

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

**PRELIMINARY BEST INTEREST FINDING
AQUATIC FARMSITE AMENDMENT REQUEST**

**APPLICANT: TOM HENDERSON
ADL #106252**

LOCATION: BIG JOHN BAY AND STEDMAN COVE

The Department of Natural Resources is accepting public comment on the following preliminary decision document for an amendment to an existing aquatic farm site. **Written comments must be received on or before 5:00 p.m., Thursday, September 15, 2011.**

PROPOSED ACTION: The applicant is requesting to increase the existing aquatic farm site by adding a 218 ft. x 400 ft intertidal parcel for geoduck clam culture in Stedman Cove equaling 2.0 acres. The existing farm site is located on the west side of Kupreanof Island, on state-owned tide and submerged lands located in southeast Alaska. The applicant has been successfully culturing Pacific oysters, purple-hinged rock scallops and geoduck clams.

Add back* 4.5 acres to an existing 3.51 acre permitted intertidal beach (Parcel 3) in Big John Bay so that with the proposed expansion, Parcel 3 dimensions would be 435 ft x 800 ft and total 8.01 acres.

***Note:** This additional area was already approved in the operation permit for this farm site, but several years ago Mr. Henderson decided to reduce the acreage of the farm as he wasn't able to use it then and didn't want to pay lease fees. He now needs the relinquished area for planting oyster spat.

With the amendment, the aquatic farm total acreage will increase from 6.06 acres to approximately, 12.56 acres. The proposed added parcels are near his existing aquatic farm located within Stedman Cove and Big John Bay, at the south end of Keku Strait near Kupreanof Island, Southeast Alaska approximately 14.0 nautical miles southeast of the community of Kake, on state-owned tide and submerged lands.

The proposed location is only accessible by boat or floatplane. All support facilities are located at the applicant's current aquatic farm lease adjacent to the proposal. A location map is attached to this decision.

AUTHORITY: AS 38.05.035; AS 38.05.070; AS 38.05.075; AS 38.05.083; AS 38.05.127;
AS 38.05.128; 11 AAC 63.020

This decision addresses and is based on those issues under the authority of the Department of Natural Resources (DNR) under Title 38. While other issues may be addressed that are not within the scope of DNR's responsibilities, this decision's purpose is to determine whether or not to issue a DNR lease and does not make any determinations whatsoever on the issuance of other agency authorizations that are necessary for aquatic farming activities.

ADMINISTRATIVE RECORD: The administrative record for the application submitted is file number ADL 106827.

LOCATION:

USGS MAP COVERAGE: Petersburg C-6

NAUTICAL CHART: 17372

LEGAL DESCRIPTION: Township 58 South, Range 74 East, Copper River Meridian,
And more specifically described as:

Section 34: NE ¼, within Stedman Cove, encompassing a intertidal geoduck clam grow out area measuring 218 feet by 400 feet, according to the drawings attached to this document and labeled as Attachment B, containing approximately 2.0 acres, more or less.

LATITUDE/LONGITUDE:

Parcel 4 - Stedmen Cove site – 218 ft. x 400 ft. = 2.0 acres

NW Corner: 56° 48.153' N, 133° 44.018' W
SE Corner: 56° 48.107' N, 133° 43.934' W
SW Corner: 56° 48.082' N, 133° 43.982' W
NW Corner: 56° 48.128' N, 133° 43.066' W

GEOGRAPHIC: The proposed farmsite is located on state-owned tide and submerged lands in the northeast portion of Stedmen Cove on the west side of Kupreanof Island, in southeast Alaska and approximately 14 miles southeast of the community of Kake.

POLITICAL INFORMATION:

BOROUGH/MUNICIPALITY: This application is outside of an organized borough.

REGIONAL CORPORATION: Sealaska Corporation

FISH AND GAME ADVISORY COMMITTEES: Kake and Sumner Strait Fish and Game Advisory Committees.

TITLE:

ACQUISITION AUTHORITY: Submerged Lands Act of 1953. (P.L. 31, 83rd Congress, First Session; 67 Stat. 29); Equal Footing Doctrine; Section 1 of the Alaska Statehood Act.

TITLE REPORT: A title report was requested on October 12, 2001 (for original lease).

PLANNING AND CLASSIFICATION:

LAND MANAGEMENT PLAN: Central/Southern Southeast Area Plan, Adopted in November 2000.

SURFACE CLASSIFICATION: The Central/Southern Southeast Area Plan classifies state owned tidelands at the proposed location as Public Recreation – Dispersed Use and Wildlife Habitat, under

classification order number CL SE-00-001. These classifications allow for aquatic farming activities.

SURFACE MINERAL ORDERS: The proposed site is open to mineral entry.

SURVEY AND APPRAISAL:

SURVEY: A survey is not required by law before issuing a 10-year negotiated lease. However, the department has the right to require one in the future, at the applicant's expense, if boundary conflicts or disputes over acreage arise.

APPRAISAL: The Division of Mining, Land and Water 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. The applicant has the option to have a site-specific appraisal done, at the applicant's expense, before the lease is issued, if he or she does not wish to use the fee schedule. If an applicant opts for a site-specific appraisal, the division-approved appraisal will establish the rental for the lease and the fee schedule will no longer be an option.

PUBLIC/AGENCY NOTICE AND COMMENTS: Public notice of the proposal has been sent to various newspapers, post offices, agencies, boroughs/cities, native corporations, the general mailing list maintained by DNR, Fish and Game Advisory committees, etc. Public and agency comments are welcome during the comment period and will be considered in the final best interest finding. Only those who provide written comments during the comment period or who testify at a public hearing will be sent a copy of the final best interest finding and will be eligible to appeal. The final best interest finding will include an explanation of the appeal process. The public comment period begins on August 17, 2011 and will end at 5:00 p.m. on September 15, 2011.

The preliminary best interest finding is subject to public comments received during the comment period. The final best interest finding will consider and address any comments related to the subject proposal and will be available on or about October 10, 2011. If significant changes occur to this decision as a result of public comments received, additional notice will be sent to those who provided comments, either in writing or by testifying at a public hearing.

Evaluation by the Alaska Department of Fish and Game

I. Physical and Biological Characteristics: Based on the information provided by the applicant on the site physical and biological characteristics, the proposed sites appear capable of supporting the farm activities proposed. Details listed for the proposed areas are summarized below.

Protection from Oceanographic and Atmospheric Extremes: No physical exposure notes from Alaska ShoreZone imagery mapped data¹ is available for this area. The proposed intertidal farm culture gear has a sound configuration and anchoring system and is comparable to existing farm gear used in Southeastern Alaska that can withstand ocean and atmospheric conditions.

Sufficient Environmental Conditions: The proposed aquatic farm operation project is in an area that appears to have sufficient water exchange, water temperatures, currents, salinity, and primary production to support an aquatic farm and maintain healthy environment for other marine

¹ NOAA (National Oceanic and Atmospheric Administration), Fisheries, National Marine Fisheries Service. Alaska ShoreZone: Coastal Mapping and Imagery. <http://akr-mapping.fakr.noaa.gov/szflex/> (Accessed July 2011).

organisms.

Sufficient Water Depth: Not applicable for the proposed intertidal site parcels and intertidal culture gear.

Eelgrass and Kelp Beds Maintained: Eelgrass and kelp habitats are among some of the most productive and biologically diverse. Among other things, eelgrass and kelp beds helps prevent erosion and maintain stability of near-shore environments and provide food, breeding areas, and protective nurseries for fish, shellfish, crustaceans, and many other animals. Operations must be done in a manner to minimize turbidity in the area and to prevent any trampling or shading that may impact the health and abundance of eelgrass or kelp beds. Alaska ShoreZone imagery data² was not available for this area. Based on the information provided by the applicant, there does not appear to be any eelgrass in the proposed project area. The exact locations and extent of eelgrass beds is not well documented in the area. If health and the abundance of eelgrass beds in the area are not properly maintained, project modifications to the aquatic farm operations permit will be made to correct the condition.

Anadromous Fish Streams: The proposed project site is not located within 300 feet of the mouth of an anadromous fish stream catalogued by ADF&G for various salmon species³. The proposed farm gear structures will not significantly affect fish rearing habitats for salmonids and other marine fishes in the area and will allow adequate fish passage for salmonid adults (chum, coho, and pinks) that may be milling or migrating through the area.

II. Existing Uses not Significantly Altered: The proposed aquatic farm site will not significantly alter an established use defined in regulations as a commercial fishery, sport fishery, personal use fishery, or subsistence fishery.

Commercial Fisheries: This project area is in Commercial Fisheries Division statistical area sub-district 105-32. The proposed aquatic farm site project is not expected to cause any significant alterations to the existing commercial fishery uses in the area. Details on each commercial fishery are listed below.

Geoducks: At present, no geoduck commercial fishery exists in subdistrict #105-32. There are no known conflicts with the geoduck commercial fishery for this site. The nearest fishery, Port Alice/Cone Bay. Geoduck clam wild stock are not known to grow naturally in intertidal areas in Alaska.

Sea cucumber - The commercial sea cucumber dive fishery had landings in this area in 2010.

Red Sea Urchins - No commercial red sea urchin dive fishery takes place in either of these sites.

Salmon - No commercial salmon gillnetting fishery, salmon trolling, purse seining fishery occurred in this area in 2010.

Herring - No herring are known to spawn in this area.

² NOAA (National Oceanic and Atmospheric Administration), Fisheries, National Marine Fisheries Service. Alaska ShoreZone: Coastal Mapping and Imagery. <http://akr-mapping.fakr.noaa.gov/szflex/> (Accessed July 2011).

³Johnson, J. and K. Klein. 2009. Catalog of waters important for spawning, rearing, or migration of anadromous fishes – Southcentral Region, Effective June 1, 2009. Alaska Department of Fish and Game, Special Publication No. 09-03, Anchorage.

Dungeness crab: Commercial landings have occurred for Dungeness crab in ten out of the last ten years showing commercial Dungeness crab harvest. Dungeness harvest (lbs), permits fished, and landings made from statistical area 105-32 for the past ten seasons are shown in Table 9 below:

SEASON	HARVEST	PERMITS FISHED	LANDINGS
2001/02	285,162	18	98
2002/03	442,317	27	171
2003/04	193,174	24	109
2004/05	67,409	12	35
2005/06	48,016	7	22
2006/07	112,305	5	25
2007/08	204,247	13	82
2008/09	344,715	18	92
2009/10	130,014	14	68
2010/11	77,066	10	55
TOTALS	1,904,425	49	757

Aerial surveys of the Dungeness grounds in central and northern Southeast are conducted every June after the commercial fishery opens. An aerial survey of the area conducted in June of 2011 noted the presence of 2 pots in Big John Bay. It is likely that this proposed farm site amendment could have an appreciable impact on commercial Dungeness fisheries and on Dungeness habitat, in Big John Bay. There is a potential conflict from this project on the Dungeness crab commercial fishery. However, the additional acreage for this aquatic farm is not thought to significantly alter this existing use.

Sport Recreational Fishery: The area is not a significant site for Sport Anglers. It is likely that the project area is also used by personal use and subsistence Dungeness fishermen. The Statewide Harvest Survey does tally Dungeness personal use harvest in Southeast but summarizes these data on a wider scale than district or statistical area. Due to their design, oyster farms have not seemed to have significant negative impact on anglers. The proposed aquatic farm site is not expected to cause any significant alterations to the existing sport recreational fishery use.

Subsistence Use: There is a customary and traditional use finding for District 5 north of Cape Pole, so subsistence fishing for Dungeness crab is allowed in Big John Bay. Since no permit system is in place for the personal use or subsistence fisheries, the amount of effort and harvest in the area would be difficult to gauge. The proposed aquatic farm site is not expected to cause any significant alterations to the existing subsistence use.

Anchorage: This area is not known to have any critical vessel anchorages.

III. Compatible with Fish and Wildlife Resources: The proposed aquatic farm site is compatible with fish and wildlife resources in the area.

Predator and Pest Control Methods: Predator exclusion devices to be used at the proposed site are expected to be utilized in a manner that minimizes impacts on non-targeted fish and

wildlife resources in the area.

Sensitive Wildlife: The proposed aquatic farm site is not expected to adversely impact seabird colonies, sea lion haulouts and rookeries, seal haulouts and pupping areas, and walrus haulouts.

Sea Bird Colonies: There are no sea bird colonies identified within 1 mile of the proposed sites.⁴

Eagle Nest: There are no eagle nests within 330 ft of the proposed project site parcels⁵

Sea Mammal Habitat: There are no sea mammal haulouts within 1 mile of the proposed sites⁶.

Endangered species: The proposed aquatic farm site will not adversely impact endangered and threatened species recovery and habitat efforts.

IV. Operation and Development Plan:

Increase Productivity: The operation and development plan for this project sufficiently describes how the operation will improve the productivity of the species intended for culture above what would occur in natural conditions using approved methods. Approved methods include predator exclusion, reduction of competing species, destiny manipulation, import of naturally-produced seed, import of hatchery produced seed, programming harvest to optimize growth and shellfish condition, and habitat improvements.

Note: The applicant provided no information on the operation and development plan for installation schedule for equipment (gear type ie. PVC tubes and numbers) which will be needed for the permit, if approved. The plan indicates that geoduck harvest is projected to occur by the 6th year.

Maintenance: The operation and development plan for this project indicates that support facilities and culture gear and anchoring system will be installed with sufficient anchors and be maintained.

Rotation Schedule: The projected rotation schedule is consistent with the life history of the species intended for culture.

V. Species to be Cultured and Site Suitability

Pacific geoducks (*Panopea abrupta*) are reported to occur from Newport Bay California, north to Kodiak Island⁷, but other sources indicate the northern extreme of the range is Sitka, Alaska⁸. Known geoduck beds in Southeast Alaska are patchily distributed in central and southern Southeast Alaska, Primarily in protected waters near the outside coasts (ADF&G unpublished data).

⁴ U.S. Fish and Wildlife Service, (current year). Beringian Seabird Colony Catalog -- computer database. U.S. Fish and Wildlife Service, Migratory Bird Management, Anchorage, Alaska 99503.

⁵ U.S. Fish and Wildlife Service, Migratory Bird Management. Alaska Bald Eagle Nest Atlas-computer database. 2008.

⁶ Analysis completed by NOAA Fisheries Service, Alaska Region, Protected Resources Division. Specifically, the data used to complete this analysis were provided by researchers from NOAA Fisheries Service, Alaska Fisheries Science Center, and National Marine Mammal Laboratory.

⁷ O'Clair, R. M. and C.E. O'Clair. 1998. Southeast Alaska's Rocky Shores: Animals. Plant Press, Auke Bay, AK. 564 pp.

⁸ Foster. 1991. Intertidal Bivalves. A Guide to Common Bivalves of Alaska. University of Alaska Press. 152 pp.

The patchy distribution results from the habitat requirements of the geoduck, which ranges from the lower intertidal to subtidal areas, to depths of over 110 meters⁹. Geoducks occur in soft mud, sand, or pea gravel substrates, in which adult clams burrow to depths for 1 meter^{10,11}. The applicant description for the proposed intertidal site, Parcel 4, indicated that the substrate was muddy sand with fine sediment.

Based on this information in the application, the proposed site is capable of supporting the activities proposed. The proposed parcels in this aquatic farm operation project are located in an area that will have suitable biological and physical characteristics to culture geoduck clams.

Predation rates decrease with age for geoducks with the highest mortality occurring at the planktonic and early life stages. As the clam digs deeper into the substrate the survival increases. Once established in the substrate, juvenile geoducks are subject to predation by epigenetic fish, Lewis moonsnail (*Euspira lewisii*), worms, sea stars, and crabs. Sea stars such as *Pisaster brevispinus* and *Pcycnopodia helianthoides* can prey on geoducks down to a depths of 24 inches (60 cm), but once adult clams reach normal depths, they are susceptible to only sea otters (*Enhydra lutris*) and humans. Siphon grazing by spiny dogfish (*Squalus acanthia*), cabezon (*Scorpaenichthys marmoratus*) and Halibut (*Hippoglossus stenolepis*) also has been documented (Goodwin and Pease, 1989). Predator netting is highly recommended for geoduck aquatic farm sites. The applicant did not indicate how long the predator exclusion devices be left (PVC and polyethylene mesh netting) in place at the site.

Other species that occur in the substrate with geoducks include tube dwelling polychaete worms, whose tubes serve as attachment points for juvenile geoducks, and horse clam (*Tresus capax*), another clam typically burrows in the substrate to about 18 inches (45 cm).^{12,13} Although they may occur in commercial quantities in some areas, horse clams are not generally harvested commercially.¹⁴, but they are generally harvested for sport.¹⁵ Horse clams removed from the substrate as a result of geoduck harvesting or culture would die, because adult clans are unable to burrow back into the substrate.^{16,17} Other taxa commonly observed on the substrate of geoduck beds include sea urchins (*Strongylocentrotus* spp.), sea cucumbers (*Parastichopus* spp.), and Dungeness crab (*Cancer magister*).

VI. Request for Additional Information

The following information is required:

- 1) An updated operation and development plan that includes the installation schedule for equipment along with type and numbers for the aquatic farm. The plan needs

⁹ Goodwin, C.L. and B. Pease. 1989. Species profiles: Life Histories and environmental requirements of coastal fishes and invertebrates (pacific Northwest) – Pacific geoduck clam. U.S. Fish and Wildlife Service Biol. Report 82(11.120). Us Army Corps of Engineers, TR EL-82-4. 14 pp.

¹⁰ Goodwin, C.L. and B. Pease. 1989. Species profiles: Life Histories and environmental requirements of coastal fishes and invertebrates (pacific Northwest) – Pacific geoduck clam. U.S. Fish and Wildlife Service Biol. Report 82(11.120). Us Army Corps of Engineers, TR EL-82-4. 14 pp.

¹¹ Gordon, D.G. 1996. Field Guide to the Geoduck. Sasquatch Books, Seattle. 48 pp.

¹² Goodwin, C.L. and B. Pease. 1989. Species profiles: Life Histories and environmental requirements of coastal fishes and invertebrates (pacific Northwest) – Pacific geoduck clam. U.S. Fish and Wildlife Service Biol. Report 82(11.120). Us Army Corps of Engineers, TR EL-82-4. 14 pp.

¹³ Gordon, D.G. 1996. Field Guide to the Geoduck. Sasquatch Books, Seattle. 48 pp.

¹⁴ Quayle, D. B. and N. Bourne. 1972. The clam fisheries of British Columbia. Fisheries Research Board of Canada. Ottawa.

¹⁵ Feder, H. M. and A. J. Paul. 1974. Alaska Clams: A Resource for the Future. Alaska Seas and Coasts, Vol. 2:1. February 15, 1974. Sea Grant/Marine Advisory Program. University of Alaska Fairbanks, Fairbanks, AK.

¹⁶ Quayle, D. B. and N. Bourne. 1972. The clam fisheries of British Columbia. Fisheries Research Board of Canada. Ottawa.

¹⁷ O'Clair, R. M. and C.E. O'Clair. 1998. Southeast Alaska's Rocky Shores: Animals. Plant Press, Auke Bay, AK. 564 pp.

to include projected production for both existing and the proposed parcels for geoducks.

- 2) How long will the applicants leave the predator exclusion devices (PVC and polyethylene mesh netting) in place at the site?

ENVIRONMENTAL RISK ASSESSMENT: The applicant has submitted a signed environmental risk questionnaire. The questionnaire asks for information on potentially hazardous materials, such as plans for onsite storage of fuel or chemicals. The applicant has indicated that no on-site use, storage, transport, disposal, or otherwise, of any petroleum products will be used during the course of the proposed activities.

BONDING AND INSURANCE:

BONDING: Bonding, or another form of security, is required under AS 38.05.083 and 11 AAC 63.080. The bond must cover the costs of site cleanup and restoration, any associated cleanup costs after termination of the lease, including any unpaid rentals or other obligations accruing until site restoration is complete. The regulations require the minimum security amount of \$2,500 (or \$1,250 with an association bond) for an aquatic farm lease. Factors such as location and amount of improvements at the site are taken into consideration when the bond amount is determined. Please refer to the Recommendation section at the end of this decision for the bond amount that was determined appropriate for this proposal.

INSURANCE: At this time the DNR does not require this type of activity to have general liability insurance. General liability insurance may be required in the future depending on the aquatic farming operations and the procedures of the department at the time changes are made to the lease or a renewal lease is issued. The lessee is responsible for acquiring other types of insurance, such as Workman's Compensation Insurance that may be required under other local/state/federal laws.

POTENTIAL CONFLICTS/PENDING INTERESTS: The uplands are within the Petersburg Ranger District of the Tongass National Forest, owned and managed by the U.S. Forest Service. The proposal may not be compatible with the management intent for the uplands as described in the Tongass Land and Resource Management Plan. Please refer to the sections below entitled - Upland Owner/Management Intent and Considerations.

There are no known pending interests at the location of the proposal.

TRADITIONAL USE FINDING: Information available at this time suggests that the proposed aquatic farm would not disrupt traditional and/or existing uses of the area, such as commercial and sport fishing, subsistence activities, boat travel, and recreation. Through agency and public input, more traditional and existing use information may surface. If such information becomes available, any potential and/or existing conflicts will be addressed in the final best interest finding.

CENTRAL/SOUTHERN SOUTHEAST AREA PLAN INFORMATION SPECIFIC TO THIS PROPOSAL:

This proposal lies within Region 2, Kuiu/West Kupreanof – North, subunit UT-07. The designations for this subunit are Habitat, Harvest, and Public Recreation-Dispersed Use. These areas are to be managed so that their principle resources are protected. DNR will rely on the expertise of DFG biologists concerning impacts the proposal may have to the habitat and harvest values in this area.

The plan identifies the resources and/or uses within the subunit as waterfowl/shorebird and black bear

concentrations, salmon rearing and schooling, community harvest, anchorage, heritage sites, and extensive area of estuarine wetlands. Subsistence harvesting on tidelands involves invertebrate and intertidal gathering as well as salmon and other finfish harvesting. Most of the harvesting activities occur in southern Kupreanof Island and southeastern Kuiu Island, tending to concentrate in the larger bays of both areas.

Areas are listed in the plan that were determined to be inappropriate for aquatic farming activities and, therefore, are prohibited. This proposal does not lie within any of the prohibited areas. During the planning process, locations deemed appropriate for aquatic farming activities were coordinated with the U.S. Forest Service where state tide and submerged lands adjoin the Tongass National Forest.

In order to be consistent with the plan's management goals described above, measures have been developed to mitigate impacts the proposal may have to the valuable resources identified in the plan. Again, please refer to the Considerations section at the end of this decision for a listing of these measures.

Upland Owner/Management Intent: The uplands adjacent to the proposal are within the Petersburg Ranger District of the Tongass National Forest, owned and managed by the U.S. Forest Service. The Tongass National Forest Land and Resource Management Plan designates the adjacent uplands as Semi-Remote Recreation, which objective is to manage to provide for recreation and tourism in natural-appearing settings where opportunities for solitude and self-reliance are moderate to high. In accordance with the Central/Southern Southeast Area Plan, the Forest Service will be consulted to determine if the proposal is consistent with the management intent of their plan.

CONSIDERATIONS: The following criteria, set out in 11 AAC 63.050(b), has been considered and represents what is known at this time:

Land Management: There are no known land management policies or designations, other than those in the Central/Southern Southeast Area Plan and potentially the Tongass National Forest Land and Resource Management Plan that may impact this proposal. Measures taken to mitigate impacts on the resources identified in the above-mentioned plans are listed below.

Pending/Existing Uses:

1. There are no known pending use conflicts or potential impacts to nearby communities or residential land due to the placement of this farm at the proposed location.
2. Information available at this time suggests that placement of an aquatic farm at this location would not disrupt the traditional and existing uses of the site for use as an anchorage, commercial and sport fishing, recreation, and tourism.

Issuing an amendment to the lease for the aquatic farm would not compete with commercial and sport fisheries as access to those resources being sought after would be protected and stipulated in any resultant lease agreement.

In order to inform the public of their continued access rights, any resultant lease would stipulate the requirement that signs be posted with information that informs the public of their rights of access through the farmsite as well as access to those fish and wildlife resources not being cultured at the aquatic farmsite.

3. There are no historic and cultural resources known to exist in the area.

4. There are no commercial or industrial facilities known to exist in the area.

Public Access: Public access will be protected in accordance with 11 AAC 63.050(b)(6) and 11 AAC 53 and will be addressed in any resultant lease agreement.

Public Trust Doctrine: Any resultant lease agreement is subject to the principles of the Public Trust Doctrine in order to protect the public's right to use navigable waters and the land beneath them for navigation, commerce, fishing, and other purposes.

Mitigation Measures: In addition to the mitigation measures identified above under Pending/Existing Uses, paragraph 2, any resultant lease may include additional stipulations necessary to mitigate conflicts identified during the public/agency comment period

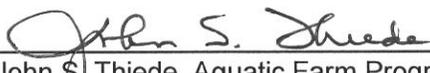
Social, Economic, and Environmental Concerns: There are no known significant social, economic, and environmental effects from the placement of this proposal.

Surface Area: The proposal does not encumber more than a third of the surface area of a bay, bight, or cove in accordance with 11 AAC 63.050(c).

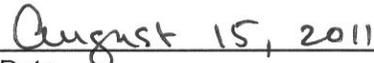
Aquatic farm sites have the opportunity to increase income and diversify the state's economy by utilizing state tide and submerged lands for this purpose. The advantage of issuing this lease on state owned tide and submerged lands is the continued employment opportunities as well as any secondary jobs created or increased from businesses involved in marketing, transport or sale of the farmed products.

After researching this proposal there seems to be no obvious disadvantages in issuing this activity on state owned tide and submerged lands. The public should be aware that access through the site, as well as access to any of the common property resources not being cultured at the site are public uses that remain intact. Therefore, and as mentioned above, any resultant lease would stipulate the requirement that signs be posted informing the public of their rights at the aquatic farm site.

RECOMMENDATION: Considering the information known at this time and described within this decision, it appears to be in the state's best interest to approve the amendment request for approximately 2.0 acres more or less to the applicant for an intertidal geoduck clam grow-out area associated with the existing aquatic farm in Big John Bay and Stedman Cove. Any resultant lease will include stipulations that may be identified as a result of public comments. The current security bond will remain at \$2,500 or \$1250 with an association bond.



John S. Thiede, Aquatic Farm Program Manager



Date

PEARL OF ALASKA GEODUCK FARM- DESCRIPTION

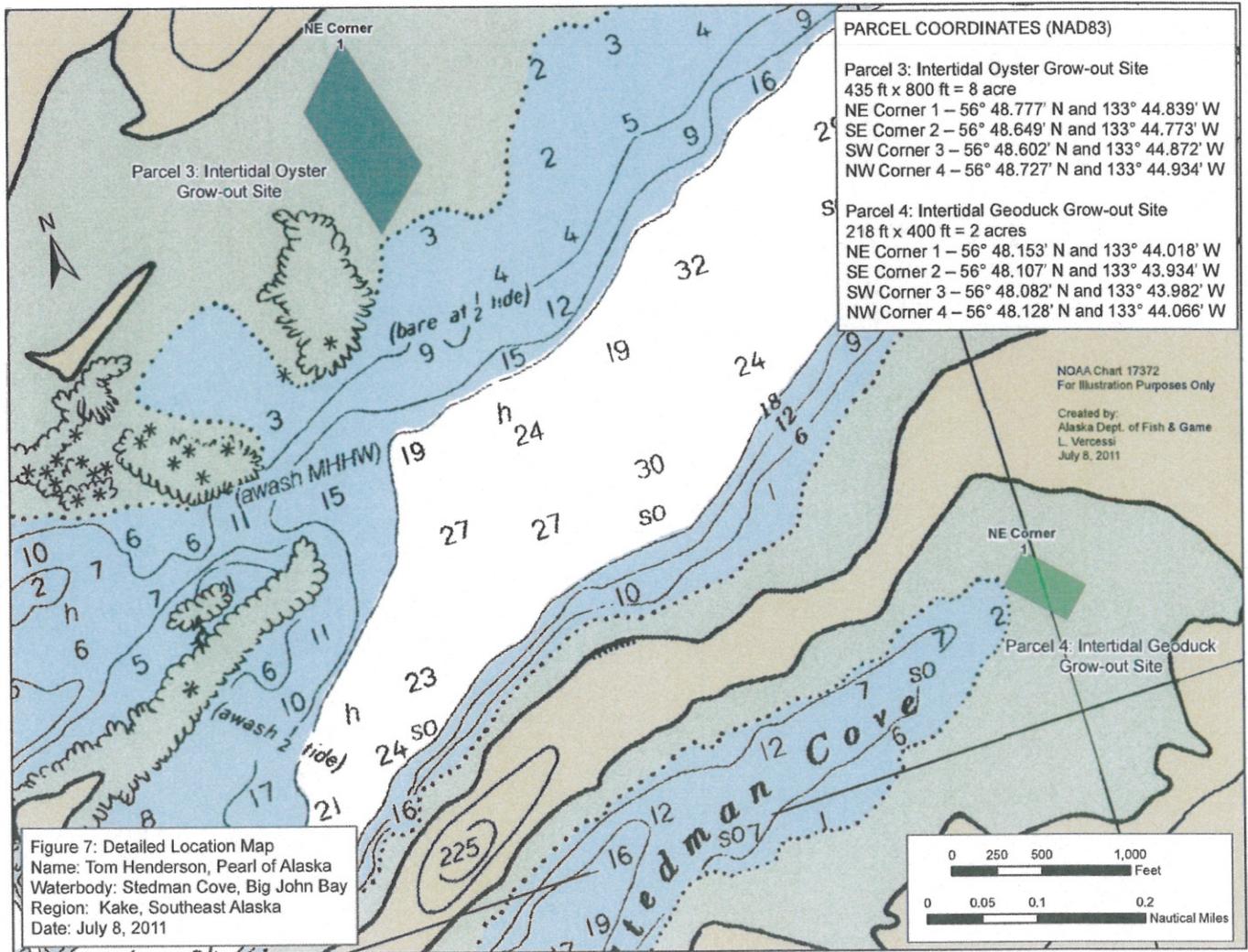
Parcel 4

Geoduck spat will be planted within Stedman Cove in the area indicated on figures 2, 3 & 4. The area elevation is approximately -2 ft (two feet below MLW). The substrate is muddy sand with fine sediment on the surface. A few small patches of macro-algae grow wherever a rock or other solid substrate is located.

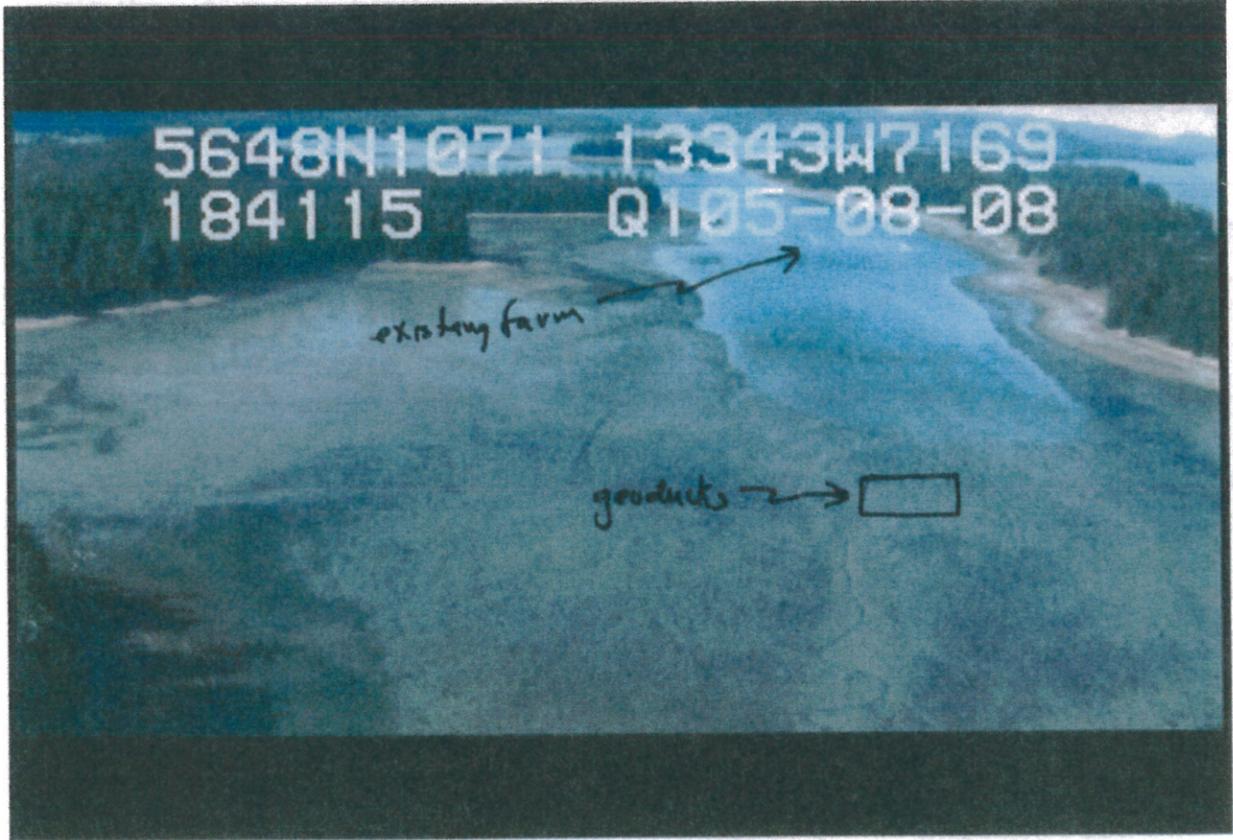
Scattered horse clams can be found throughout the site. No other large bivalves are present, though the typical mix of worms and other invertebrates can be found below the surface. The proposed site is well above the normal location of dungeness crab which are fished at the western end of the cove. The elevation of the site precludes it as a viable boat anchorage.

Spat will be transferred to this growout site after four to 16 months in nursery trays from the Stedman Cove geoduck nursery. Spat will be planted in 6" diameter pvc pipes about 20" in length, pushed in the sediment of the grow out area. Pipes may be covered with polyethylene mesh netting to prevent predation.

It is estimated that 50% of the spat will survive to approximately 2lb.s within six years, at which time sales may commence.



90-04-AF-SE



Approximate location of
gooduck planting.

Stedman Cove

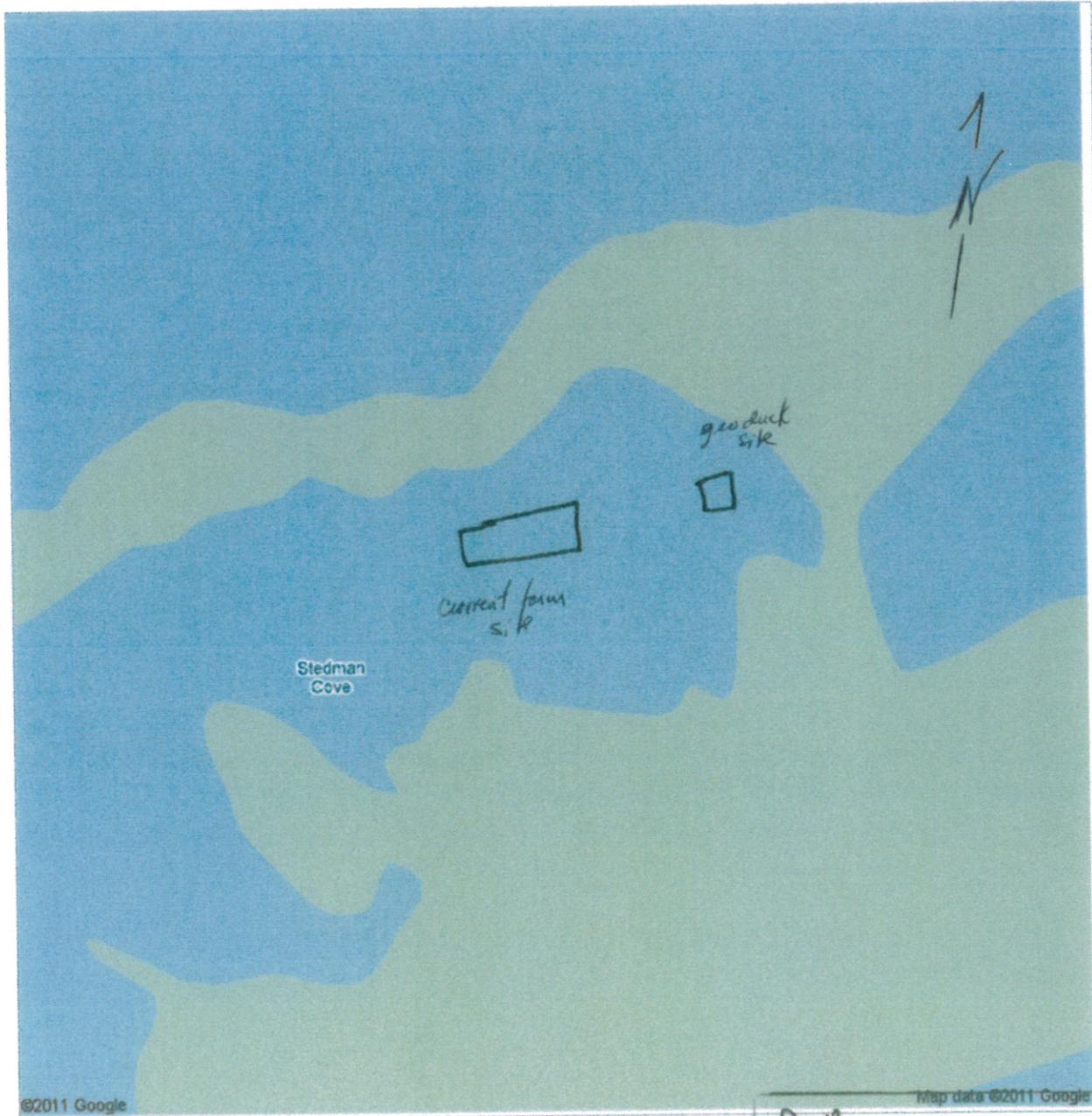
Tom Henderson

PoA
~~Fig. 2~~
 Stedman Cove - Parcel 4
 Gooduck Farm Location
 4/4/11

Google maps

Loading...

Get Google Maps on your phone
 Text the word "GMAPS" to 466453

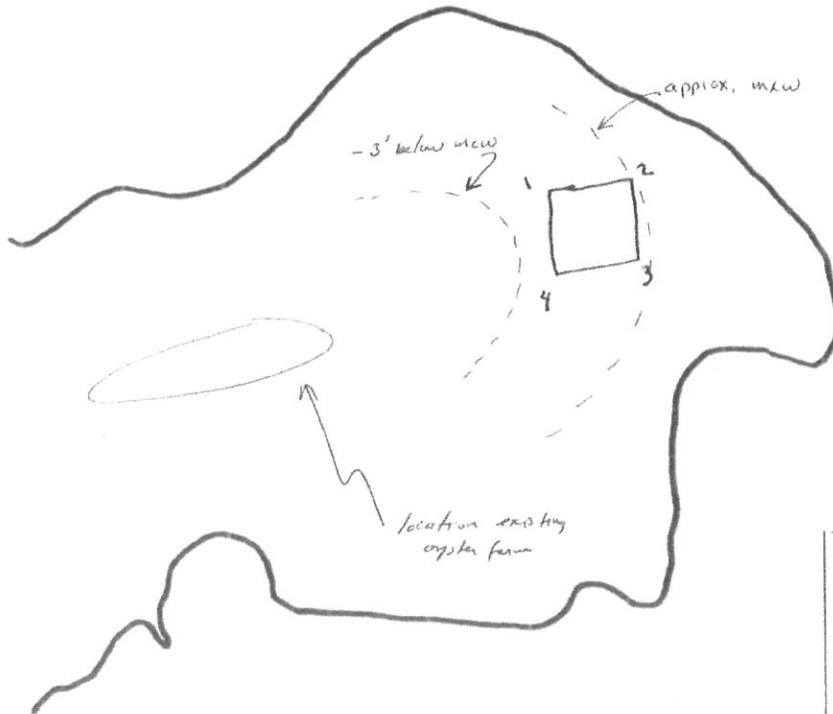



POA
 Fig 3
 Stedman Cove
 Geoduck Farm-Map
 Parcel 4

90-04-AF-SE



corners		
1	56 48.015N	133 44.286W
2	56 48.153N	133 44.018W
3	56 48.107N	133 43.934W
4	56 47.969N	133 44.202W



Parcel 4

East End
Stedman Cove

Point of Alaska
Fig. 4
Stedman Cove
Goodluck location map

Tom Henderson

90-04-AK-5E

Overhead View

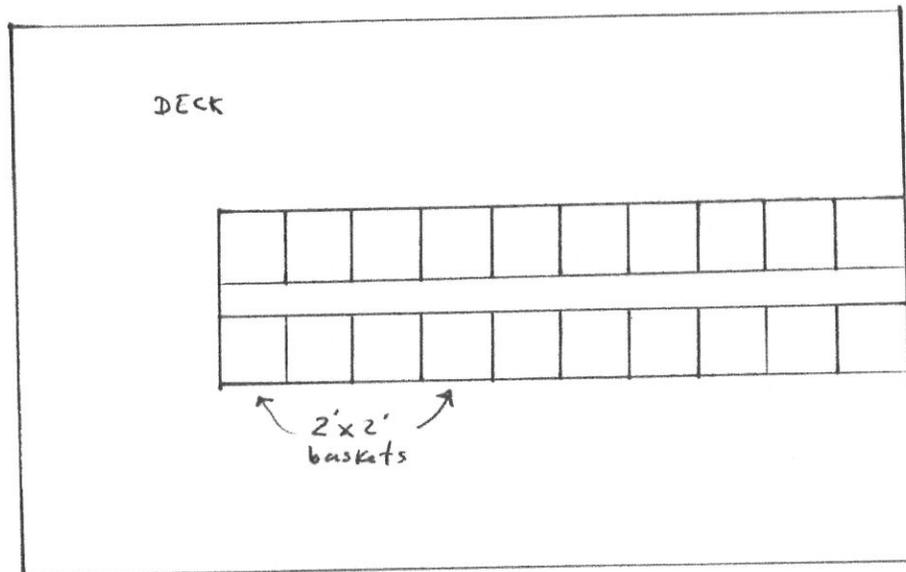


Fig. 5
Geoduck Nursery
Stedman Cove
4/4/11

Tom Henderson

90-04-SE-AK

1"=1'

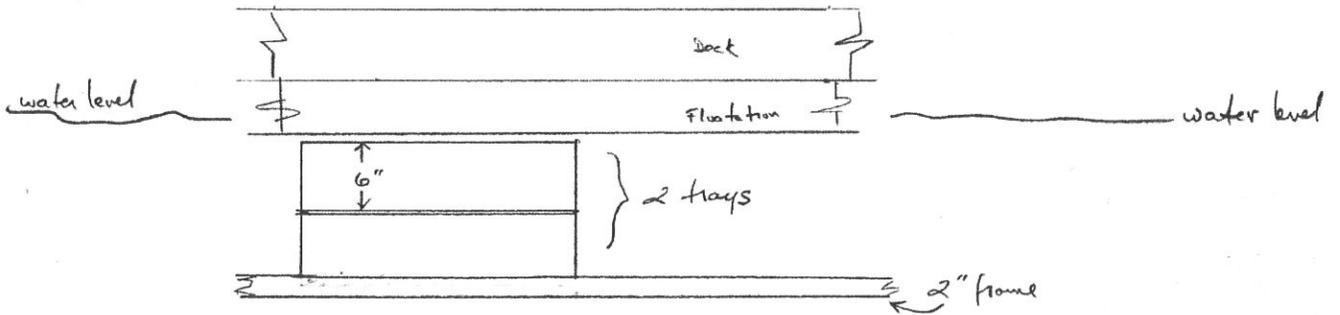


Fig. 6

cross section - elevation

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