Pond or any RI estuary would be well over 50% of surface area the social carrying capacity of RI estuaries has been studied and understood to be at 5% (Byron et al 2011), just a fraction of the actual biological capacity of the salt ponds. This 5% limit for aquaculture in RI ponds was established by the State after several meetings and input from RIDEM, CRMC, Shellfishermans Association, Salt Ponds Coalition and members of the public. Currently Potter Pond is at 2.1% of surface area being used for aquaculture, if the proposed lease is granted this would bring the total percentage of aquaculture in the pons to 3.1%.

(11) demonstrate that measures have been taken to minimize any adverse scenic impact The floating gear will be positioned nearest to the coast and out of direct view of any home owner on the pond to minimize scenic impact. The submerged longlines will only be visible by the floats at the end of the lines to minimize scenic impact. The floats being proposed have reduced in size to 5 inch x 5 inch floats in order to reduce visibility of the gear.

(see Section 330). Each topic shall be addressed in writing. Additional requirements are listed for specific Category B activities and alterations in the sections that follow

Cited:

Booth, J. and H. Rueggeberg. 1989. Marine birds and aquaculture in British Columbia: assessment of geographical overlap. Technical Report Series No. 73. Wildlife Service, Pacific and Yukon Region, British Columbia. 53 p.

Byron, C.J, Bengtson, D., Costa-Pierce, B., Calanni, J. 2011. Integrating science into management: carrying capacity of bivalve shellfish aquaculture. Marine Policy 35:363-370

Cranford, P., M. Dowd, J. Grant, B. Hargrave, and S. McGladdery. 2003 Ecosystem level effects of marine bivalve aquaculture. *In*, Fisheries and Oceans Canada. A Scientific Review of the Potential Environmental Effects of Aquaculture in Aquatic Ecosystems – Vol 1. Can. Tech. Rep. Fish. Aquat. Sci. 2450: ix + 131 p.

Crawford, C.M., C.K.A. Macleod, and I.M. Mitchell. 2003). Effects of shellfish farming on the benthic environment. Aquaculture 224:117-140.

DeAlteris, J.T., B.D. Kilpatrick, R.B. Rheault. 2004. A comparative evaluation of the habitat value of shellfish aquaculture gear, submerged aquatic vegetation, and a non-vegetated seabed. Journal of Shellfish Research, Vol. 23, no. 3, 867-874.

Nelson, K.A., Leonard, L.A., Posey H., Alphin, T.D. and M.A. Mallin. 2004. Using transplanted oyster (Crassostrea virginica) beds to improve water quality in small tidal creeks: a pilot study. J.Exp.Mar.Biol.Ecol. 298(2):347-368.

Newell, R.I.E., 2004. Ecosystem influences of natural and cultivated populations of suspension-feeding bivalve molluscs: A review. J. Shellfish Res. 23(1) 51-61

FILE COPY

Raso

12/17

1. Perry Raso
   629 Succotash rd
   Wakefield RI 2879

2. File #
3. DEM Aquaculture license # Aqua 000020Rpot
4. Commercial lease site
5. South Kingstown, Potter Pond
   NW corner: 41.384204N, 71.53831W
   NE corner: 41.384133N, 71.53753W
   SE corner: 41.382496N, 71.53753W
   SW corner: 41.382496N, 71.53831W

6. Species will include, Eastern Oyster (*Crassostrea virginica*) and Bay Scallops (*Argopectin irradians*). Biosecurity Board seed protocols will be followed for importing seed into the proposed site.
7. Operation Plan and Project description:

To establish a 3 acre shellfish lease South West of Ram Point and north of the inlet into Segar Cove, Potter Pond. The proposed site is removed from any navigation channel and is not in a commercially or recreationally used area for shellfishing. The proposed site is not between residential docks and it is not between any dock and the inlet of the cove. There is no eel grass or aquatic vegetation in the proposed site.

The nearest edge of the proposed site to land is the north east side towards the center and the north east corner where the lease at these points is 20 to 40 feet from shore. The distance between the proposed lease and the land from the eastern center of the lease to the south east corner ranges from 20 to 45 feet.

12 rows of 50 lantern nets will be set out in each of three of the western most sections of the farm. Lantern nets will be 4 tiers and the bottom of the lantern nets will be 1.5 ft above the sea floor at low tide. Spat bags to hold scallop seed will be attached to these submerged long lines when the scallops are in their juvenile stage, the spat bags are fine mesh soft nylon bags and have a plastic mesh inside the bag for the juvenile scallops to byss (attach). Each line will hold 100 spat bags when they are being used. All lines will not be used for the spat bags when the scallops are in the juvenile stages, as the scallops grow they will be moved to the lantern nets, a proven method of growing bay scallops.

The three adjacent sections of the farm, the eastern most sections closes to land, will have 12 rows of 30 cages in each of the three sections. Each of the three sections are 107 ft x 206 ft. The cages are 30 inches wide x 70 inches long and 12 inches deep. Fastened to the top of the cage, two or three (depending on weight) black plastic floats that are 5 inches x 5 inches square and extend the width of the cage 30 inches.

The low profile floats will minimize visual impact as they will protrude out of the water 3 to 4 inches. 8 plastic mesh oyster growing bags (2ft x 3ft) will be inserted into each cage. The 12 rows of 30 cages will be assembled north to south in rows. The ends of the lines that the cages will be fastened to will be anchored at the end of each section.

Bay scallops will be purchased from at 1mm and put into the spat bags containing plastic mesh for substrate for the scallops to attach to. The scallops will graduate into larger mesh spat bags twice before being taken out of the spat bags and placed into lantern nets at a volume f 30-50 animals per tier. Bay scallops will also be purchased from Muscongus Bay Aquaculture or another approved source. In order to control macro algae growth, lantern nets and oyster bags will be rotate out as the animals are sorted. The animals will be removed from on net or bag and put into a net or bag that is clean. The sorting and harvesting of oysters will be done onboard the boat which accesses the farm. Bags of oysters and scallops may be brought to the work platform at the existing farm in Potter Pond for general maintenance.

In order to reduce interference with migratory birds in the area, maintenance of the farm will be limited to the hours of 9am and 3pm from November 15 to March 15.

8. 6" inch cylyder floats will mark the ends of each of the rows, 14 inch lobster pot floats will be used to mark the corners of the entire lease. 5 inch floats may be used to keep the scallop spat bags suspended and 6 inch floats may be fixed to the long line to keep the line from sinking as gear increases in weigh via growth of animals and biofouling.
9. The proposed area is currently classified as "open to shellfishing".
10. Oyster seed will be purchased from Muscongus Bay Aquacultrue (Maine) or another approved source and put into existing upwellers in Point Judith Pond. After 2.5 to 4 months the oyster seed will be stocked into ADPI oyster bags (2'x3') will be stocked in cages 8 or 11 bags per cage. Smaller oysters will be stocked at a higher number of individuals per bag (1500 – 2500) and larger oysters will be stocked at a lower density (200 – 500) of oysters in each bag. During the grow out period the animals will be culled and sorted for size on deck within the farm, to remove biofouling bags will be air dried off site and switched out with new bags.

When animals have reached market size and have been on the lease for at least one year they will be harvested and the product will be sold locally and regionally. Harvesting methods, storage and transportation of the product will follow all guidelines in accordance with ISSC, RIDEM, CRMC and RIDOH. Animals will be transported to market either directly by boat or combination of boat and truck.

11. All records will be kept at 629 Succotash rd. Seed that is acquired from out of state will not be brought in until permission to due so is granted by the aquaculture coordinator. Documentation of permission as well as associated

documents such as pathology reports will be saved electronically and hard copy. The aquaculture coordinator will be asked for permission to bring in seed no less than 7 days from bringing in seed and disease certificates will be provided as necessary. The seed will be tagged until it is deployed at the farm.

12. All records will be kept at 629 Succotash rd. Upweller seed will be brought from upwellers in Potter Pond or Pt Judith Pond at a size of 31mm or less. The date that the seed is brought to the farm will be documented and tracked in order to ensure that the oysters are kept on the farm for a minimum of 12 months.
13. All records will be kept at 629 Succotash rd. Seed will not be purchased from a third party however for seed that is brought in from upwellers in Potter Pond and/or Pt Judith Pond: Upweller seed will be brought from upwellers in Potter Pond or Pt Judith Pond at a size of 31mm or less. The date that the seed is brought to the farm will be documented and tracked in order to ensure that the oysters are kept on the farm for a minimum of 12 months by keeping track of planting date through out the grow out period.

Point Judith Harbor of Refuge (41°22'N/71°29'W)	3.5	3.2	0.1	3.0

(601) Latest information available.

ABBREVIATIONS (For complete list of Symbols and Abbreviations, see Chart No. 1)

Aids to Navigation (lights are white unless otherwise indicated):

AERO aeronautical
Al alternating
B black
Bn beacon
C can
DIA diaphone
F fixed
Fl flashing
G green
IQ interrupted quick
Iso isophase
LT HO lighthouse
M nautical mile
m minutes
MICRO TR microwave tower
Mkr marker
Mo morse code
N nun
OBSC obscured
Oc occulting
Or orange
Q quick
R red
Ra Ref radar reflector
R Bn radiobeacon
R TR radio tower
Ro rotating
s seconds
SEC sector
St M statute miles
VQ very quick
W white
WHIS whistle
Y yellow

Bottom characteristics:

Bldr boulders
bk broken
Cy clay
Co coral
G gravel
Grs grass
gy gray
h hard
M mud
Oys oysters
Rk rock
S sand
so soft
Sh shells
sy sticky

Miscellaneous:

AUTH authorized
ED existence doubtful
Obstn obstruction
PA position approximate
PD position doubtful
Rep reported
Submg submerged

21. Wreck, rock, obstruction, or shoal swept clear to the depth indicated.
(12) Rocks that cover and uncover, with heights in feet above datum of soundings.

HEIGHTS

Heights in feet above Mean High Water.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

AIDS TO NAVIGATION

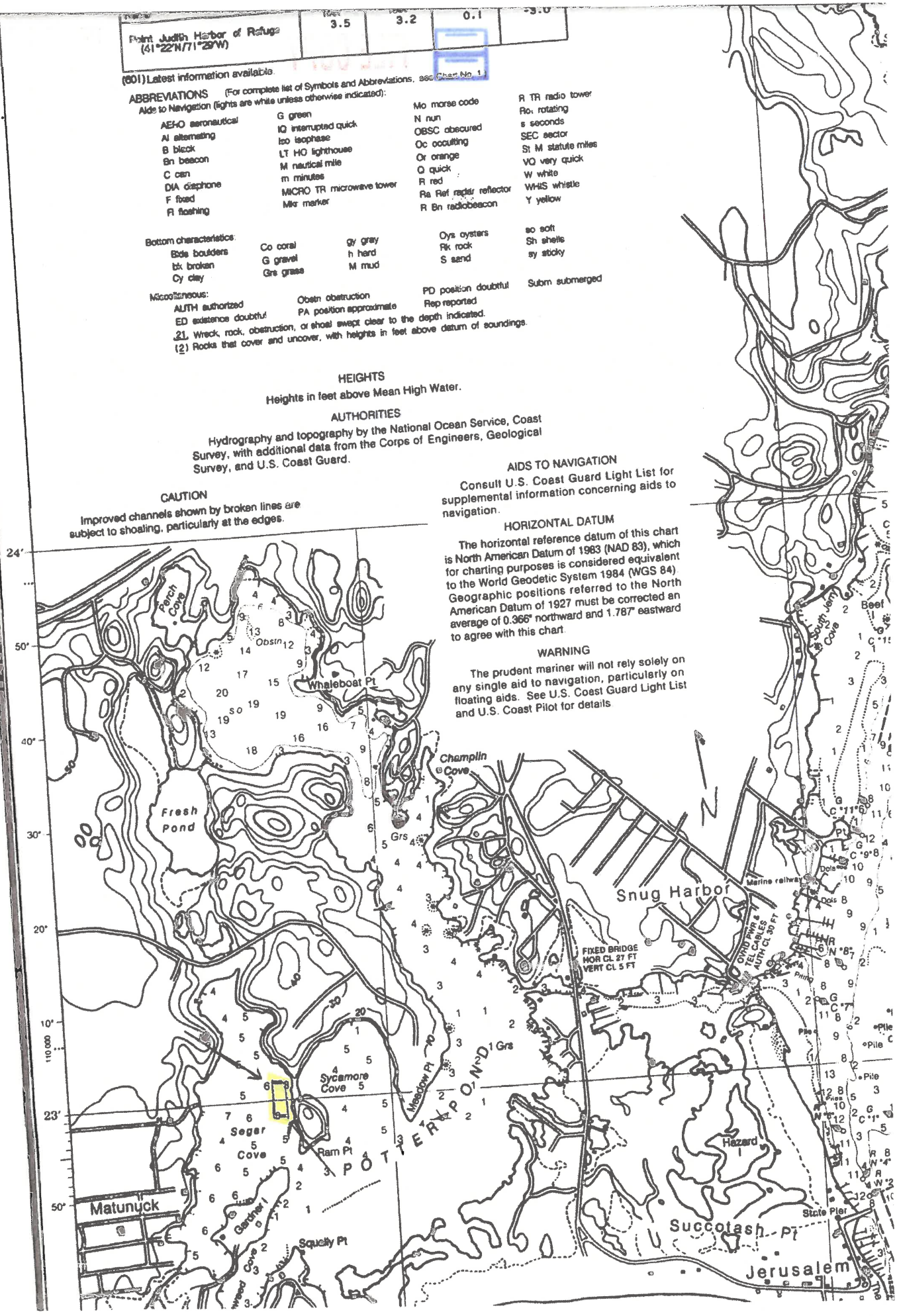
Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.366" northward and 1.787" eastward to agree with this chart.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.



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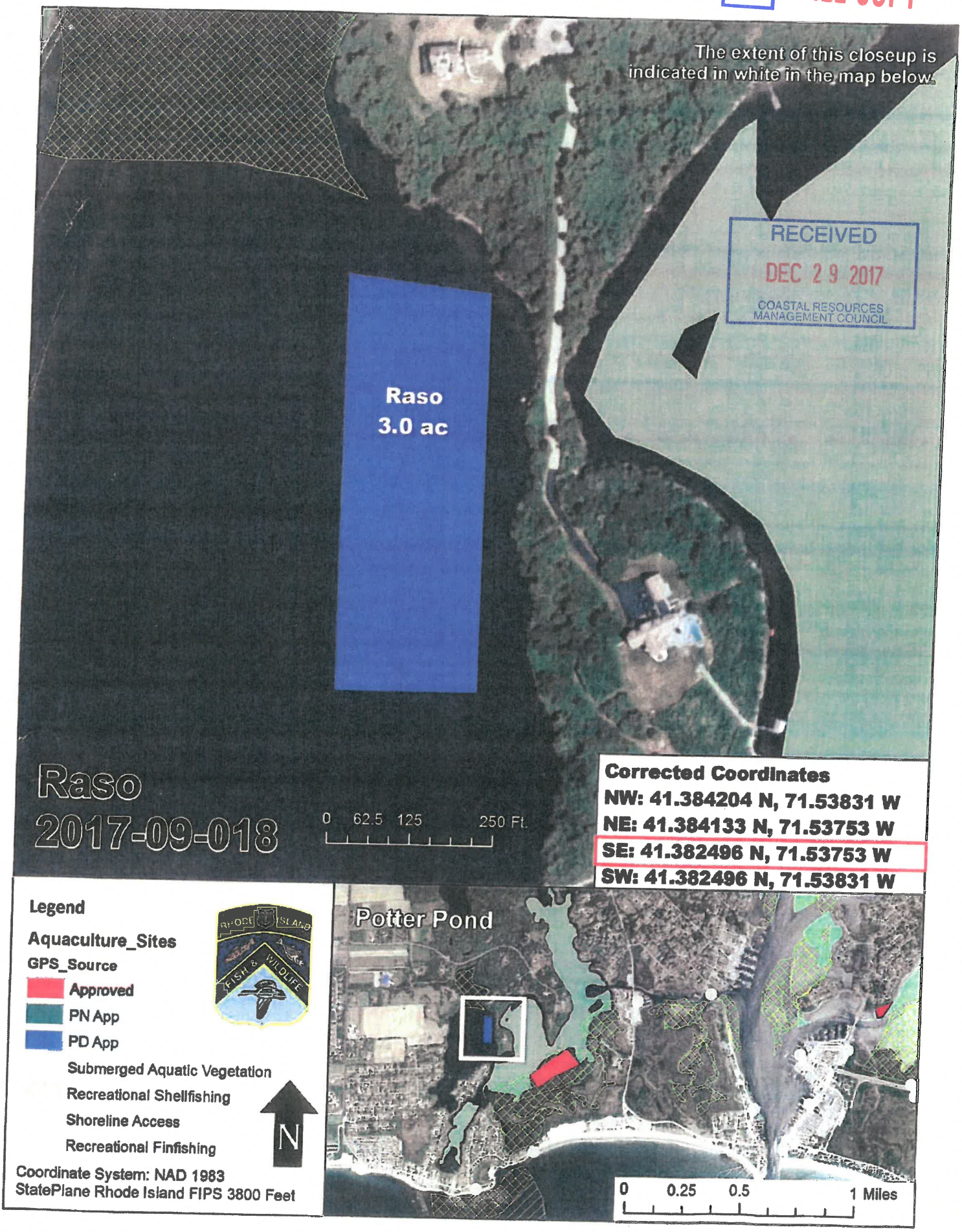
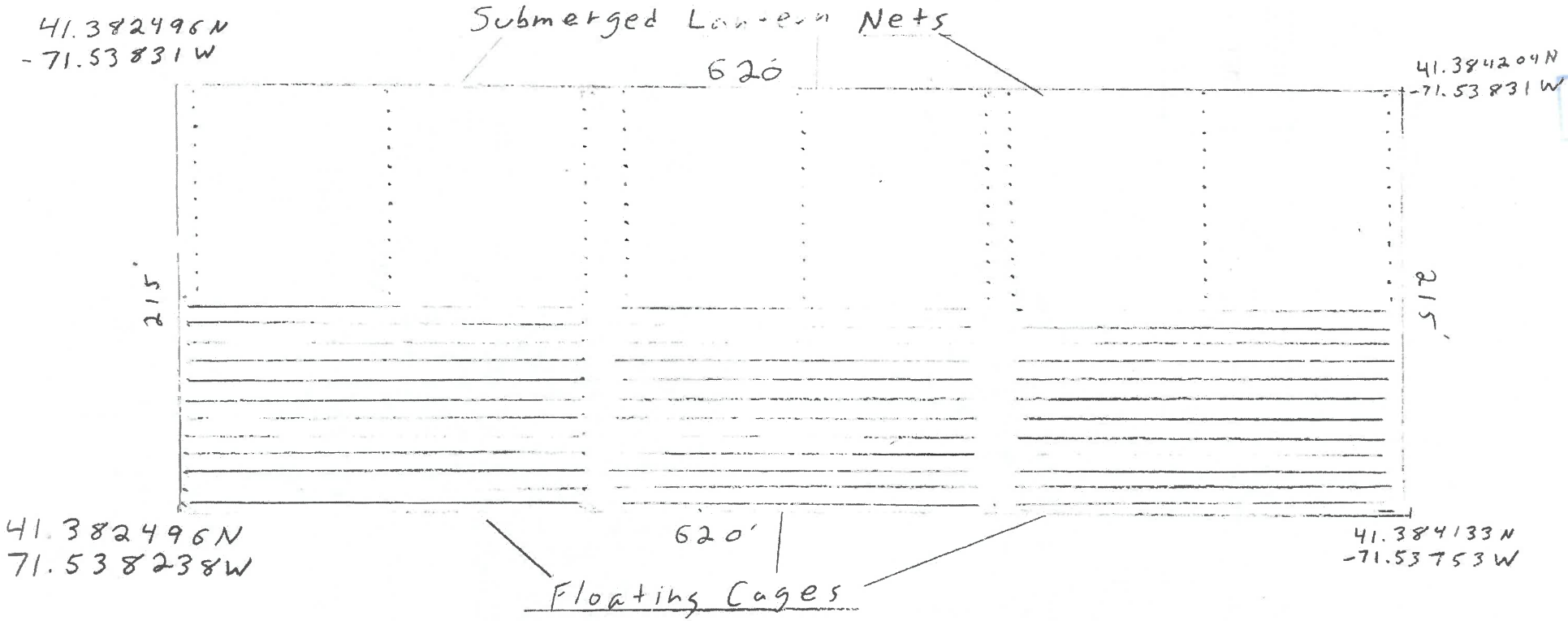

The extent of this closeup is indicated in white in the map below.
RECEIVED
DEC 29 2017
COASTAL RESOURCES MANAGEMENT COUNCIL
Raso
3.0 ac
Raso
2017-09-018
0 62.5 125 250 Ft.
Corrected Coordinates
NW: 41.384204 N, 71.53831 W
NE: 41.384133 N, 71.53753 W
SE: 41.382496 N, 71.53753 W
SW: 41.382496 N, 71.53831 W
Legend
Aquaculture_Sites
GPS_Source
Approved
PN App
PD App
Submerged Aquatic Vegetation
Recreational Shellfishing
Shoreline Access
Recreational Finfishing
N
Coordinate System: NAD 1983
StatePlane Rhode Island FIPS 3800 Feet
Potter Pond
0 0.25 0.5 1 Miles

Kaso

Farm Plan View

9/17



Kaso

Floating Cage: Side view

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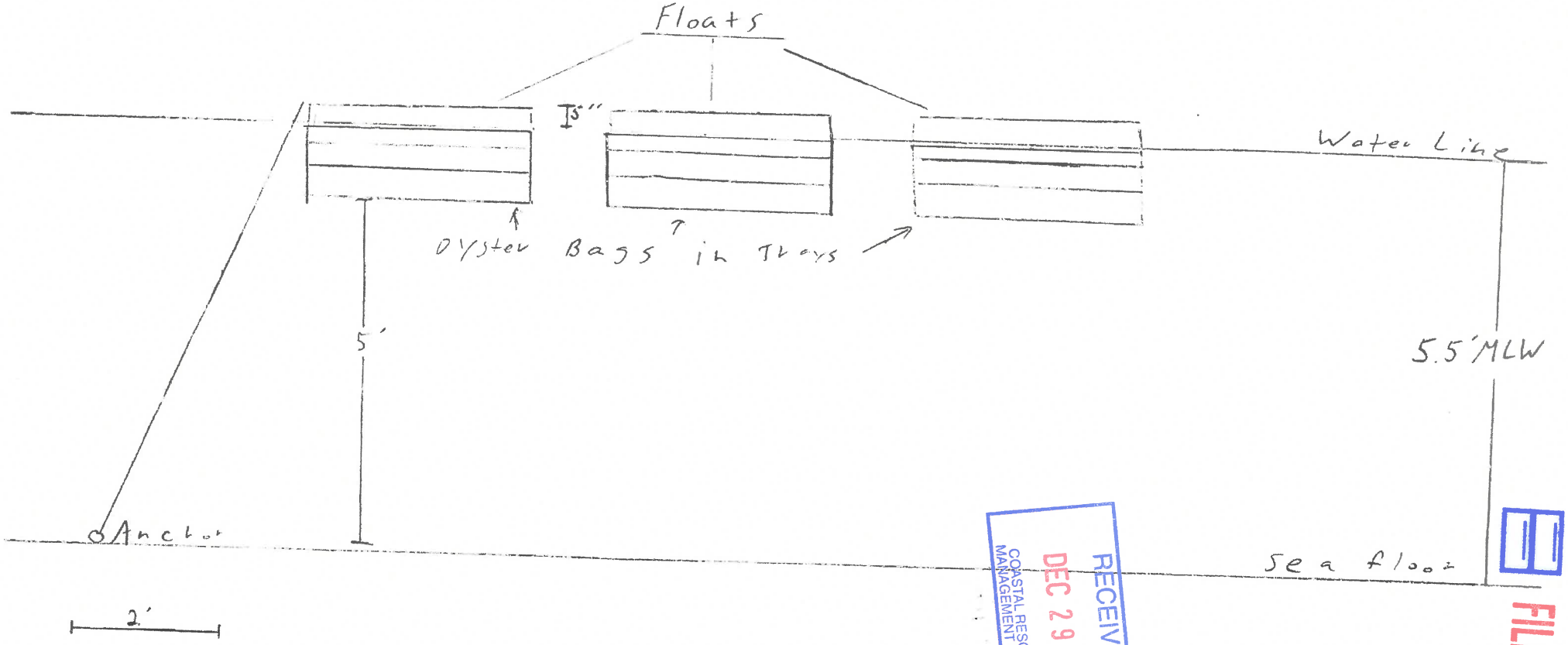

Raso

Submerged Spat bags Side view

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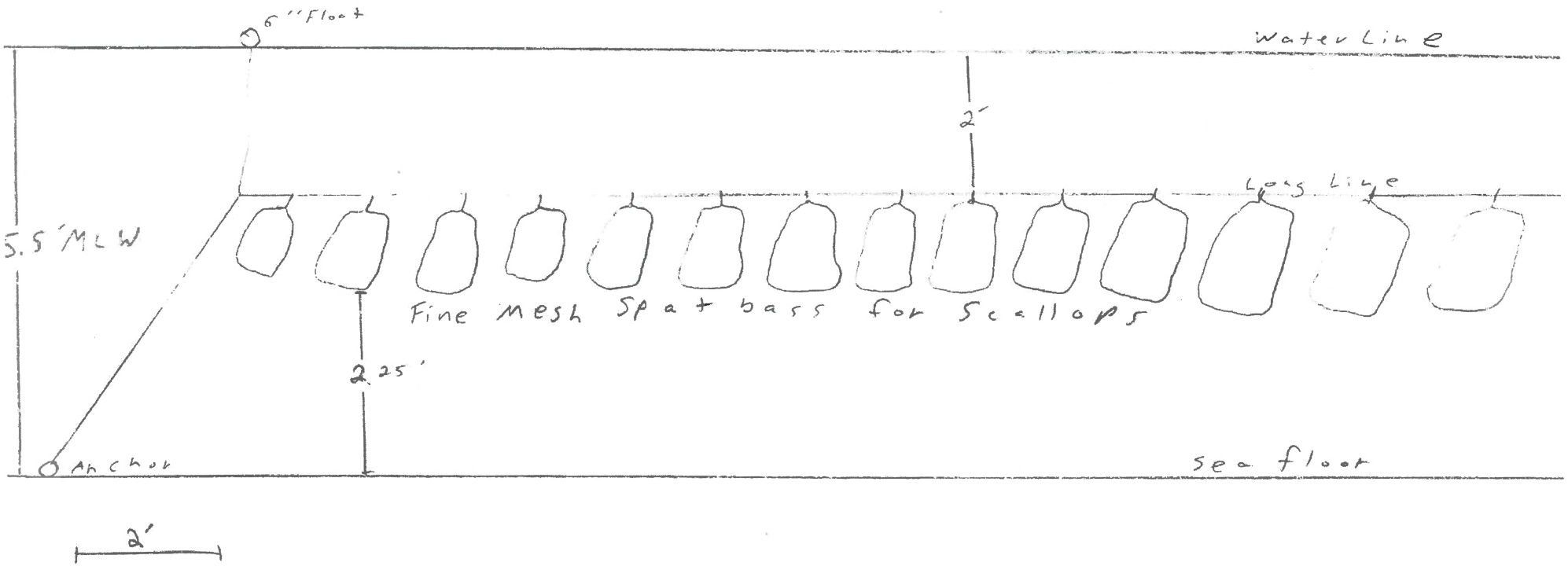

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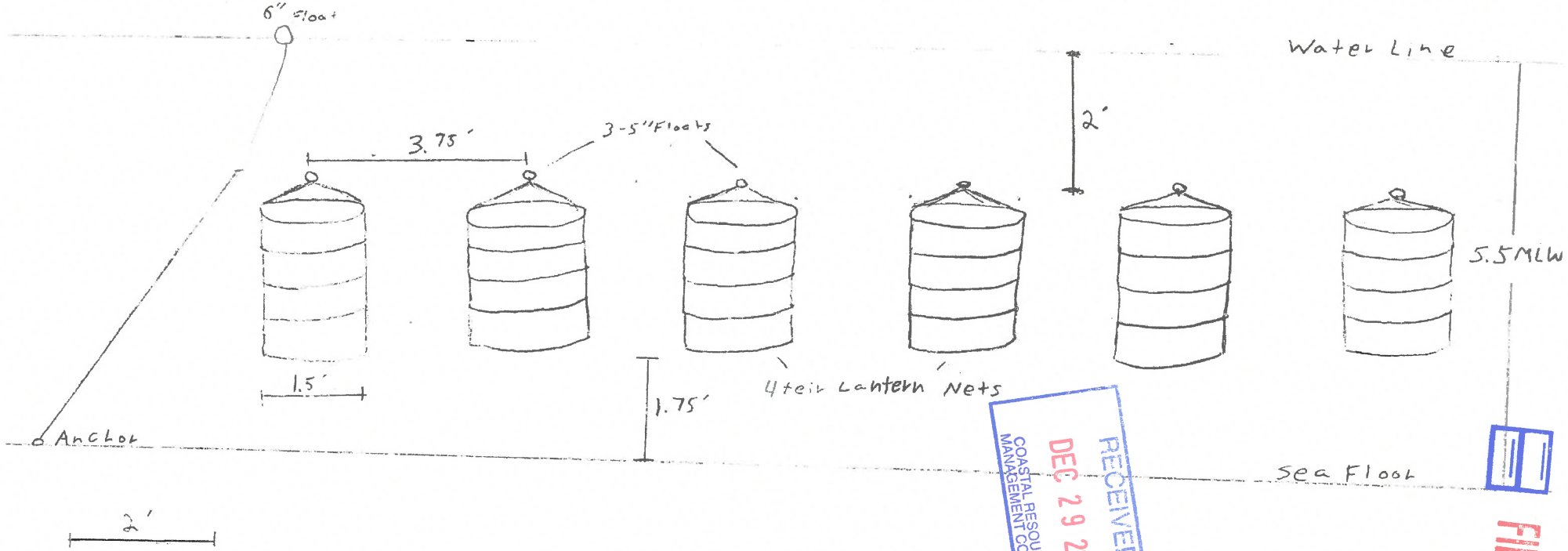
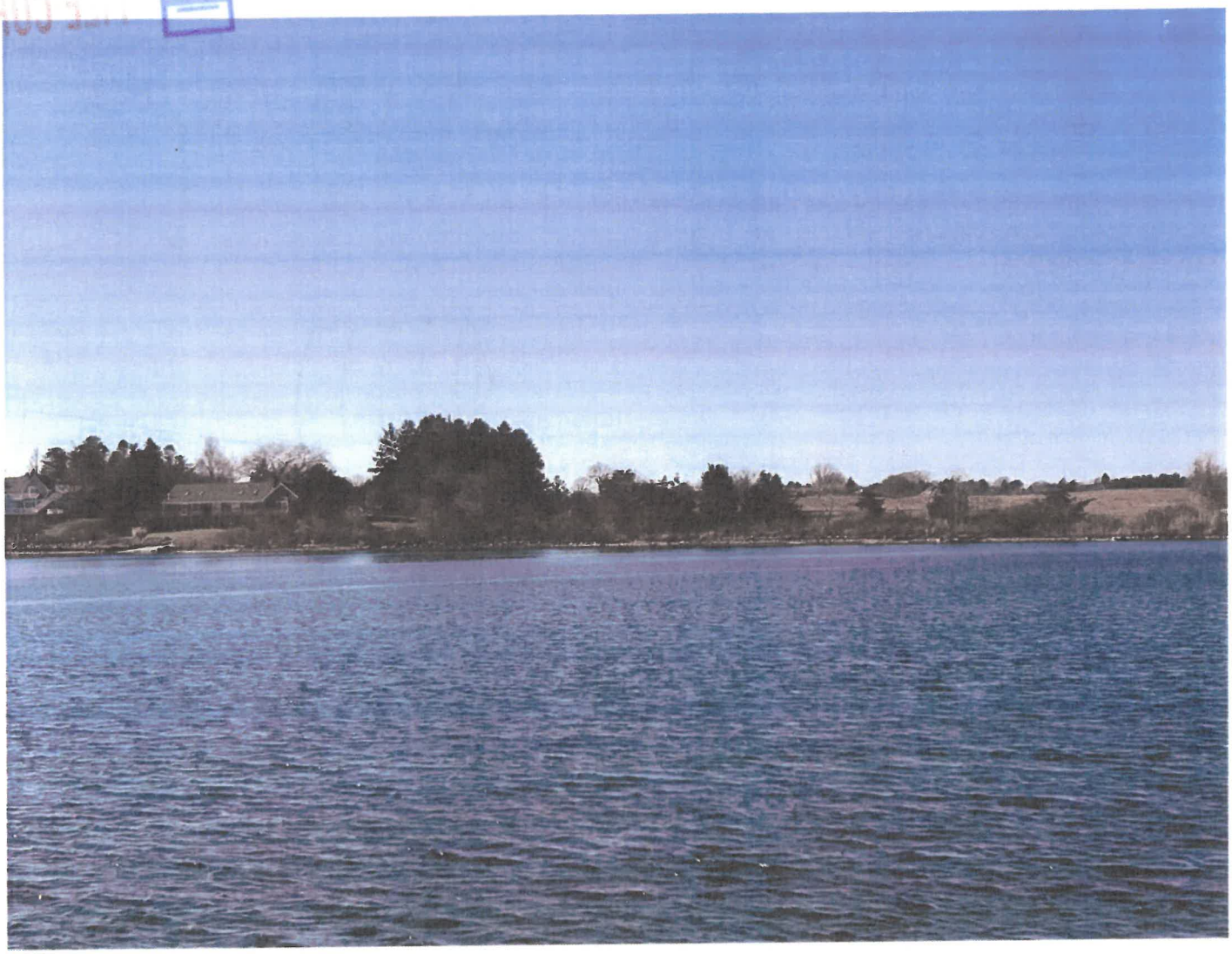
Submerged Lantern Nets side view

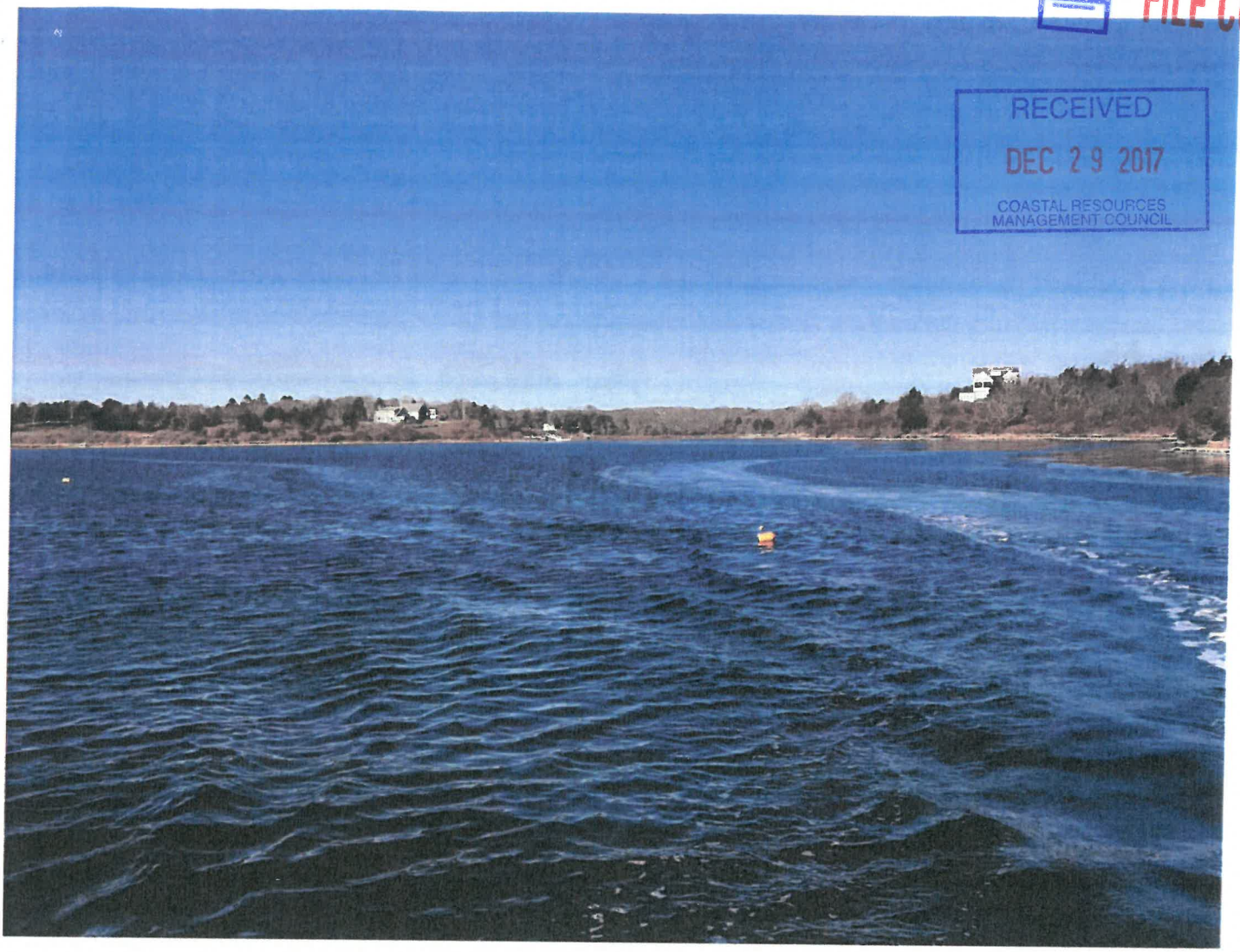
9/17





Facing West

Rasa 12/17



Facing NORTH

Raso 12/17

Facing South

Rec'd 1/17

Facing East

Rose Hill