

STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND AND WATER
SOUTHCENTRAL REGIONAL LAND OFFICE

AMENDED PRELIMINARY DECISION

ADL 234188 Pacific Kelp Company

Application for Lease
AS 38.05.083

The Preliminary Decision (PD) issued on December 4, 2023, and sent for Public Notice on December 8, 2023, is being amended to consider comments provided by agencies and the public, and a revised application submitted by Pacific Kelp Company (PKC) on May 10, 2024, in response to those agency and public comments. The public is invited to comment on this Amended Preliminary Decision (APD) during the Public Comment Period. The deadline for commenting is **September 9, 2024**. Please see the Comments Section of this decision for details on how and where to send comments for consideration. Only the applicant and those who comment have the right to appeal the Final Finding and Decision.

Proposed Action:

The Department of Natural Resources (DNR), Division of Mining, Land and Water (DMLW), Southcentral Regional Land Office (SCRO) has received an updated application from PKC to lease 79.7 acres, more or less, of state-owned tide and submerged lands for 10 years for the purpose of the commercial growth and harvest of four species of kelp: giant kelp (*Macrocystis pyrifera*), sugar kelp (*Saccharina latissima*), ribbon kelp (*Alaria marginata*), and bull kelp (*Nereocystis leutkeana*). The proposed lease is located near Ketchikan, Alaska. The location of the project is further described as being within Section 32 and the W1/2 of Section 33, Township 79 South, Range 93 East, Copper River Meridian.

SCRO is considering the issuance of a 10-year aquatic farmsite lease to PKC for the installation of a submerged longline culture system using seeded line produced by a permitted hatchery for the commercial growth and harvest of four species of kelp: giant kelp, sugar kelp, ribbon kelp, and bull kelp.

Scope of Review:

The scope of this decision is to determine if it is in the State's best interest to issue this aquatic farmsite lease as amended. A PD was issued on December 4, 2023, and the Notice for the original PD went out for comment on December 8, 2023. PKC submitted a revised application on May 10, 2024, in which the proposed parcel has been reduced in size and moved to the east of the original proposed location due to comments received during the initial public notice period. Due to the

revised application and comments during the Public Notice, SCRO has decided to issue an APD for public notice to present to the agencies and the public the proposed new parcel location.

Authority:

This lease application is being adjudicated pursuant to Alaska Statute (AS) 38.05.035 Delegation of the Powers and Duties of the Director; AS 38.05.070(b) Generally; AS 38.05.083 Aquatic Farming and Hatchery Site Leases; and AS 38.05.945 Public Notice. The authority to execute the Preliminary Decision, Final Finding and Decision, and the lease has been delegated to the Regional Manager of SCRO.

Administrative Record:

The administrative record for the proposed action consists of the Constitution of the State of Alaska, the Alaska Land Act as amended, applicable statutes and regulations referenced herein, the 2000 Central/Southern Southeast Area Plan and other classification references described herein, and the casefile for the application serialized by DNR as ADL 234188.

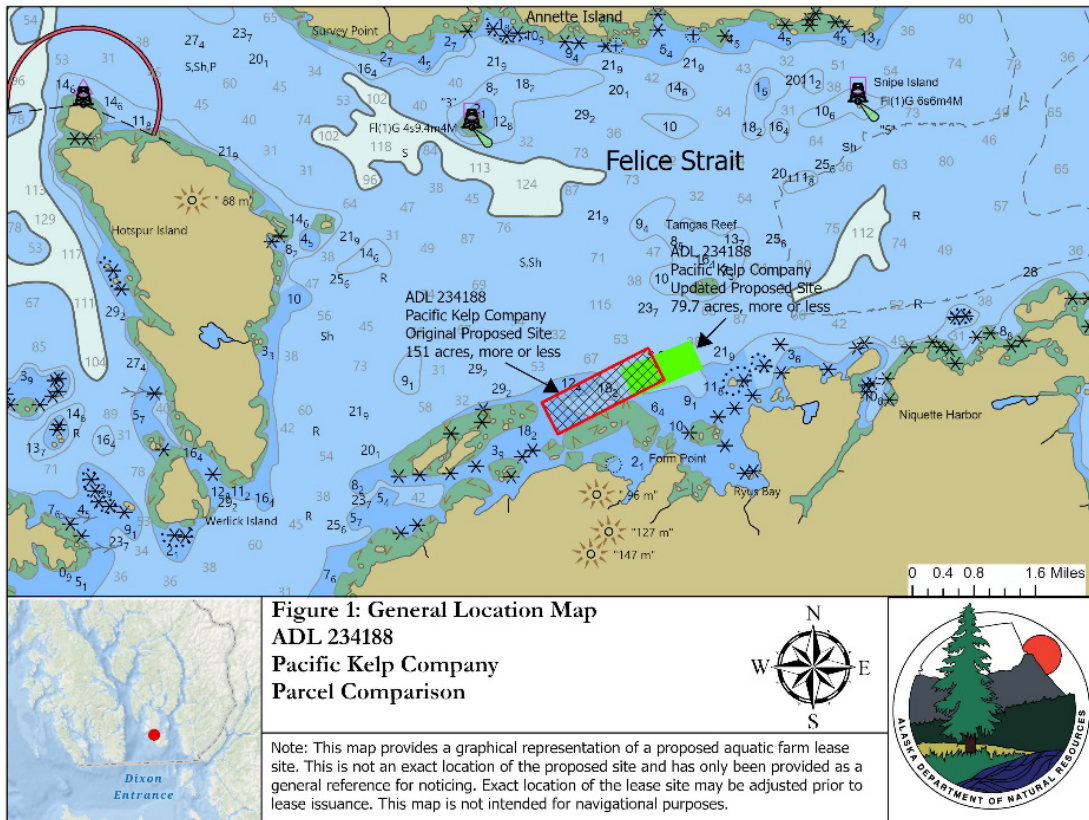
Legal Description, Location, and Geographical Features:

The state land where this proposed lease site is located is described as follows:

- **Site reference name:** Vegas Island
- **Legal description:** Section 32 and the W1/2 of Section 33, Township 79 South, Range 93 East, Copper River Meridian
- **Geographical locations:** Located within Felice Strait, east of Vegas Island and north of Duke Island, approximately 27 miles southeast of Ketchikan, Alaska.
- **Approximate Lat/Longs (NAD 83):**

Parcel #: 1,180 feet by 2,942 feet, encompassing 79.7 acres, more or less.

NE Corner: 54° 58.701’N, 131° 25.2618’W
SE Corner: 54° 58.5228’N, 131° 25.1298’W
SW Corner: 54° 58.3332’N, 131° 25.9062’W
NW Corner: 54° 58.512’N, 131° 26.0382’W



- **Existing surveys:** None
- **Municipality/Borough:** Ketchikan Gateway Borough
- **Native Corporations/Federally Recognized Tribes:** Sealaska Corporation; Central Council of the Tlingit and Haida Indian Tribes of Alaska; Metlakatla Indian Community, Annette Island Reserve; Organized Village of Saxman; Cape Fox Corporation; Ketchikan Indian Community
- **Size:** 79.7 acres, more or less

Title:

A DNR Title Report (RPT-23247) issued on June 10, 2024, from DMLW’s Realty Services Section, attests that the State of Alaska holds title to the subject tide and submerged lands under the Equal Footing Doctrine and the Submerged Lands Act of 1953.

Third Party Interests:

No third-party interests are known at this time.

Classification and Planning:

The project area is subject to the Central/Southern Southeast Area Plan (CSSAP), Region 5: Ketchikan, Mary/Duke Islands Subregion, General Use Tidelands, Map 3-26: Ketchikan – South.

The tideland designations for the proposed site General Use, which converts to the classification of Resource Management Land. Land classified as Resource Management Land is either 1) land that might have a number of important resources but for which a specific resource allocation decision is not possible because of a lack of adequate resource, economic, or other relevant information, or is not necessary because the land is presently inaccessible and remote and development is not likely to occur within the next 10 years; or 2) land that contains one or more resource values, none of which is of sufficiently high value to merit designation as a primary use (4-3). Chapter 3 states that in General Use tidelands, it is intended that the standard state/federal permitting process will determine, on a site-by-site basis, whether tideland development is appropriate at a given tideland site (3-238).

Uplands near the proposed site are within Tongass National Forest (TNF). Chapter 2 of the CSSAP states that DNR will consult with the U.S. Forest Service when determining compatibility of activities. Generally, permits should not be issued for areas adjoining Tongass Land and Resource Management Plan (TLRMP) prescriptions of Wilderness or adjacent to a National Monument (2-6). Chapter 4 of the CSSAP states that, while the CSSAP only makes decision for state lands, the tideland and upland recommendations of the plan have been coordinated with the U.S. Forest Service and that state land designations were reviewed against those contained in the TLRMP and are believed to be generally compatible with the TLRMP management prescriptions that adjoin state land (4-13). Chapter 4 further states that permitting and other actions that are to be undertaken by the state will be made compatible with the federal upland management prescriptions to the extent practicable and if consistent with the overall best interest of the state. Tideland permitting decisions by the state shall consider the adjacent upland uses permitted under the TLRMP and state decisions shall consider the effects of these actions on adjacent federal lands (4-13).

Chapter 2 of the CSSAP states that in general, all authorizations for use of state land within the planning area will be consistent with the management intent of the plan. In considering authorization for use of state land, DNR will adjudicate applications to: 1) minimize damages to streambeds, fish and wildlife habitat, vegetation, trails, anchorages, and other resources; 2) minimize conflicts between resources and uses; and 3) protect the long-term value of the resource, public safety, and the environment. Chapter 2, continues, stating, “if authorizations from other agencies are required, DNR will consider issuing a permit or lease contingent upon issuance of these other authorizations” (2-3). Chapter 2 of the CSSAP also states that in managing State tidelands and submerged lands adjacent to federal conservation units, specifically the Tongass National Forest, DNR will take into consideration the management intent for the uplands identified in the TLRMP. Activities, including aquatic farming operations, that are incompatible with the management intent will generally not be authorized unless the conditions of the other local, state, and federal permits or authorities are met and unless there is an overriding state interest and there is no feasible and prudent alternative (2-6).

The TNF uplands closest to the leasehold are found on Vegas Island and Duke Island. Within the TLRMP, the TNF uplands adjacent to the proposed lease site are designated as Special Interest Area. Special Interest Area Land Use Designation (LUD) goals are to provide for the inventory, maintenance, interpretation, and protection of the existing characteristics and attributes of areas with unique cultural, geological, botanical, zoological, recreational, scenic, or other special features. The objectives for Special Interest Area LUD include to provide opportunities for public study, use, and enjoyment of unique natural areas that are suitable to, and do not compromise, the characteristics of each area; allow only facilities and recreation developments that contribute to the interpretation of natural features or provide for compatible public uses, and that blend with the natural setting; provide for existing Recreation Opportunity Spectrum (ROS) opportunities and activities, unless public use is specifically restricted for the protection of other resources; consider withdrawing each area from mineral entry, subject to valid existing rights, on a case-by-case basis, if mineral development would not be consistent with protecting the unique features of the area; apply the High Scenic Integrity Objective except around developed interpretive facilities, and other developments or structure; allow fish, wildlife, and/or soil and water improvements if they are compatible with the purposes for which each Special Interest Area was established; and to develop management plans for those Special Interest Areas needing specific direction for achieving these goals and objectives (3-39). Chapter 4 of the TLRMP states to cooperate with state and federal agencies to meet industry and public needs for aquatic farming programs and ensure compatibility with other resources and activities (4-29).

Aquatic Farming is specifically mentioned in Chapter 2 of the CSSAP with stated goals to “provide opportunities to increase income and diversify the state’s economy through the use of state tidelands and submerged lands for aquatic farming”. Chapter 2 further states that DNR must make a best interest finding before issuing a lease and the proposed operation must be in the best interest of the state before an authorization may be issued (2-5). Aquatic farming will be allowed on state tidelands or submerged lands where there is no significant conflict and the objectives of statute and this management plan are met. The siting of aquatic farming facilities may be more difficult on tidelands designated for log transfer or storage, mineral transfer or access, fish and wildlife habitat, intensive storage areas adjacent to proposed land sales or existing residential areas, anchorages or developed recreation. These areas will be available for aquatic farming if the Department determines in the "best interest" finding that: 1) it is practicable to operate an aquatic farming operation so that it is compatible with the other uses of the immediate area; and 2) the proposed activity is consistent with the management intent of the statute and this management plan. Specific stipulations related to siting, operations, and maintenance may be imposed by the Department in addition to those otherwise required in order to achieve site and use compatibility. In no case will aquatic farming be allowed to foreclose access to mineral, timber, important fish and wildlife resources, or recreation use areas (2-6).

In accordance with the CSSAP, aquatic farming is an allowable use and is therefore consistent with the plan. The proposed operation must be in the best interest of the state before an

authorization may be issued. Factors that are to be considered in this decision are identified in 11 AAC 63.050(b).

Traditional Use Findings

Traditional use findings will not be discussed in this Preliminary Decision because the proposed lease site is located within the Ketchikan Gateway Borough, an organized borough. Pursuant to AS 38.05.830 a traditional use finding is not required.

Access:

Access to the aquatic farm is by a 20-foot to 30-foot skiff from Ketchikan or a local area harbor.

Access To and Along Navigable and Public Waters:

AS 38.05.127 and 11 AAC 51.045 require that before leasing land, SCRO determines if a body of water is navigable and if it is, that SCRO provides for easements or reservations as necessary to ensure free access to and along the waterbody. The waters of Felice Strait are tidally influenced and thus navigable. However, the lease is entirely within these waters and located further than 50 feet from Mean High Water, thus a .127 easement is not necessary.

Public Trust Doctrine:

Pursuant to AS 38.05.126 all authorizations for this site will be subject to the principles of the Public Trust Doctrine; specifically, the right of the public to use navigable waterways and the land beneath them for: navigation, commerce, fishing, hunting, and other purposes. These rights must be protected to the maximum extent practicable while allowing for the development of this project. As such, SCRO is reserving the right to grant other authorizations to the subject area consistent with the Public Trust Doctrine.

Lease Discussion:

PKC submitted an application for a DMLW aquatic farm lease on April 18, 2023, for 151 acres, more or less, for the cultivation of giant kelp, sugar kelp, ribbon kelp, and bull kelp within Felice Strait. A request for additional information was sent to PKC, and a complete application was received by the Alaska Department of Fish and Game (ADF&G) and SCRO on May 31, 2023. An Agency Review was conducted for a 20-day review starting on June 6, 2023, and ended on June 26, 2023. During the initial Agency Review, SCRO received comments from two agencies and “no comment” from one agency that were addressed within the original PD. The original PD was signed by the SCRO Regional Manager on December 4, 2023. At the applicant’s request, the original PD went out for Public Notice on December 8, 2023, for a 45-day public notice with comments due no later than January 22, 2024.

During the public notice, nine written requests for a public hearing were received between January 20-22, 2024. The public hearing requests stated that important information had been omitted from the PD. An updated agency comment was received from ADF&G on January 22, 2024, stating that

after additional review, the ADF&G Division of Commercial Fisheries Management had concerns and does not support an aquatic farm operation permit at the original proposed site due to significant alterations of established uses. The applicant had several meetings with ADF&G, DNR, and affected parties and due to comments received during the Public Notice, which are addressed below, PKC has moved the location of the proposed site as seen in Figure 1 of this APD. Due to the discussions that took place during the meetings held by applicant, agencies, and affected parties, the applicant relocating the proposed site, the initial 45-day comment period, this APD and subsequent 30-day comment period, the request for public hearing was denied. Interested parties that submitted comments during the initial public notice period or submitted a request for public hearing will be sent a copy of the public notice of the APD and will have the opportunity to provide written comments on the new proposed location.

The new proposed site will be comprised of one parcel, covering an area of approximately 79.7 acres. The proposed parcel will measure 1,180 feet by 2,942 feet. The parcel will contain one growing array measuring 22.3 acres of growing area within the parcel. The arrays will be a catenary design and have been designed in partnership with a marine engineering firm. The array will contain 6 steel high-scope drag embedment anchors, one at each corner of the array and an anchor on each side of the array. The anchors will be connected to the arrays with 83-millimeter steel anchor chain and 96-millimeter fiber rope anchor lines. The anchor lines will be connected to 35-liter plastic tensioning floats. There will be a polyethylene foam corner float in each corner of the array.

The array will contain 60 growout lines, measuring from 984 feet to 1,640 feet in length. The total length of growout lines for the array will measure approximately 71,827 feet. The growout lines will be suspended approximately 25 feet to 30 feet below the water. Each line will contain 5 concrete weights attached to the line to counteract the buoyancy of the kelp.

PKC plans to predominately cultivate giant kelp but may also cultivate other species to include sugar kelp, ribbon kelp, and bull kelp. All gear and equipment will remain in the water year-round as giant kelp is a perennial species and can be harvested multiple times a year. If other species are cultivated, gear will remain in the water year-round and applicant proposes to follow existing industry practices in Alaska and harvest annually in the later winter/early spring. PKC will collect wild sorus tissue samples of the various kelp species to then provide to a certified hatchery. The hatchery will then propagate the sorus tissue. Kelp sporophytes will be outplanted by unwinding a seeded PVC pipe over the length of growlines. Applicant proposes to harvest multiple times per year by trimming the kelp canopy. Harvest will be completed by cutting the kelp with a knife of other cutting apparatus on a long pole to trim the kelp from the growout lines. Kelp will then be collected with a net or hook and placed into brailer bags which will be transported via tender boat to Ketchikan for processing on private property.

PKC stated in their project description that they plan to visit the site at least once per week to monitor the site and use other methods, such as an aerial or submersible drone to ensure no marine entanglement or conflicts of use with other activities. Multiple boats will be employed during the harvesting season.

At this time the Commercial Use Requirement (CUR) states a farm must make annual sales of aquatic farm products of at least \$3,000.00 per acre or \$15,000.00 per farm by the fifth year of operation and continue for the rest of the lease term. Failure to meet CUR constitutes a default and may be cause for termination. Annual reports of sales are due January 31 of each year.

Should the proposed lease be approved, the lease will be issued for a 10-year term beginning no later than one year following the effective date of the Final Finding and Decision. The proposed lease will be subject to the terms of DMLW's standard lease document and any Additional Stipulations based, in part, upon the following considerations.

Development Plan:

The Development Plan dated May 10, 2024, is accepted by SCRO as complete but may be subject to change based on agency and public review. Should the proposed lease be granted, it is anticipated that the Development Plan will need to be updated throughout the life of the lease as activities and/or infrastructure are added or subtracted. All updates must be approved, in writing, by SCRO before any construction, deconstruction, replacement of infrastructure, or change in activity will be permitted. SCRO reserves the right to require additional agency review and/or public notice for changes that are deemed by SCRO to be beyond the scope of this decision.

Hazardous Materials and Potential Contaminants:

No hazardous materials or fuel will be stored on the proposed lease. The use and storage of all hazardous substances must be done in accordance with existing federal, state and local laws. Debris (such as soil) contaminated with used motor oil, solvents, or other chemicals may be classified as a hazardous substance and must be removed from the sites and managed and disposed of in accordance with state and federal law.

Lease Performance Guaranty (bonding):

In accordance with AS 38.05.083(e) and 11 AAC 63.080, PKC will be required to submit a performance guaranty for the lease site.

- **\$8,000.00 Performance Bond:** This bond will remain in place for the life the proposed lease. The bond amount is based upon the level of development, amounts of hazardous material/substances on site, and the perceived liability to the State. This bond will be used to ensure the applicant's compliance with the terms and conditions of the lease issued for their project. This bond amount will be subject to periodic adjustments and may be adjusted upon approval of any amendments,

assignments, re-appraisals, changes in the development plan, changes in the activities conducted, changes in the performance of operations conducted on the authorized premises, or as a result of any violations to one or more of the authorizations associated with this project.

- **Reclamation Bond:** SCRO is reserving the right to require a reclamation bond due to non-compliance issues during the term of the lease or near the end of the life of the project.

Insurance:

PKC will be required to submit proof of liability insurance to SCRO, with the State of Alaska listed as a “NAMED” insured party. PKC will be responsible for maintaining such insurance throughout the term of the lease.

Survey:

In accordance with AS 38.04.045, this short-term lease does not require a survey. However, the State of Alaska reserves the right to require one in the future, should the need arise due to changes in statutes or increased use of the area. PKC has submitted GPS coordinate point(s) for the four corners of the proposed leasehold.

Compensation and Appraisal:

DMLW has approved an administrative lease fee schedule for aquatic farmsites that meet the conditions listed within the schedule. The most current lease fee schedule will be used to establish the fair market rental each lessee must pay. Fees are subject to adjustment per AS 38.05.083(c). The current annual rate for a 79.7-acre aquatic farm lease is a fee of \$7,805.00 for the first 70.01 acres and \$76.00 for each additional acre or partial acre. In accordance with the Aquatic Farmsite Fee Schedule, Report No. 2522-16, a breakdown of the lease fee will be as follows:

$$79.7 \text{ acres (70.01 acres at } \$7,805) + (9.69 \text{ acres} \times \$76) = \mathbf{\$8,565.00 \text{ per year}}$$

If the applicant does not agree with the fee schedule amount of \$8,565.00, a fair market value determination can be obtained by the applicant. Fair market value is determined by obtaining a DNR approved appraisal of the lease site. If an appraisal is conducted to determine fair market value of the lease site, the applicant will be required to pay the appraised amount and the \$8,565.00 annual fee will no longer be an option. The appraisal cost will be borne by the applicant. The parcel may need to have an approved Alaska Tideland Survey to accomplish the appraisal. If a survey is required, the cost will be incurred by the applicant.

Assignment of Lease:

The proposed lease, if issued, may be transferred or assigned to another individual or corporation **only** with prior written approval from the DMLW. A lease will not be assigned to an entity if that

entity does not meet the statutory requirements of the lease or the lease is not in good standing. DMLW reserves the right to amend the terms of the lease prior to assignment.

Reclamation:

In accordance with AS 38.05.090(b), all lessees must restore their lease sites to a “good and marketable condition” within 120 days after termination of the lease. What level of reclamation constitutes as being “good and marketable” is at the discretion of SCRO. SCRO is reserving the right to require a reclamation bond due to non-compliance issues during the term of the lease or near the end of the life of the project.

Public Notice of the Preliminary Decision:

Pursuant to AS 38.05.945, the original PD was advertised for a 45-day public notice comment period beginning on December 8, 2024, and ended on January 22, 2024. Notice was posted on the Alaska Online Public Notice System, the post offices located in Ketchikan, Metlakatla, and Ward Cove. Courtesy notices were mailed or emailed to neighboring property owners, permit/lease holders, and other interested parties on December 8, 2023, for a 45-day public comment period.

Public Notice Comment(s):

SCRO received 2 comments from agencies, one “no comment” from an agency, one “no objection” from an agency during the public notice and 26 emails or letters from the public with comments. Within these comments, 8 topics were raised that are addressed by SCRO below.

Agency Comments Received During Public Notice:

Alaska Department of Fish and Game Comment:

An updated comment was received from ADF&G on January 22, 2024. Within this updated comment, ADF&G stated that after additional review, the ADF&G Division of Commercial Fisheries Management has concerns and does not support an aquatic farm operation permit at the original proposed location due to significant alterations of established uses. ADF&G stated they would like to meet with the applicant to discuss mitigation measures, compromises or potential relocation of the project to address concerns before moving forward.

Within the ADF&G comment, a Department Advisory stated the following:

The Division of Commercial Fisheries [(DCF)] provided an initial review of the proposed Pacific Kelp Company lease to cultivate aquatic plants in Felice Strait approximately 28 miles south of Ketchikan, Alaska. The initial review from DCF provided comments stating that there would be little impact to the commercial geoduck fishery, but there would be impact to the commercial sea cucumber fishery. This impact would likely be in the form of limiting or eliminating access to the commercial harvest of sea cucumbers along the northwest corner and along the southwest line extending eastward. Comments regarding access to commercial sea cucumber permit holders on

existing aquatic farm sites were referenced, which included the permit holder not limiting or impeding access to an established fishery.

Upon further examination, it was discovered that additional information was overlooked during the initial review. The western half of the proposed aquatic farm site is situated directly over one of the largest commercial geoduck beds in the designated Cat and Dog Island geoduck rotational fishery. The map attached shows the location of ADF&G surveyed transects on documented geoduck clam beds. The guideline harvest level for the Cat and Dog Island geoduck area is 40,300 pounds which at today's market value represents an ex-vessel value of approximately \$400K to the commercial geoduck divers.

The commercial harvest of geoducks involves a vessel anchoring directly above a commercially viable geoduck bed. Divers on the vessel then enter the water with a hookah system, a surface supplied air hose that delivers air or Nitrox air from the surface to the diver on the bottom, as well as a high-pressure water hose connected to compressor at the surface which a diver uses to emulsify the substrate to extract individual geoduck clams. Given the proposed catenary design of the farm site, the amount of lines that will be running parallel to shore at a depth ranging from 13 to 33 feet, and additional anchoring systems in place this will effectively eliminate access to this limited entry commercial fishery in this area.

Additionally, the western portion of the proposed farm site is located directly on an extensive wild *Macrocystis pyrifera* bed. Review and determination criteria (5 AAC 41.240 (a)(1)(E)) require the health and abundance of eelgrass and kelp beds be maintained. It is unsure whether this would be possible with an aquatic farm placed over the wild kelp bed. The ability to differentiate between wild and cultivated *Macrocystis* that will be sold would be questionable, although not specifically prohibited under AS 16.40.100 or AS 16.40.105.

The proposed aquatic farm site at this location creates a scenario which violates AS 16.40.105 (3).

The Commercial Fisheries staff have several alternative site locations in proximity (all within a 5-mile radius) to the original proposed site that could be potentially viable without disrupting existing well-established fisheries. ADF&G staff are available and would like to meet with the applicant to discuss the potential options.

Our department requests that the Department of Natural Resources consider providing this in their Final Finding and Decision as an advisory to the applicant and for public reference.

SCRO Response:

SCRO acknowledges ADF&G's comment. As one of the resource managers in the area, ADF&G's input is an important source of information. SCRO relies on input from ADF&G and other

stakeholders to advise of any expected impact and solutions that may fall outside of SCRO's authority. Applicant was provided ADF&G's comment with the email sent from ADF&G. As requested in ADF&G's updated comment, the APD herein contains ADF&G's letter, which will be advertised for a 30-day public comment period.

The applicant had several meetings with ADF&G, DNR, and affected parties and due to comments received during the Public Notice, PKC has moved the location of the proposed site as seen in Figure 1 of this APD.

DNR's statutes and regulations for aquatic farmsite leases do not specify management of aquatic farms relating to fish and game but authorize DNR to issue a lease for state-owned tideland, shoreland, or submerged land to develop an aquatic farm. Management of fish and game is within the authority of ADF&G, and as such, SCRO must defer to them.

U.S. Army Corps of Engineers Comment:

In an email dated December 13, 2023, the US Army Corps of Engineers (USACE) submitted a comment stating that a Department of the Army authorization is required if anyone proposes to place dredged, and/or fill material into the waters of the U.S., including wetlands and/or perform work in navigable waters of the U.S. The aquatic farm would need a Section 10 permit.

In a follow up email dated December 22, 2024, the USACE submitted a comment with links to permits and sample drawings along with contact information for applicant to request a preapplication meeting with the USACE.

SCRO Response:

SCRO acknowledges the comment from the USACE. As one of the resource managers in the area, the USACE's input is an important source of information. SCRO relies on input from the USACE and other stakeholders to advise of any expected impacts and solutions that may fall outside of SCRO's authority.

An updated agency comment was received from ADF&G on January 22, 2024, stating that after additional review, the ADF&G Division of Commercial Fisheries Management had concerns and does not support an aquatic farm operation permit at the original proposed site due to significant alterations of established uses. The applicant had several meetings with ADF&G, DNR, and affected parties and due to comments received during the Public Notice, PKC has moved the location of the proposed site as seen in Figure 1 of this APD.

Public Comments Received During Public Notice:

Topic 1:

Commenters state that the originally proposed site would have negative impacts on an already established commercial dive site for both geoduck and sea cucumber as outlined below:

- Loss of viable geoduck and sea cucumber established areas.
- Increased hazard and safety issues while diving under infrastructure including lines and anchors.
- Loss of economic viability for local divers if approved while other areas of harvestable submerged lands have suffered loss due to increasing sea otter populations.
- Cause impediments and an unsafe environment to dive harvesters fishing within the established areas.
- Increased risk of diving equipment damaging kelp or kelp gear which would make fisherman liable for damages.

SCRO Response:

SCRO acknowledges the comment. Per 11 AAC 63.050(b), SCRO must consider traditional and existing uses of the site, including commercial fishing. Chapter 2 of the CSSAP states that in considering authorizations for use of state land, DNR will adjudicate applications to minimize conflicts between resources and uses. If authorizations from other agencies are required, DNR will consider issuing a permit or lease contingent upon issuance of these other authorizations (2-3). Aquatic farm leaseholders are required to obtain an aquatic farm operation permit from ADF&G. Additionally, chapter 2 of the CSSAP states that in no case will aquatic farming be allowed to foreclose access to important fish and wildlife resources (2-6).

An updated agency comment was received from ADF&G on January 22, 2024, stating that after additional review, the ADF&G Division of Commercial Fisheries Management had concerns and does not support an aquatic farm operation permit at the original proposed site due to significant alterations of established uses. The applicant had several meetings with ADF&G, DNR, and affected parties and due to comments received during the Public Notice, PKC has moved the location of the proposed site as seen in Figure 1 of this APD.

Topic 2:

Commenters state that many residents use Ryus Bay as access to camping locations, anchorage for fishing, as well as recreation within the vicinity. Commenters state that the originally proposed site would create inaccessible locations for multiple uses.

SCRO Response:

SCRO acknowledges the comment. Per 11 AAC 63.050(b), SCRO must consider traditional and existing uses of the site, including commercial fishing and sport fishing, use as an anchorage, navigation, and recreation. Chapter 2 of the CSSAP states that in considering authorizations for

use of state land, DNR will adjudicate applications to minimize conflicts between resources and uses. If authorizations from other agencies are required, DNR will consider issuing a permit or lease contingent upon issuance of these other authorizations (2-3). Aquatic farm leaseholders are required to obtain an aquatic farm operation permit from ADF&G. Additionally, chapter 2 of the CSSAP states that in no case will aquatic farming be allowed to foreclose access to important fish and wildlife resources, or recreation use areas (2-6).

An updated agency comment was received from ADF&G on January 22, 2024, stating that after additional review, the ADF&G Division of Commercial Fisheries Management had concerns and does not support an aquatic farm operation permit at the original proposed site due to significant alterations of established uses. The applicant had several meetings with ADF&G, DNR, and affected parties and due to comments received during the Public Notice, PKC has moved the location of the proposed site as seen in Figure 1 of this APD.

Topic 3:

Commenter stated that the initial PD failed to report to the public the negative impacts the original site would have on commercial dive fisheries. Commenter requested that DNR seek an updated determination from ADF&G.

SCRO Response:

SCRO acknowledges the comment. An updated agency comment was received from ADF&G on January 22, 2024, stating that after additional review, the ADF&G Division of Commercial Fisheries Management had concerns and does not support an aquatic farm operation permit at the original proposed site due to significant alterations of established uses. The applicant had several meetings with ADF&G, DNR, and affected parties and due to comments received during the Public Notice, PKC has moved the location of the proposed site as seen in Figure 1 of this APD.

Topic 4:

Commenter states that the failure to disclose negative impacts the original site would have on commercial dive fisheries perhaps had led some commenters to support the proposed site without knowing it would be at the expense of a commercial fishery.

SCRO Response:

SCRO acknowledges the comment. SCRO adjudicates applications with the information provided to them from agencies that have the authority over commercial fisheries. Failure to disclose information on commercial dive operations within the original proposed site was due to the fact that the information was not provided to SCRO by other state agencies during the initial agency review period. An updated agency comment was received from ADF&G on January 22, 2024, stating that after additional review, the ADF&G Division of Commercial Fisheries Management had concerns and does not support an aquatic farm operation permit at the original proposed site due to significant alterations of established uses. The applicant had several meetings with ADF&G,

DNR, and affected parties and due to comments received during the Public Notice, PKC has moved the location of the proposed site as seen in Figure 1 of this APD.

Topic 5:

Commenter states that the original footprint is in direct conflict with the CSSAP as stated within the original PD, “In no case will aquatic farming be allowed to foreclose access to...important fish resources”, and with Alaska Statute 16.40.105(3), “the proposed farm or hatchery may not significantly affect fisheries, wildlife, or their habitats in an adverse manner”.

SCRO Response:

SCRO acknowledges the comment. In an updated comment from ADF&G during the public comment period, ADF&G stated that the proposed aquatic farm site at the original location creates a scenario which violates AS 16.40.105(3). As one of the resource managers in the area, ADF&G’s input is an important source of information. SCRO relies on input from ADF&G and other stakeholders to advise of any expected impact and solutions that may fall outside of SCRO’s authority.

DNR’s statutes and regulations for aquatic farmsite leases do not specify management of aquatic farms relating to fish and game but authorize DNR to issue a lease for state-owned tideland, shoreland, or submerged land to develop an aquatic farm. Management of fish and game is within the authority of ADF&G, and as such, SCRO must defer to them.

The applicant had several meetings with ADF&G, DNR, and affected parties and due to comments received during the Public Notice, PKC has moved the location of the proposed site as seen in Figure 1 of this APD.

Topic 6:

Commenters stated that they were in support of the proposed kelp farm because of the potential for it to support the local economic development through the creation of long-term sustainable careers and through the utilization of local businesses and supply chains.

SCRO Response:

SCRO acknowledges the comment. An updated agency comment was received from ADF&G on January 22, 2024, stating that after additional review, the ADF&G Division of Commercial Fisheries Management had concerns and does not support an aquatic farm operation permit at the original proposed site due to significant alterations of established uses. The applicant had several meetings with ADF&G, DNR, and affected parties and due to comments received during the Public Notice PKC has moved the location of the proposed site as seen in Figure 1 of this APD.

Topic 7:

Commenters stated they were in support of the proposed kelp farm because the cultivation of kelp can help to regenerate marine habitats and enhance natural ecosystems for the benefit of all stakeholders within the region.

SCRO Response:

SCRO acknowledges the comment. An updated agency comment was received from ADF&G on January 22, 2024, stating that after additional review, the ADF&G Division of Commercial Fisheries Management had concerns and does not support an aquatic farm operation permit at the original proposed site due to significant alterations of established uses. The applicant had several meetings with ADF&G, DNR, and affected parties and due to comments received during the Public Notice PKC has moved the location of the proposed site as seen in Figure 1 of this APD.

Topic 8:

Commenter states that applicants may apply to harvest and sell sea cucumbers that naturally set on their gear which could create unregulated harvest of a valuable resource. Commenter states that sea cucumbers primary source of food is kelp, and it is highly likely that sea cucumbers will search out healthy kelp to feed upon which may impede attempts to maintain a sustainable fishery.

SCRO Response:

SCRO acknowledges the comment. An updated agency comment was received from ADF&G on January 22, 2024, stating that after additional review, the ADF&G Division of Commercial Fisheries Management had concerns and does not support an aquatic farm operation permit at the original proposed site due to significant alterations of established uses. The applicant had several meetings with ADF&G, DNR, and affected parties and due to comments received during the Public Notice PKC has moved the location of the proposed site as seen in Figure 1 of this APD.

If the new proposed site is approved and applicant wanted to add sea cucumbers to the lease, the applicant would need to apply for an amendment which would go out for a 30-day public notice period allowing all interested parties to read over the proposed amendment and comment.

Public and Agency Notice of the Amended Preliminary Decision:

Pursuant to AS 38.05.945, this Amended Preliminary Decision will be advertised for a 30-day public and agency comment period. Notice will be posted on the Alaska Online Public Notice System and at the post offices located in Ketchikan, Metlakatla, and Ward Cove. Courtesy notices will also be mailed or emailed to neighboring property owners, permit/lease holders, and other interested parties on August 8, 2024, for a 30-day public comment period.

Comment(s):

This decision is subject to both public and agency comments and all comments received by the comment deadline will be considered in the Final Finding and Decision. Only those who comment and the applicant have the right to appeal the Final Finding and Decision.

**Written comments about this project must be received in this office no later than
September 9, 2024 to be considered.**

To submit comments, please choose one of the following methods:

Postal: Department of Natural Resources
Southcentral Regional Land Office
ATTN: Brent Reynolds
550 West 7th Avenue Suite 900C
Anchorage, AK 99501-3577

E-mail: brent.reynolds@alaska.gov

Fax: (907) 269-8913

If public comments result in significant changes to the Preliminary Decision, additional public notice may be given. To be eligible to appeal the Final Finding and Decision, a person must provide written comments during the Preliminary Decision comment period per AS 38.05.035(i)-(m).

Signature Page Follows

Recommendation:

DMLW has completed a review of the information provided by the applicant, examined the relevant land management documents, and has found that this project is consistent with all applicable statutes and regulations. SCRO considered three criteria to determine if this project serves the best interest to the State and the development and enjoyment of its natural resources. The criteria include direct economic benefit to the State, indirect economic benefit to the State, and encouragement of the development of the State’s resources. This authorization provides a direct economic benefit to the State with the collection of one-time filing fees and any yearly rent/fees. The authorization of this lease is in the State’s best interest as it furthers economic development of the State’s aquatic farm industry. It is recommended that SCRO issue a 10-year lease to Pacific Kelp Company.

Brent Reynolds

8/7/2024

Brent Reynolds

Date

Natural Resource Specialist 3

Preliminary Decision:

It is the determination of the Division of Mining, Land, and Water that it may be in the State’s best interest to issue an aquatic farmsite lease to Pacific Kelp Company, as described above. Prior to issuance of this lease, the applicant will be required to pay the annual lease fee of \$8,565.00, submit a \$8,000.00 performance bond, and provide proof of liability insurance. This Amended Preliminary Decision shall now proceed to public notice.

Joni Sweetman

8/7/2024

Joni Sweetman, Natural Resource Manager 2

Date

Division of Mining, Land & Water

Southcentral Regional Land Office

Attachments

Attachment A – Development Plan

Attachment B – ADF&G Letter

Attachment A Development Plan

PROJECT DESCRIPTION

DATE SUBMITTED: 4/18/2023

Company Name

Pacific Kelp Co.

Site Location *[Include water body, distance from nearest community, any landmarks, general region of Alaska, and whether on state tidal and/or submerged lands or private. Provide enough information to understand where it is located.]*

The site location in Southeast Alaska is 27 mi Southeast of Ketchikan, AK on the southern shores of Felice Strait, near Ryus bay. The farm is location 0.5 mi to the north of Duke Island and 1 mi to the east of Vegas Island

Site Dimensions, Acres for Each Parcel

79.7 acres of total permit area. The total lease area is approximately 1,180 feet wide by approximately 2,942 feet long for a total square feet of approximately 3,471,560.

Total Acres of All Parcels

Approximately 79.7

Species You Intend to Farm *[Include scientific and common species name]*

Macrocystis Pyrifera, Giant Kelp
Saccharina Latissima, Sugar Kelp
Alaria Marginata, Ribbon Kelp
Nereocystis Leutkeana, Bull Kelp

Attachment A Development Plan

Culture Method *[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.]*

We plan to predominantly cultivate Giant Kelp (*Macrocystis Pyrifera*) on our proposed farm site, which entails outplanting (seeding), monitoring, and harvesting on site, all year-round. We plan to build one growing array on our farm site, approximately 22 acres in size.

Regardless of which species we cultivate, our plan is to leave our gear in the water year-round. Our farm structure is a catenary farm designed in partnership with Kelson Marine, a leading marine engineering firm.

Kelp sporophytes will be outplanted by unwinding a seeded PVC pipe over the length of a grow rope. We do not anticipate using any husbandry techniques at this time other than basic density management and the monitoring and maintenance of our farm site and seeded lines. We will monitor for biofouling, marine entanglement, use conflicts and potential impacts to local marine populations. We do not plan to use any predator control measures.

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.]*

[See attached document]

Attachment A Development Plan

Seed Acquisition Plan (Commercially produced and/or wildstock) *[Commercially produced juveniles or seed stock must be obtained from an approved seed source. Do you intend to collect wildstock juveniles or natural set organisms for direct culture on your proposed site? Yes/No. If yes, describe collection methods (applicable for indigenous species: i.e. mussels, scallops, abalone, natural set aquatic plants, etc. This does not refer to broodstock collection on behalf of hatcheries for propagation. If increasing number of acquisitions per year, indicate projected amounts per year. Aquatic plant species can be combined into total feet of line per year.]*

We plan to collect wild sorus tissue samples (following the 50 x 50 Rule) from 50 different indigenous individuals within 50 km of our farm site for the development of seedstock at the hatchery facility. We have already identified several robust wild kelp beds within 50km of our farm site that will serve this purpose.

Following the collection of wild sorus tissues we plan to engage with one or several approved seed and hatchery service suppliers within Alaska, such as Mothers of Millions, Lexa Meyer, or Oceans Alaska, to then propagate our seed.

The total linear feet of line to be seeded for cultivation is estimated to not exceed 71,827 ft. The growing array will have no more than 60 lines, ranging from 984 to 1,640' in length.

Harvest Equipment and Method *[Describe harvest equipment and methods to be used, activities to be done onsite, and schedule of harvest of aquatic farm product. If more than one species, include harvest information for each species or group of species like macroalgae if the harvest information is the same.]*

The aquatic site will be operated year round. We plan to harvest multiple times per year by "trimming" the kelp canopy. (up to 4 times per year per individual). In the event that we cultivate a non-canopy kelp species like *Saccharina Latissima*, we will follow existing industry practices in Alaska and harvest annually in the late winter / early spring. Our plan is to leave our gear in the water year round, regardless of what species is cultivated. No matter what species is cultivated, we will continue to regularly monitor our site and perform regular and preventative maintenance. In regards to the equipment and methods used, we plan on using a simple knife or other cutting apparatus on a long pole to trim the kelp canopy from the longlines. Given that *macrocystis* is positively buoyant, we will then collect the biomass that floats to the top of the water with a net or hook and place the trimmed kelp into brailer bags which will then be transported via tender boat to Ketchikan for processing.

"Wet weight yield" will be measured to determine biomass growth rates on site. All canopy trimmings will be collected on site and we will minimize the amount of waste kelp clippings that could enter into the larger environmental area from our farm. All harvesting will be conducted on site as will the transfer of kelp to brailer bags. We do not anticipate any other activities in regards to harvesting/processing to be conducted on site.

Support Facilities (Type, Size, Number, Configuration, Material, and Anchoring) *[Support facilities include caretaker facility, storage rafts, work rafts, processing rafts, etc.]*

We do not plan on constructing or utilizing support facilities on our site. All equipment storage and kelp biomass warehousing and processing will be conducted on private property and not on state lands or waters.

Attachment A Development Plan

Access to and from Site [Include nearest community, transportation type used and how many times traversing back and forth]

Our proposed site is a 60-90 minute boat ride from Ketchikan (one way) and is accessible via boat on the inside passage. We plan to launch a 20-30ft skiff from Ketchikan South Tongass Launch Ramp or a local area harbor to monitor our farm site at least once per week (weather permitting) – although likely at a higher frequency. We will also monitor our permitted area using other methods, such as an aerial or submersible drone to ensure no marine entanglement or conflicts of use with other boaters, etc. During the harvesting season, we will need to access the site more often for monitoring and harvesting operations. Additionally, we will employ multiple boats during harvesting season.

Storage Location of Equipment and Gear When Not in Use [Include whether on private lands and nearest community]

We plan to store our equipment and gear on private property near Ketchikan. We do not plan to store any equipment or gear on state lands or waters.

C. PROJECT OPERATION PLAN

1. How will support facilities, culture gear and anchoring systems be maintained?

- a. How often, in days per month, do you intend to monitor your site for things such as adequate anchoring, disease, exotic species settlement, fouling, gear drift, snow load, wind damage, vandalism, etc.?
Growing season 4 (days/month) **Off months** 0 (days/month)
- b. How will you keep the gear and shellfish free of fouling organisms (hot-dip, air dry, pressure washing, etc.)?
Washing or removal by hand.
- c. How will you manage reduction of competing species over the course of operations (relocate sea stars, grow-out cages, or other possible protection from competing species)?
We will consult industry and environmental experts on best management practices with the least environmental impact and employ those methods only if necessary.
- d. If you intend to use predator netting, how long will you keep netting over your product?
N/A (months)
- e. If using predator netting, how will you minimize impacts on non-target species, including seabirds, seals, sealions, walrus and whales?
N/A

2. Projected Harvest Rotation Consistent with Life History

- a. How often do you intend to harvest your product by species?
We expect to harvest macrocystis up to 4x / year. Other species 1x per year.
- b. Do you plan on utilizing density manipulation by culling or redistribution?
We may reduce the density of plants to maximize biomass yield if we deem it necessary. In the event that we need to reduce the density of planting on our farm in a given area we would perform that manually using a knife or other cutting apparatus in only the specified area.

Attachment A Development Plan

c. What techniques will be used to optimize growth or condition of product?

We will optimize kelp growth and growing conditions by adjusting the growline density, along with harvesting and planting frequency and timing. Lastly, we will maintain a clean and sustainable farm site to ensure the best growing conditions.

3. Acquisition of hatchery or wild seed

a. Will you use a certified or approved shellfish seed source(s)? Yes No

b. Will you use an Alaska kelp hatchery? Yes No

c. How do you intend to collect wild seed? (Applicable for indigenous species: i.e. clams, natural set kelp, invertebrates, etc.)

4. Describe how operation of the aquatic farm will improve the productivity of species intended for culture not covered by the previous questions (examples: predator exclusion, reduction of competing species, density manipulation by culling/redistribution, importing natural or hatchery seed, program harvest to optimize growth/condition and habitat improvement)?

We plan to plant at optimal density (plants / grow line and also number of grow lines per acre) to achieve maximum yield per given acre. We plan to harvest only after plants have had sufficient time in water to achieve sufficient biomass growth.

D. PROJECT LOCATION

1. Coordinates

Please provide latitude and longitude coordinates for each corner of each parcel at the proposed farm site. 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: _____ (e.g. Grow-out Area)	NE Corner	No. 1: Latitude	<u>54°58.701</u>	Longitude	<u>-131°25.2618</u>	
		SE Corner	No. 2: Latitude	<u>54°58.5228</u>	Longitude	<u>-131°25.1298</u>
		SW Corner	No. 3: Latitude	<u>54°58.3332</u>	Longitude	<u>-131°25.9062</u>
		NW Corner	No. 4: Latitude	<u>54°58.512</u>	Longitude	<u>-131°26.0382</u>
Parcel 2: _____ (e.g. Hardening Area)	NE Corner	No. 1: Latitude	_____	Longitude	_____	
		SE Corner	No. 2: Latitude	_____	Longitude	_____
		SW Corner	No. 3: Latitude	_____	Longitude	_____
		NW Corner	No. 4: Latitude	_____	Longitude	_____
Parcel 3: _____ (e.g. Support Facility Area)	NE Corner	No. 1: Latitude	_____	Longitude	_____	
		SE Corner	No. 2: Latitude	_____	Longitude	_____
		SW Corner	No. 3: Latitude	_____	Longitude	_____
		NW Corner	No. 4: Latitude	_____	Longitude	_____

Attachment A

Development Plan

Attachment 1

Project Description Outline

The proposed aquatic farm lease is one parcel totaling 79.7 acres of state owned tidal and submerged lands and is located in Felice Strait in Southeast Alaska in waters 90 – 150' deep.

Our plan is to construct a cultivation system, ~22.3 acres in size, within the ~79 acres of lease area. We plan to predominantly cultivate Giant Kelp (*Macrocystis Pyrifera*) on our proposed farm site, which entails outplanting (seeding), monitoring, and harvesting on site.

Our cultivation array has been designed in partnership with Kelson Marine, a leading marine engineering firm and is a catenary design. We will install approximately 71,827 feet of growline on our catenary array, which will be deployed at approximately 25 to 30 feet of depth, MLLW. Our array will have 60 lines, ranging from 984 to 1,640 ft in length. Given that our species is positively buoyant, each of the lines will have 5 weights on it, spaced evenly apart, to counteract the buoyant nature of the kelp.

Environmental loads on open ocean structures are driven by current, waves, water levels and wind. Kelson Marine's characterization of these meteorological and oceanographic ("metocean") variables and their extreme values conforms to NS 9415:2021 (Standards Norway, 2022). To ensure a conservative analysis, and to comply with guidance from the relevant permitting agencies for this project, the 25-year storm condition was taken to be the design standard for the present study and incorporated relevant wind, current, waves, tides and varying water level data to ensure structural integrity across a range of environmental scenarios and stresses. Much of Kelson Marine's work conforms with industry standards and catenary arrays are common practice in the cultivation of macroalgae.

Harvest will occur up to 4 times per year by 'trimming' the top canopy of the kelp. Kelp trimmings will then be collected and stored in floating brailer bags, which will then be towed back to the dock for further processing. All processing will occur on private property. The only activities to occur on state-owned tidal and submerged lands will be gear installation, maintenance & monitoring, outplanting, and harvesting. Gear will remain in the ocean year-round.

We understand large, commercial scale cultivation of *Macrocystis Pyrifera* has not been done before. That being said, wild harvest and smaller scale research projects with *macrocystis* have been conducted with success, particularly in Chile and in California, providing much of the basis and understanding of farming *Macrocystis Pyrifera* contained within this report.

Given this is a fairly novel endeavor our plans have been formulated to the best of our knowledge from research and discussions with industry and scientific experts on such matters. Please see below for a list of experts we have interacted with to inform the basis of this presentation:

- Dr. Diane Kim, University of Southern California & Holdfast Aquaculture
- Dr. Schery Umanzor, University of Alaska Fairbanks
- Greenwave, Non-profit industry group
- Javier Infante , SWD Connectors
- Josh Masel and Haik van Exel, Hortimare
- Alicia Bishop and James Morris, NOAA
- Toby Dewhurst, Kelson Marine

Attachment A Development Plan

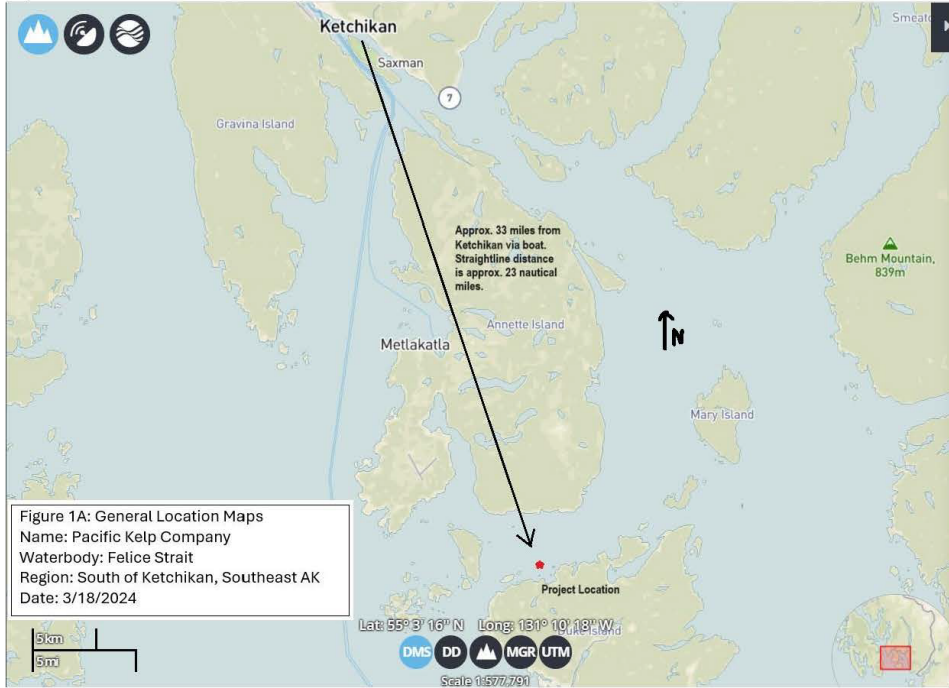
CULTURE GEAR & EQUIPMENT (Additional Detail for Application Question due to space constraints)

Type	Size*	Qty	Material	Anchoring System
High-scope drag embedment moorings	10,000 - 30,000 lbs	6	Steel	N/A
Anchor Chain	83 mm diameter	6	Steel	High-scope drag embedment moorings
Anchor Line	96 mm diameter	6	Fiber rope (e.g. UHMWPE)	High-scope drag embedment moorings
Corner Float	4 m diameter	6	Polyethylene foam	High-scope drag embedment moorings
Tensioning Floats	35 L	6	Plastic	High-scope drag embedment moorings
Tensioning Float Tether	28 mm diameter	6	Fiber rope (e.g. polypropylene)	High-scope drag embedment moorings
Header Line	96 mm diameter	2	Fiber rope (e.g. UHMWPE)	High-scope drag embedment moorings
Growline-Inner	22 mm diameter	58	Fiber rope (e.g. polyester)	High-scope drag embedment moorings
Growline-Edge	22 mm diameter	2	Fiber rope (e.g. polyester)	High-scope drag embedment moorings
Growline Float	100 L	300	Polyethylene shell, foam-filled	High-scope drag embedment moorings
Weights	114.3 kg	300	Concrete	High-scope drag embedment moorings
Growline Float Tether	22 mm diameter	300	Fiber rope (e.g. polyester)	High-scope drag embedment moorings
Transverse Set Line	96 mm diameter	1	Fiber rope (e.g. UHMWPE)	High-scope drag embedment moorings

Attachment A Development Plan

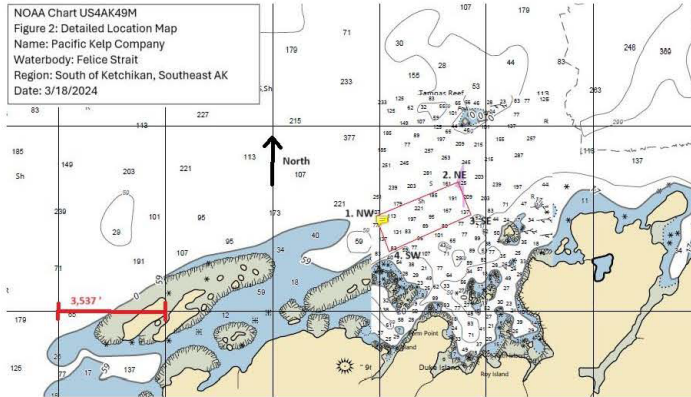
Note: Figure 1a and 1b represent the General Location Maps. Figure 1a shows a zoomed out map depicting our project location relative to the nearest community, Ketchikan. Figure 1b illustrates in 1:63,360 scale our location utilizing USGS Topographic Quadrangle Map Prince Rupert D-5, AK

Figure 1a: General Location Map



Attachment A Development Plan

Figure 2: Detailed Location Map, NOAA Chart No. US4AK49M



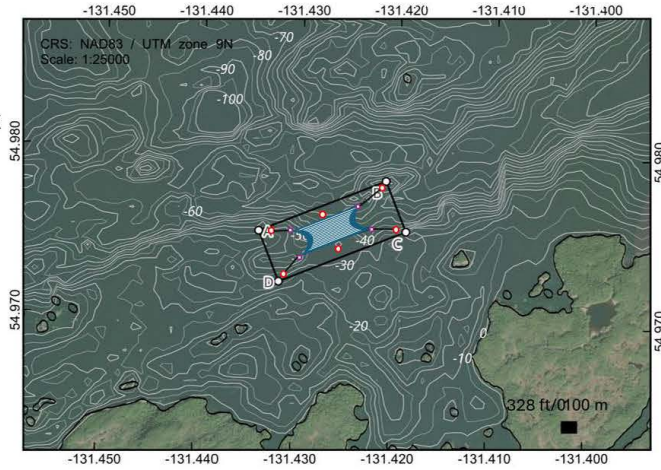
Lease Area: Suspended Kelp Farm Area
Area: 79.7 Acres
Dimensions: 1,180 ft x 2,942 ft
NW: 54°58.512, -131°26.0382
NE: 54°58.701, -131°25.2618
SE: 54°58.5228, -131°25.1298
SW: 54°58.3332, -131°25.9062

Attachment A Development Plan

Figure 3: Site Plan Map

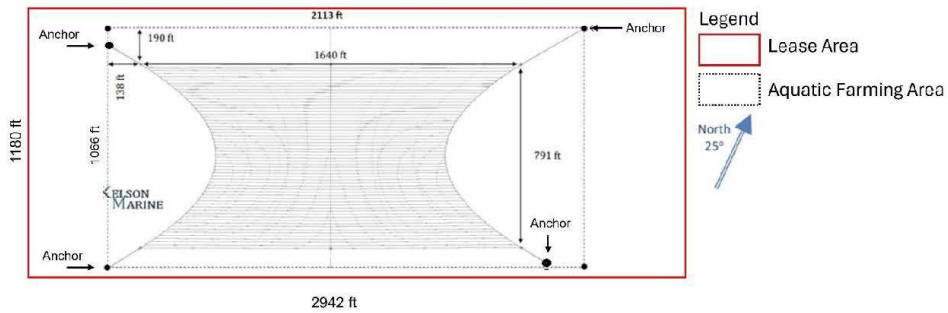
Figure 3
Name: Pacific Kelp Co.
Waterbody: Felice Strait
Region: South of KTN, SE AK
Date: 3/18/24

Key:
 Corner Float
 Anchors
 | Line
 Lease Boundaries



Site plan view at a 1: 25000 scale of the cultivation system. The approximate location of anchors, corner buoys, and line elements are shown within the permit area that is defined by the white points marked 'A', 'B', 'C', 'D'.

Figure 3: Site Plan Map Supporting Projection Diagram Dimensions



Attachment A Development Plan

Figure 4: Cross Sectional Diagram

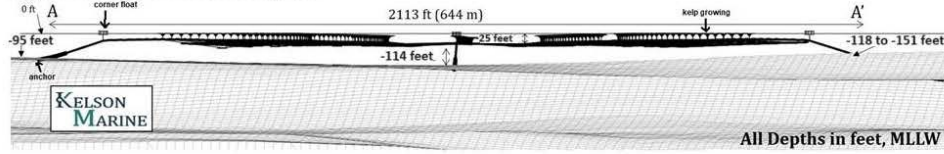
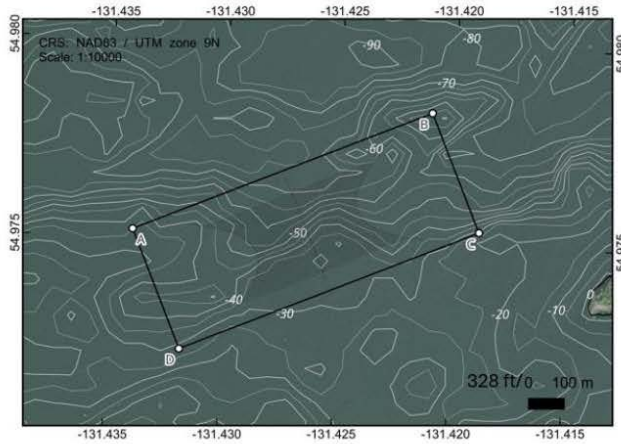


Figure 4A: Cross Sectional Diagram
Name: Pacific Kelp Company
Waterbody: Felice Strait
Region: South of Ketchikan, Southeast AK
Date: 3/22/2024

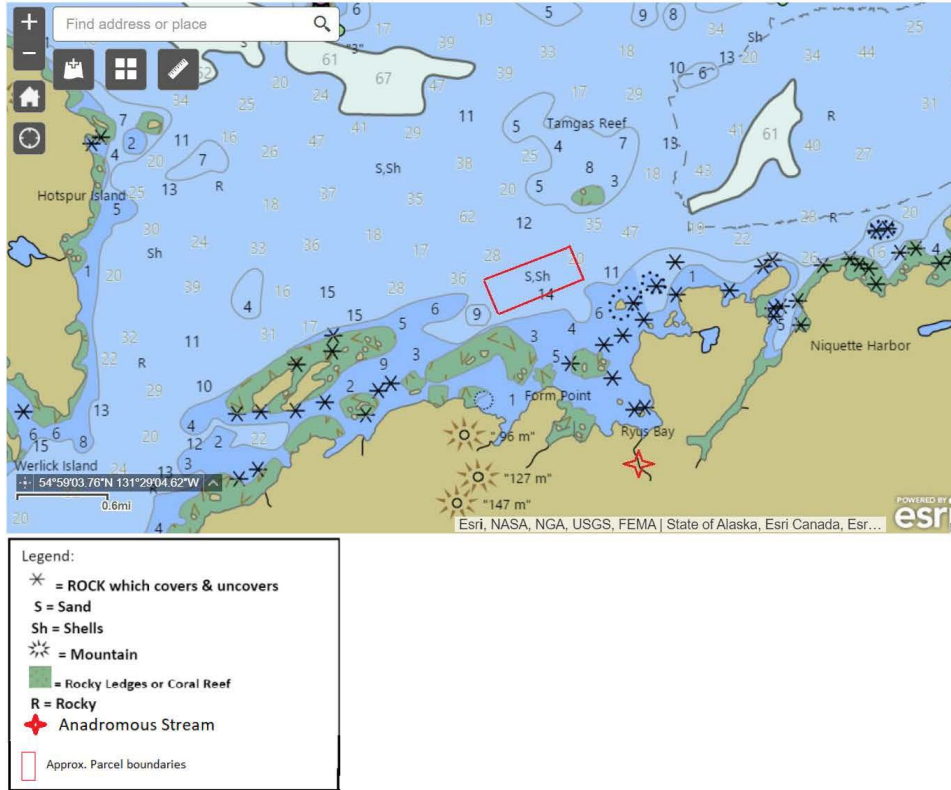
Figure 4B:

NOTE: For bathymetry in relation to site boundary please see below diagram.



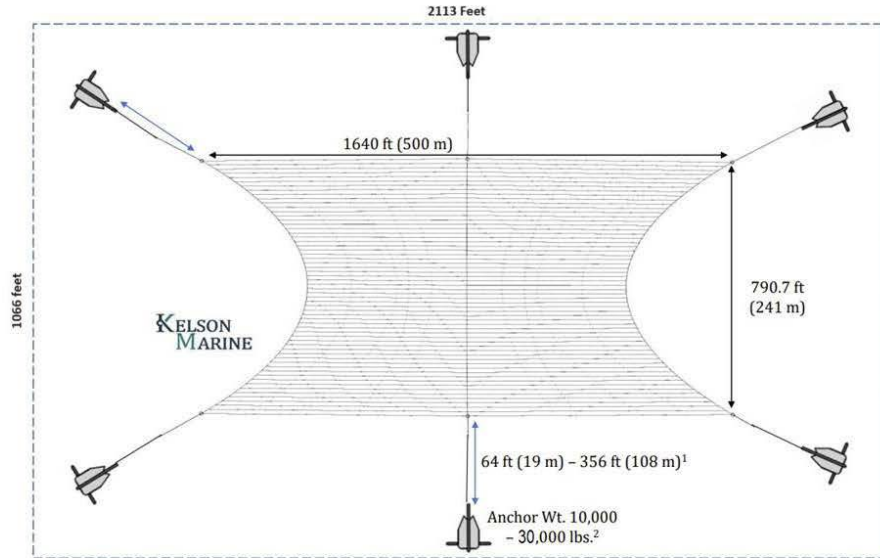
Attachment A Development Plan

Figure 4C: Cross-Sectional Diagram Supporting Information for Major On-Bottom Physical Features

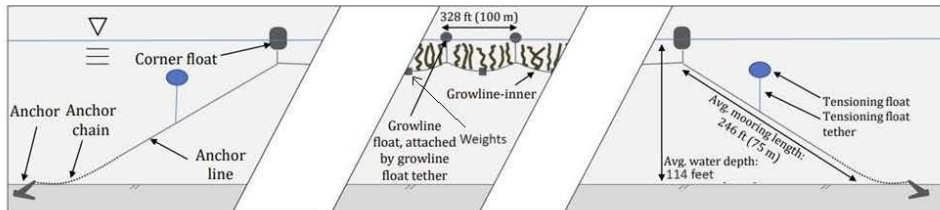


Attachment A Development Plan

Figure 5: Detailed Cross-Sectional Diagrams and Drawings



¹ Anchor distance and mooring length varies as a function of water depth.
² Anchor weights assume high efficiency drag embedment anchors with efficiencies between 37:1 and 52:1



Attachment B
ADF&G Letter



THE STATE
of **ALASKA**
GOVERNOR MICHAEL J. DUNLEAVY

Department of Fish and Game

Division of Commercial Fisheries
Headquarters Office

1255 West 8th Street
P.O. Box 115526
Juneau, Alaska 99811-5526
Main: 907.465.4210
Fax: 907.465.4168
Permit Coordinator: 907.465.4724

January 22, 2024

Kate Dufault
Department of Natural Resources
Southcentral Regional Land Office
Aquatic Farm Leasing Program
550 West 7th Avenue, Suite 900C
Anchorage AK 99501

Re: Alaska Department of Fish and Game updated Agency Review Comments
Stem-Smet / Pacific Kelp Company Aquatic Farm Site Proposal – Felice Strait
DNR File No.: ADL 234188

Dear Ms. Dufault:

The Alaska Department of Fish and Game (ADF&G) has conducted a secondary review of the project proposal, **ADL 234188** relevant to criteria specified in authorizations for Aquatic Farming AS16.40.105 and 5 AAC 41 200-400. *After additional review, the ADF&G Division of Commercial Fisheries Management has concerns and does not support an aquatic farm operation permit at the proposed location due to significant alterations of established uses.* ADF&G would like to meet with the applicant to discuss mitigation measures, compromises or potential relocation of the project to address concerns before moving forward. Any comments from other government agencies or from the public that may impact applicable department provisions will be considered as part of the final department review for an aquatic farm operation permit which will be issued within 30 days of the lease being issued. Recommendations from this additional review are summarized below.

Department Advisory

The Division of Commercial Fisheries provided an initial review of the proposed Pacific Kelp Company lease to cultivate aquatic plants in Felice Strait approximately 28 miles south of Ketchikan, Alaska. The initial review from DCF provided comments stating that there would be little impact to the commercial geoduck fishery, but there would be impact to the commercial sea cucumber fishery. This impact would likely be in the form of limiting or eliminating access to the commercial harvest of sea cucumbers along the northwest corner and along the southwest line extending eastward. Comments regarding access to commercial sea cucumber permit holders on existing aquatic farm sites were referenced, which included the permit holder not limiting or impeding access to an established fishery.

Attachment B ADF&G Letter

Kate Dufault
Department of Natural Resources
Aquatic Farm Proposal ADL 234188 updated ADF&G Agency Review Comments

- 2 -

January 22, 2024

Upon further examination, it was discovered that additional information was overlooked during the initial review. The western half of the proposed aquatic farm site is situated directly over one of the largest commercial geoduck beds in the designated Cat and Dog Island geoduck rotational fishery. The map attached shows the location of ADF&G surveyed transects on documented geoduck clam beds. The guideline harvest level for the Cat and Dog Island geoduck area is 40,300 pounds which at today's market value represents an ex-vessel value of approximately \$400K to the commercial geoduck divers.

The commercial harvest of geoducks involves a vessel anchoring directly above a commercially viable geoduck bed. Divers on the vessel then enter the water with a hookah system, a surface supplied air hose that delivers air or Nitrox air from the surface to the diver on the bottom, as well as a high-pressure water hose connected to compressor at the surface which a diver uses to emulsify the substrate to extract individual geoduck clams. Given the proposed catenary design of the farm site, the amount of lines that will be running parallel to shore at a depth ranging from 13 to 33 feet, and additional anchoring systems in place this will effectively eliminate access to this limited entry commercial fishery in this area.

Additionally, the western portion of the proposed farm site is located directly on an extensive wild *Macrocystis pyrifera* bed. Review and determination criteria (5 AAC 41.240 (a)(1)(E)) require the health and abundance of eelgrass and kelp beds be maintained. It is unsure whether this would be possible with an aquatic farm placed over the wild kelp bed. The ability to differentiate between wild and cultivated *Macrocystis* that will be sold would be questionable, although not specifically prohibited under AS 16.40.100 or AS 16.40.105.

The proposed aquatic farm site at this location creates a scenario which violates AS 16.40.105 (3).

The Commercial Fisheries staff have several alternative site locations in proximity (all within a 5-mile radius) to the original proposed site that could be potentially viable without disrupting existing well-established fisheries. ADF&G staff are available and would like to meet with the applicant to discuss the potential options.

Our department requests that the Department of Natural Resources consider providing this in their Final Finding and Decision as an advisory to the applicant and for public reference.

Thank you for the opportunity to provide comments on this aquatic farm proposal. If you have any questions, please contact me at (907) 465-4724.

Sincerely,



Michelle Morris
Permit Coordinator

cc: Garold V. Pryor, Aquaculture Section Chief, ADF&G
Nicholas Stern/John Smet, Pacific Kelp Company