

For Office Use Only

ADNR File No: ADL 233813

DATE STAMP: Recvd: 11/12/24

ADF&G No: _____



Alaska Aquatic Farm Program Joint Agency Application – Amendment Request

This form is for use in amending the aquatic farm lease and operation permit authorizations.

The project location is in:

☐ Southeast Alaska

☐ Southcentral Alaska

☒ Kodiak

☐ Alaska Peninsula

☐ Other

A. Applicant Information

Old Harbor Native Corporation

ADL 233813

Name

ADNR Lease ADL No.

Sitkalidak Aquiculture Farm

DFG-2021-3-AF-WE

Business Name (If Applicable)

ADF&G AFOP No.

2702 Denali St, Suite 100

Mailing Address (PO Box or Street Address)

Anchorage AK 99503

City State Zip

cberns@oldharbor.org

Email Address

907.278.6100

Private Information

Home/Office Phone

Cell Phone

B. Proposed Amendment

Check Modifications That Apply

Information Required for Review

☐ Modify aquatic farm site boundaries/locations

☐ Section C

☐ Section D including Maps and Diagrams

AND

☐ Increased Area

☐ Reduced Area

☐ Move Farm Boundaries

☐ Add or significantly¹ modify support facility

☐ Section E (If floating facility)

☐ Sections E & F (If upland facility)

☐ Section D-3 c (Site Plan Map with facility)

☐ Section D-3 d (Cross Sectional Diagram of facility)

☐ Section D-3 e (Detailed Drawing of facility)

☐ Other² Oysters

Dependent on amendment request

¹Significant modifications include changes that increase obstructions to navigation or to other public uses.

²Other includes production changes or species added if associated with changes to farm site boundary/location.

C. Amendment Description

In the space provided below, please provide a general description of your proposed changes to your aquatic farm site and operations. This should be a narrative of your amendment request that includes changes to your project location or size, new overall size including any hardening areas, all species you intend to culture, type of farm gear, equipment, support facilities, and associated housing to be used including size, number, and construction materials. Your narrative should match the rest of the application information you provide. If a section does not apply to your proposed amendment, please state so. If additional space is necessary, **please attach a separate document labeled "AMENDMENT DESCRIPTION". Example information for project narrative can be found in Attachment I.**

Company Name *(if being changed)*

Site Location Modifications

New Site Dimensions, Acres for Each Parcel *(New Dimensions and calculated area in acres for each parcel being amended and total area in acres of farm after amendment)*

☐ Add or significantly¹ modify support facility

☐ Section E (If floating facility)

☐ Sections E & F (If upland facility)

☐ Section D-3 c (Site Plan Map with facility)

☐ Section D-3 d (Cross Sectional Diagram of facility)

☐ Section D-3 e (Detailed Drawing of facility)

■ Other² Oysters

Dependent on amendment request

¹Significant modifications include changes that increase obstructions to navigation or to other public uses.

²Other includes production changes or species added if associated with changes to farm site boundary/location.

C. Amendment Description

In the space provided below, please provide a general description of your proposed changes to your aquatic farm site and operations. This should be a narrative of your amendment request that includes changes to your project location or size, new overall size including any hardening areas, all species you intend to culture, type of farm gear, equipment, support facilities, and associated housing to be used including size, number, and construction materials. Your narrative should match the rest of the application information you provide. If a section does not apply to your proposed amendment, please state so. If additional space is necessary, **please attach a separate document labeled "AMENDMENT DESCRIPTION". Example information for project narrative can be found in Attachment I.**

Company Name (if being changed)

N/A

Site Location Modifications

Site Location: No changes are being made to the current site location. Site Dimensions and Acreage: There are no modifications to the existing dimensions or acreage of the site. Permitted Activities: An addition is being made to the current permit to include oyster farming. All Other Aspects: Aside from the inclusion of oysters in the permit, no other changes are being made to the development plan. This summary reflects the minimal adjustments to the current plan, focused solely on expanding permitted species to include oysters. THE ADDITION OF OYSTERS WILL REQUIRE THAT THIS SYSTEM STAYS IN THE WATER YEAR ROUND AFTER THE OYSTER GRO CAGES ARE ADDED.

New Site Dimensions, Acres for Each Parcel (New Dimensions and calculated area in acres for each parcel being amended and total area in acres of farm after amendment)

N/A

New Support Facilities *(List any new support facilities, i.e. caretaker, storage, processing facilities, work rafts, etc.)*

Construction Materials of New Support Facilities and Equipment *(Note: All floating raft structures should use non-treated wood supported by closed cell expanded polystyrene or equivalent material)*

Species You Intend to Farm (for New Parcels or Changes to Species) *(Include scientific and common species name)*

Pacific Oysters (*crassostrea gigas*)

For New Parcels or Changes to Culture Methods *(Describe operation activities to be done onsite such as outplanting of seedstock, husbandry techniques to be used (culling, sorting, washing, etc.), maintenance and monitoring activities, management of fouling organisms and incidental species, predator control measures, and schedule of activities such as timing of outplanting seeded lines or adding seedstock into trays, etc. Describe what methods you plan to use based on the definition in 5 AAC 41.400(6). "Culture" means to use or the use of methods to manipulate the biology and the physical habitat of a desired species to optimize survival, density, growth rates, uniformity of size, and use of the available habitat, and to efficiently produce a product suitable for a commercial market.)*

New Support Facilities *(List any new support facilities, i.e. caretaker, storage, processing facilities, work rafts, etc.)*

N/A

Construction Materials of New Support Facilities and Equipment *(Note: All floating raft structures should use non-treated wood supported by closed cell expanded polystyrene or equivalent material)*

N/A

Species You Intend to Farm (for New Parcels or Changes to Species) *[Include scientific and common species name]*

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To culture oysters on our existing kelp farm permit, we will implement techniques that optimize survival, density, growth rate, uniformity of size, and habitat use for commercial viability. The operations will include outplanting seedstock in floating cages in a phased manner to maximize growth and reduce stress on the oysters. Husbandry practices will involve regular culling, sorting, and washing to maintain a healthy oyster population, enhance growth, and prevent overcrowding. Maintenance and monitoring activities will be routine, with inspections to assess oyster health, water quality, and general farm conditions. Fouling organisms and incidental species will be managed through selective cleaning, while predator control measures, will be managed through the use of OysterGro cage systems to safeguard oysters from natural threats. Outplanting of seedstock is planned for early spring when water temperatures begin to rise, allowing a full grow season. Regular assessments will guide the timing of harvesting and other critical actions. Through these methods, I aim to create an efficient, productive, and sustainable oyster culture environment suitable for the commercial market.

For New Parcels or Changes to Culture Gear and Equipment (Type, Size, Number, Configuration, Material, and Anchoring System) *(If more than one parcel, indicate what parcel specific gear will be located on. If more than one species, indicate gear to be used for each. Gear includes any structure that holds or protects the organism like trays, tiers of lantern nets, Vexar bags, OysterGro system, grow-out submerged longlines, predator netting, longlines, buoys, depth control systems, etc. Include approximate installation schedule, or if and what gear will remain installed year-round etc.)*

The kelp and oyster cultivation systems are comprised of two separate catenaries. The systems are comprised of poly Dacron line and are 310 ft wide x 700 ft long encompassing 4.98 acres total including the anchor line scope. The catenary systems are held fast to the seafloor with four 300 lb. Danforth anchors, eight anchors total. The connecting anchor lines are comprised of 1-inch-thick poly Dacron line. The corners of the catenary are supported by four A4 Polyform fluorescent orange buoys for a total of eight buoys.

The kelp cultivation catenary consists of 15-400 ft long cultivation lines spaced four feet apart. The cultivation lines are comprised of 3/8 inch diameter poly Dacron line. Every 100 ft there is a 80-foot transverse set line running perpendicular to the cultivation lines. There are 6-A1 Polyform support buoys on each transverse set line for a total of 18 buoys.

Kelp farm cultivation lines and kelp seed will be deployed from October-July annually. When not in use, the catenary set lines, anchors, and buoys will remain in place. All cultivation lines will be removed from the water and stored onshore in a community gear storage location July-October annually.

The oyster cultivation portion of the catenary consist of eight 400 ft lines spaced 10 feet apart. Each of the eight lines will consist of 50 OysterGrow floating cages for a total of 400 cages. Each cage will contain six plastic mesh bags containing 150 adult oysters per bag for a total of 900 adult oysters per cage and 60,000 total adult oysters. Fowling organisms are removed from the cages by flipping the cages every other week. Oysters will be removed from the bags and sorted by size at least once per month March-December. During sorting, any predatory organisms such as sea stars will be removed and returned to the ocean.

Other *(Anything else that may change from the original project due to the amendment request proposal)*

For New Parcels or Changes to Culture Gear and Equipment (Type, Size, Number, Configuration, Material, and Anchoring System) *[If more than one parcel, indicate what parcel specific gear will be located on. If more than one species, indicate gear to be used for each. Gear includes any structure that holds or protects the organism like trays, tiers of lantern nets, Vexar bags, OysterGro system, grow-out submerged longlines, predator netting, longlines, buoys, depth control systems, etc. Include approximate installation schedule, or if and what gear will remain installed year-round etc.]*

For the oyster cultivation within the 2 designated 4.98-acre parcels, gear and equipment include eight 400-foot OysterGrow lines configured specifically for oyster growth. These lines are spaced 10 feet apart and support a total of 400 floating cages. Each cage holds six plastic mesh bags, each bag contains approximately 150 adult oysters, resulting in 900 oysters per cage and a total capacity of 60,000 oysters. This gear will remain in the water year-round to maintain consistent growth conditions. To manage fouling, the cages are flipped every two weeks. Monthly from March to December, the oysters are removed from bags and sorted by size to optimize growth and uniformity. During these sessions, any predatory organisms, such as sea stars, are carefully removed and returned to the ocean. The catenary lines, composed of poly Dacron line, are anchored using a system of three 300-pound Danforth anchors per catenary, with anchoring lines made from 1-inch poly Dacron line. This anchoring system ensures stability for both kelp and oyster systems, providing a sustainable environment with effective protection against adverse conditions.

Other *(Anything else that may change from the original project due to the amendment request proposal)*

D. REQUEST FOR SITE BOUNDARY/LOCATION MODIFICATIONS (if applicable)

1. Coordinates

If this amendment request involves modifying the farm site boundaries, please provide new latitude and longitude coordinates for each corner of each parcel at the farm site you are requesting to modify. Parcel designations (number and name) must be the same as in the original lease/permit if modifying existing parcels. Identify each parcel to be used. For example, Parcel 1 - growing area, Parcel 2 - hardening area, etc. Latitude and longitude coordinates must be in **NAD83 datum using degrees and decimal minutes format to the nearest .001 minute (Example: Longitude -133° 17.345)**, obtained using a Global Positioning System (GPS). If you are applying for more than three parcels or your proposed parcels have other than four corners, please provide those coordinates in your project description or on a separate sheet.

Parcel 1: Port Otto Site (e.g. Grow-out Area)	NE Corner	No. 1: Latitude	<u>57°11.545'N</u>	Longitude	<u>153°16.600'W</u>
	SE Corner	No. 2: Latitude	<u>57°11.451'N</u>	Longitude	<u>153°16.734'W</u>
	SW Corner	No. 3: Latitude	<u>57°11.482'N</u>	Longitude	<u>153°16.808'W</u>
	NW Corner	No. 4: Latitude	<u>57°11.572'N</u>	Longitude	<u>153°16.680'W</u>
Parcel 2: Barling Bay Site (e.g. Hardening Area)	NE Corner	No. 1: Latitude	<u>57°11.830'N</u>	Longitude	<u>153°21.581'W</u>
	SE Corner	No. 2: Latitude	<u>57°11.779'N</u>	Longitude	<u>153°21.588'W</u>
	SW Corner	No. 3: Latitude	<u>57°11.777'N</u>	Longitude	<u>153°21.799'W</u>
	NW Corner	No. 4: Latitude	<u>57°11.828'N</u>	Longitude	<u>153°21.801'W</u>
Parcel 3: (e.g. Support Facility Area)	NE Corner	No. 1: Latitude	<u> </u>	Longitude	<u> </u>
	SE Corner	No. 2: Latitude	<u> </u>	Longitude	<u> </u>
	SW Corner	No. 3: Latitude	<u> </u>	Longitude	<u> </u>
	NW Corner	No. 4: Latitude	<u> </u>	Longitude	<u> </u>

2. Site Size

Please use the following formula to compute area. For more complex parcel shapes, you may wish to use the Measure Area tool in Alaska Mapper found at <https://mapper.dnr.alaska.gov/>. If you are applying for more than three parcels or your parcels are not rectangular, you may provide this information in the project description or on a separate sheet.

1. To compute the total area (sq. ft), multiply the width (ft) by the length (ft) of Parcel 1. The outside length and width of the Parcel **must include your anchors and anchoring system plus any scope.**
2. Divide the area (sq. ft) of Parcel 1 by 43,560, to convert the area from sq. ft to acres.
3. Repeat for each separate Parcel of your proposed amended farm site.
4. Add the acreage of each Parcel to get the total tideland acreage for your proposed amended farm site.
5. Write the Total Acreage on the line where indicated.
6. Note that the number of acres must correspond to your farm site maps and drawings.

Parcel 1:	<u>700</u> feet (x)	<u>310</u> feet =	<u>217000</u> square feet (÷) 43,560 =	<u>4.98</u>
	(Width of Parcel 1)	(Length of Parcel 1)	(Area)	(Acres)
Parcel 2:	<u>700</u> feet (x)	<u>310</u> feet =	<u>217000</u> square feet (÷) 43,560 =	<u>4.98</u>
	(Width of Parcel 2)	(Length of Parcel 2)	(Area)	(Acres)
Parcel 3:	<u> </u> feet (x)	<u> </u> feet =	<u> </u> square feet (÷) 43,560 =	<u> </u>
	(Width of Parcel 3)	(Length of Parcel 3)	(Area)	(Acres)

How many total acres of state-owned tidelands are you applying for (add all parcel acres):

9.96

(Total Acreage)

If you are also applying for state owned uplands for support facilities, how many total upland acres?

(Total Upland Acreage)

3. Maps and Diagrams

Provide copies of maps and diagrams including general and detailed location maps, site plan map (an overview), cross-sectional diagram and detailed drawings. If the project has multiple parcels, you must provide maps of each parcel. Copies of the maps and drawings should be no larger than 8½" x 11" (standard letter size). Examples are provided at the end of the application.

A list of mapping resources is provided below:

[Alaska Mapper](https://mapper.dnr.alaska.gov/)

<https://mapper.dnr.alaska.gov/>

[Alaska Ocean Observing System Mariculture Map](https://mariculture.portal.aaos.org/)

<https://mariculture.portal.aaos.org/>

[NOAA Nautical Charts](http://www.charts.noaa.gov)

www.charts.noaa.gov

[ShoreZone Mapping System](https://www.fisheries.noaa.gov/alaska/habitat-conservation/alaska-shorezone)

<https://www.fisheries.noaa.gov/alaska/habitat-conservation/alaska-shorezone>

[Catalog of Anadromous Streams](https://www.adfg.alaska.gov/sf/sarr/awc/)

<https://www.adfg.alaska.gov/sf/sarr/awc/>

***Be sure to include a legend box on all maps and diagrams you provide with your application with the following information:**

FORMATTING

Figure No. and Title
Applicant Name (Business Name)
Waterbody
Area/Region
Today's Date

LEGEND BOX EXAMPLE

Figure 1 Detailed Location Map
Alaska's Best Oysters
Jerryton Bay
East of Prince of Wales Island, Southeast AK
March 30, 2012

- a. **General Location Map** - This map is a larger scaled map showing larger surrounding area with less detail (See Attachment 2, Figure 1). Use a USGS Topographic quadrangle map (scale: 1" = one mile (1:63,360)) and label it "Figure 1" and show the following information:

- ☐ USGS Map Name (e.g. Craig B-4) Kodiak B-5 and B-4
- ☐ General location of the farm site
- ☐ Distance (in nautical miles), and direction (arrow) of the site from the nearest community
- ☐ A directional arrow identifying North
- ☐ Scale
- ☐ Legend box (example on previous page)

- b. **Detailed Location Map** - This map is a smaller scaled map showing more detail. Use a National Oceanic and Atmospheric Administration (NOAA) navigational chart and label it "Detailed Location Map" and show the following information:

- ☐ NOAA Chart No. 16952
 - ☐ Boundaries of each farm area parcel and clearly label all corners (NE, SE, SW, and NW)
 - ☐ Directional arrow identifying North
 - ☐ Scale on map
 - ☐ Legend box (example on previous page)
- If uplands area is proposed:
- ☐ Location and type of use (e.g. housing, storage shed, etc.)

- c. **Site Plan Map** - Draw an overhead view of the new or adjusted farm area parcel(s) and surrounding area. Label it "Site Plan Map" and show the following information:
- ☐ All in-water structures and anchoring systems (All anchoring systems and anchor scope have to be inside the farm parcel boundary)
 - ☐ All equipment and support facilities with dimensions (in feet)
 - ☐ Areas of eelgrass beds (intertidal zone)
 - ☐ Areas of kelp beds (subtidal zone)
 - ☐ Fuel and chemical storage
 - ☐ Nearby anadromous streams (fish)
 - ☐ Distance between all facilities, gear or equipment on the proposed farm site
 - ☐ Legend box (example on previous page)
- d. **Cross-Sectional Diagram(s)** - Provide Cross-Sectional Diagram(s) of all new support facilities, equipment, and gear showing their placement and anchoring systems. Note that more than one diagram may be required. Label it "Cross-Sectional Diagram" and show the following information:
- ☒ Distance from bottom of gear to ocean bottom at mean lower low tide
If suspended or on-bottom culture:
 - ☐ water depth at low tide
 - ☐ major on-bottom physical features (sand, mud, silt, clay, bedrock, cobble, shells, rockweed, algae/seaweed) and contours
 - ☒ Dimensions of the anchoring configuration and poundage
 - ☒ Scale
 - ☒ Legend box (example on previous page)
- e. **Detailed Drawing(s)** - Provide Detailed Drawing(s) of all new support facilities, equipment, and gear. Note that more than one diagram may be required. Label and show the following information:
- ☐ Draw and label the dimensions (length/width/height) of all proposed gear and equipment
 - ☐ Legend box (example on previous page)

E. REQUEST FOR SUPPORT FACILITIES (if applicable)

1. Your proposed floating personnel/caretaker housing is located on (check one) a lease site ☐ or new acreage ☐
2. The proposed personnel/caretaker housing size (in feet) will be: ____ (width) ____ (length) ____ (height)
3. What would be the maximum number of people housed per day? _____
4. Will there be any sewage discharge from any of the personnel/caretaker housing? Yes ☐ No ☐
(Note: To ensure that your growing area can meet water quality standards and be classified by Alaska Department of Environmental Conservation (ADEC) no sewage discharge from a facility will be allowed within 300 feet from the boundary of a ADEC classified growing area. All other discharges will be evaluated separately by ADEC.

Annual rent for associated housing facilities will be determined by fee schedule, reviewed every two years by the Department of Natural Resources Appraisals Section to comply with the two-year age provision of AS 38.05.840. You may stay a maximum of 14 consecutive days at your site on state-owned uplands or tidelands without applying for personnel/caretaker housing.

F. REQUEST FOR NEW UPLAND PROPERTY (if applicable)

1. If you are applying for new state-owned uplands for support facilities, how many total upland acres are you applying for? _____
2. Do you currently lease upland property adjacent to, or near, the current farm site in conjunction with your proposal? **Yes** ☐ **No** ☐
3. If you are the adjacent upland owner, are you applying for a preference right under 11 AAC 63.040(f)?
Yes ☐ **No** ☐
4. Are you proposing to use an outhouse and septic systems on the upland property? **Yes** ☐ **No** ☐
Outhouse and septic systems must maintain a minimum 100-foot horizontal separation distance from surface waters and a minimum of 4-foot vertical separation distance from the high ground water table. Additional information may be required by DEC depending on the type and complexity of the wastewater system proposed. Please contact the DEC Shellfish Program Coordinator at (907) 269-7636 with any questions.

G. AS 38.05.035(a) authorizes the director to decide what information is needed to process an application for the sale or use of state land and resources. This information is made a part of the state public land records and becomes public information under AS 40.25.110 and 40.25.120 (unless the information qualifies for confidentiality under AS 38.05.035(a)(8) and confidentiality is requested, AS 43.05.230, or AS 45.48). Public information is open to inspection by you or any member of the public. A person who is the subject of the information may challenge its accuracy or completeness under AS 44.99.310, by giving a written description of the challenged information, the changes needed to correct it, and a name and address where the person can be reached. False statements made in an application for a benefit are punishable under AS 11.56.210. In submitting this form, the applicant agrees with the Department to use "electronic" means to conduct "transactions" (as those terms are used in the Uniform Electronic Transactions Act, AS 09.80.010 – AS 09.80.195) that relate to this form and that the Department need not retain the original paper form of this record: the Department may retain this record as an electronic record and destroy the original. In submitting this form, the applicant certifies that he or she has not changed the original text of the form or any attached documents provided by the Division.

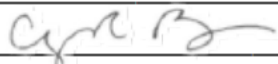
H. APPLICATION SIGNATURE BLOCK

AQUATIC FARM AMENDMENT CERTIFICATION STATEMENT

The information contained in this aquatic farm application is true and complete to the best of my knowledge and I certify that the proposed activity complies with and will be conducted in a manner consistent with all State and Federal Agency policies and regulations. I understand that modifications to the proposed activity may require additional review and that I may need to apply for additional authorizations.

This certification statement does not provide authorization necessary to sell my product. I understand I must separately apply for and hold a Growing Area Certification and a Shellfish Harvester or Shellfish Dealer Permit from the Department of Environmental Conservation.

Printed Name Cynthia Berns

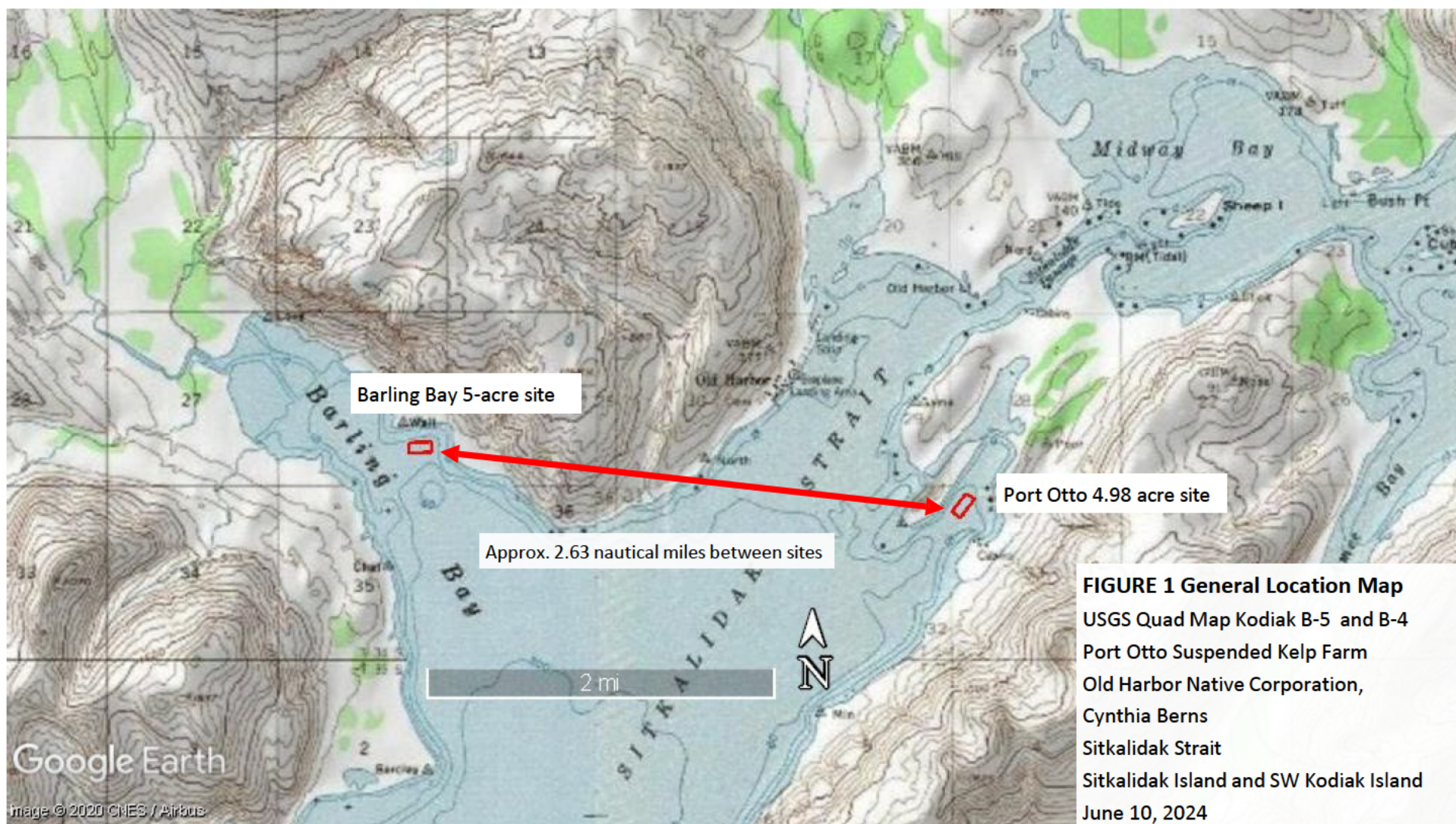
Signature of Applicant  Date 1/9/2024

Printed Name Alexandria Troxell

Signature of Applicant  Date 01/09/2024

☐ I have enclosed the amendment application fee required under 11 AAC 05.230(d)(3)(A)(E)(i)-(ii)

In submitting this form, the applicant certifies that he or she has not changed the original text of the form, or any attached documents provided by the Division. This information is made a part of the state public land records and becomes public information under AS 40.25.110 and 40.25.120 (unless the information qualifies for confidentiality under AS 38.05.035(a)(8) and confidentiality is requested, AS 43.05.230, or AS 45.48). Public information is open to inspection by you or any member of the public. A person who is the subject of the information may challenge its accuracy or completeness under AS 44.99.310, by giving a written description of the challenged information, the changes needed to correct it, and a name and address where the person can be reached. False statements made in an application for a benefit are punishable under AS 11.56.210. In submitting this form, the applicant agrees with the Department to use "electronic" means to conduct "transactions" (as those terms are used in the Uniform Electronic Transactions Act, AS 09.80.010 - AS 09.80.195 that relate to this form and that the Department need not retain the original paper form of this record: the department may retain this record as an electronic record and destroy the original.

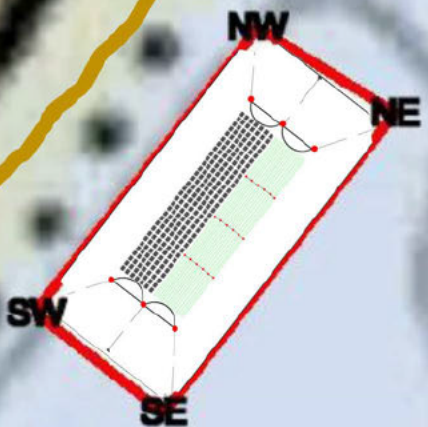


Continuous soft brown kelp
(source: Alaska ShoreZone
via AOOS Mariculture Mapper)

Anadromous stream at Old Harbor
~1.25 nautical miles



1000 ft



Rocky and mud bottom
(source: NOAA chart 16952)

Parcel 1—Port Otto Suspended Kelp Farm
Area—4.98 acres Dimensions—700' x 310'
NW corner: 57° 11.572'N, 153° 16.680'W
NE Corner: 57° 11.545'N, 153° 16.600'W
SE Corner: 57° 11.451'N, 153° 16.734'W
SW Corner: 57° 11.482'N, 153° 16.808'W

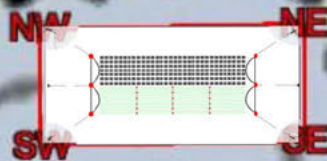
FIGURE 3a Site Plan Map
NOAA Chart 16952
Old Harbor Native Corporation,
Cynthia Berns Port Otto,
Sitkalidak Strait Sitkalidak Island,
SW Kodiak Island - April 28, 2021

Anadromous stream at the head
of the bay ~1 nautical mile

Continuous eelgrass beds
(source: Alaska ShoreZone
via AOOS Mariculture Mapper)



1000 ft



Rocky bottom
(source: NOAA chart 16952)

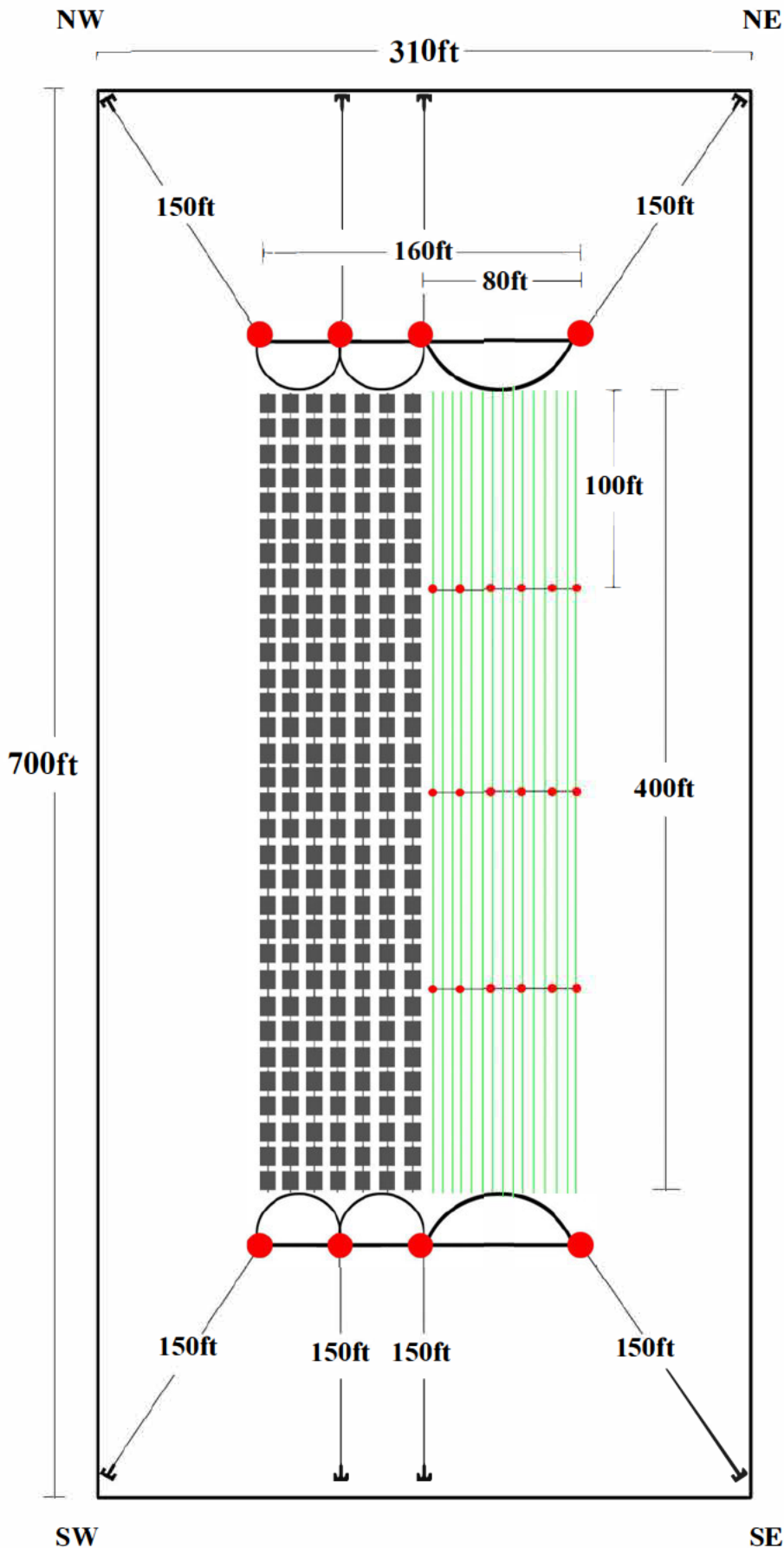
Parcel 2—Barling Bay Suspended Kelp Farm
Area—4.98 acres Dimensions—700' x 310'
NE Corner: 57° 11.830'N, 153° 21.589'W SE
Corner: 57° 11.779'N, 153° 21.588'W SW
corner: 57° 11.777'N, 153° 21.799'W NW
corner: 57° 11.828'N, 153° 21.801'W

FIGURE 3b Site Plan Map

NOAA Chart 16952

OHNC, Cynthia Berns Barling Bay,
Sitkalidak Strait SW Kodiak Island
April 28, 2021

Figure 4a Kelp and Osyster Culture Detail
OHNC, Cynthia Burns
Sitkalidak Straight
SW Kodiak Island - May 28th 2024



 300lbs danforth anchor

 A4 polyform buoy

 A1 polyform buoy

KELP

15 x 400ft kelp long lines
 long lines spaced 4ft apart
 6,000ft total

OYSTERS

50 cages per line
 7 lines spaced 10ft apart
 400 total cages, 60,000 oysters

Figure 5 Kelp Cross Sectional Detail
OHNC, Cynthia Burns
Barling Bay, Sitkalidak Straight
SW Kodiak Island - May 28th 2024

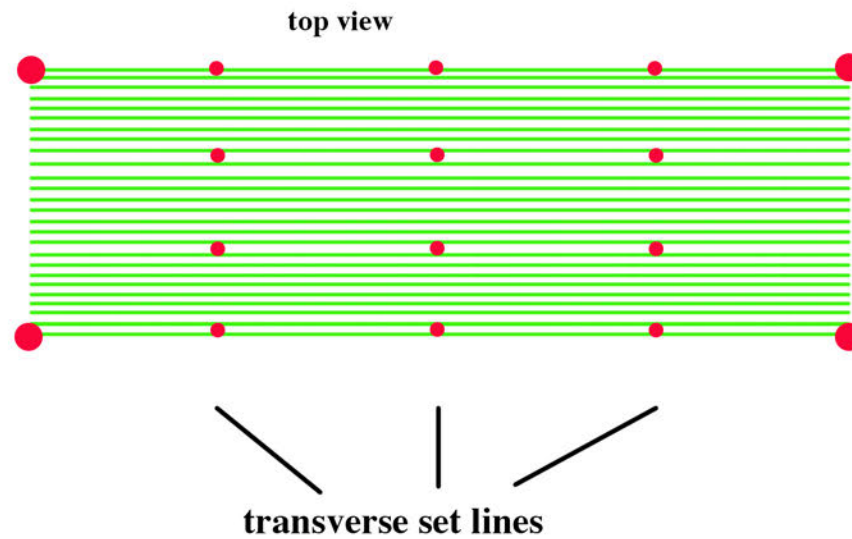
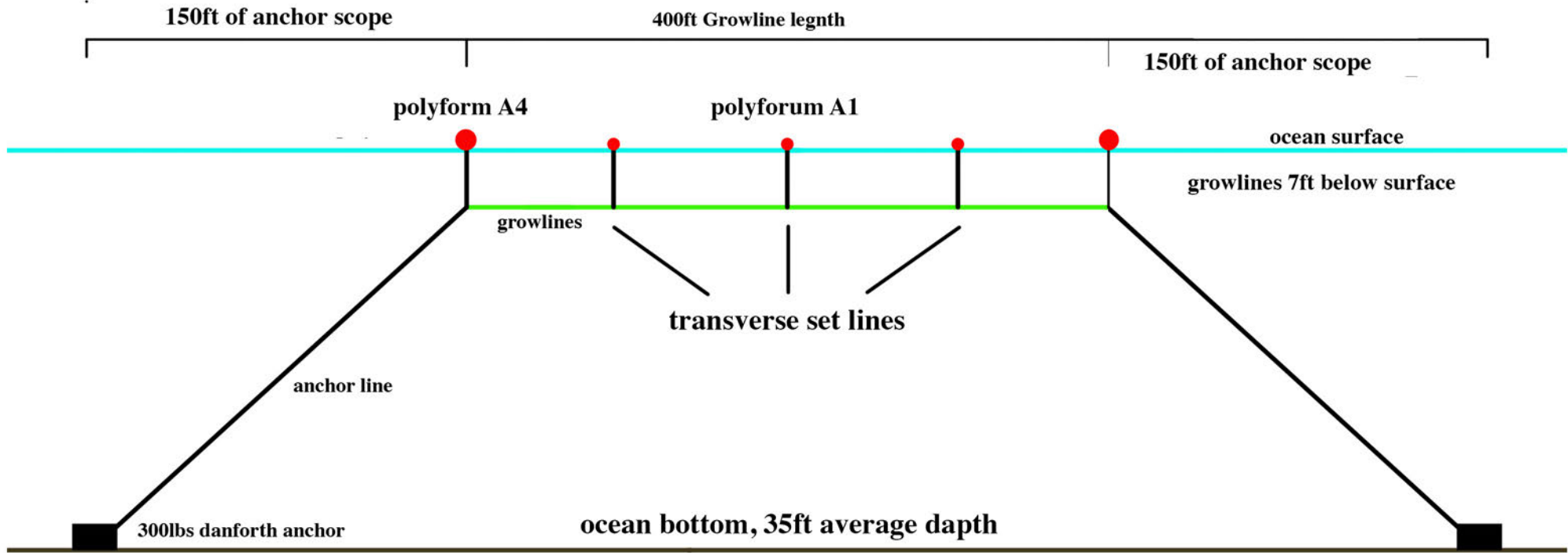
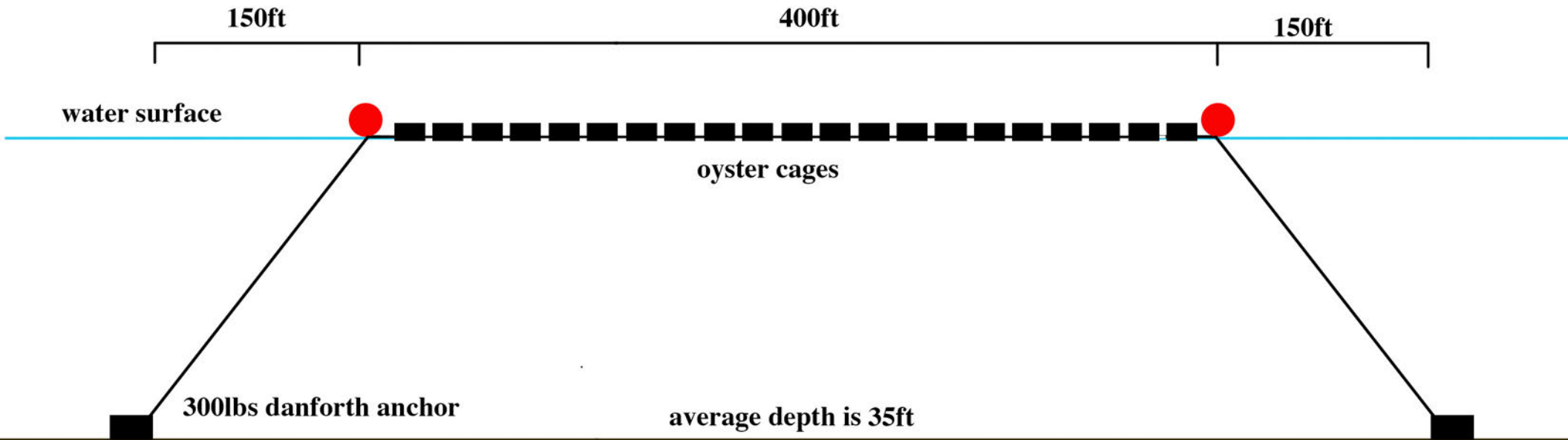


Figure 6 Osyster Cross Sectional Detail
 OHNC, Cynthia Burns
 Barling Bay, Sitkalidak Strait
 SW Kodiak Island - May 28th 2024



Oystergro Cages, 6 bag capacity

