ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672
5483 SRES SB 482 (file 2)

Governor Steve Cowper:

We the undersigned are dreadfully concerned about the potential destruction of Alaska's healthiest natural fisheries resource's and therefore want you to vote **AGAINST** any legislation which would allow the establishment of a **PEN-REARED SALMON** Industry **in ALASKA**.

We feel that due to the number of questions and uncertainties that pen-reared fin fish pose, allowing or encouraging its existence in Alaska will destroy years of work and effort as well as effect the community we live in. At this time, we feel that pen-reared salmon are not in the best interest of the State. We have a healthy and vigorous commercial fishing industry, an industry that directly bolsters the Eagle River-Chugiak economy by many millions of dollars annually. How many millions of dollars will Pen-reared salmon bring to our community if we lose our most important natural resource?

Print Name	Signature	Address	Phone #
Ken Duffus	Ken Duffus	10052 Bathin St, Eagle River	694-2359
Dea Crewdson	Dea L. Crewdson	4014 Westwood Dr Anch 99517	243-1358
Greg Bowdish	[illegible]	3601 E 75th Ct Anch 99518	344-4356
Desiree Gorsuke	[illegible]	4939 Castle Ct. 99508	337-2596
Michelle Grube	Michelle Grube	4331 MacAlister 99575	248-7711
Tina Smith	Tina Smith	P.O. Box 240553 99524	564-2718
Nancy Lamoreaux	Nancy Lamo	7040 Viburnum Dr. 99507	522-8553
Barbara Boduch	Barbara Boduch	10224 Jamestown 99507	349-7976
Linda J. Lindquist	Linda J. Lindquist	14508 Don Cir E.R. 99577	696-3733

North Pacific Fisheries Association, Inc.

HEADQUARTERS:

BOX 796 • HOMER ALASKA 99603

March 4, 1988

Senator Richard Eliason
Alaska State Legislature
Pouch V (MS311)
Juneau, AK 99811

Dear Senator Eliason:

This letter addresses Senate Bill No. 482.

NPFA supports the idea of allowing shellfish and aquatic plant mariculture to go forward. We feel that a major concern, the siting process, needs to be strengthened in the present bill. We suggest that Senator Jones' Bill 425 addresses these problems and we would appreciate the "Identification of Sites for Aquataic Farms and Hatcheries" portion of Bill 425 be included in SB 482.

We can support fin-fishing farming only in completely enclosed fresh water systems. A further concern is due to the major problems and unanswered questions about genetic pollution and disease in pen-farmed salmon. We would like to allow fin-fish farming to take place only under the conditions that the present moratorium allows. Our intent is to allow no fin-fish farming in bodies of water that have outlets to either the ocean or other fresh water systems in the State.

We support laws that would require fish farmers to prove to the State that they have proper disposal methods and equipment available. We would like additional language dealing with the problem of dumping diseased fish. The hatchery system in Alaska has only dealt with diseased eggs and smolts. Finding ways to dispose of tons of diseased four to eight pound fish is another matter all together and has developed into a major problem in Canada. The experience in British Columbia has shown that the disposed diseased fish have occasionally been disposed of in the ocean, and on a regular basis have been thrown into open landfills. We would like ADF&G to address the proper disposal of large quantities of diseased fish and require the fish farmers to submit a contingency plan when they are issued a permit.

We would support an amendment to this Bill that would limit the quantity of fin-fish that a single farm could produce. Some countries have limited farm size to 70 metric tons in order to prevent the industry from being taken over by

large corporations. Individual businessmen and communities are then targeted to benefit by the industry. This in not government interference. Alaska has always restricted salmon entry permit holders to fish in only one area. A salmon boat may not fish in two areas. This law has kept the salmon fishery in the hands of the maximum number in individuals and has succeeded in allowing coastal communities to benefit from the resource.

You may be aware that the Kodiak Mariculture Association supports a split mariculture bill. I include for you their article from the latest edition of The Kodiak Fisherman. The last paragraph of the article addressed this bill. Also I include some articles that address problems of diseased drug-filled fish being put on the consumer market with photos of improperly disposed fish.

We appreciate your efforts to write legislation that will safeguard Alaska's wild salmon and ecosystem while also allowing mariculture to exist in Alaska. We recognize what a major step for our coastlines this legislation represents and if NPFA can be of any help to you in the future, please contact us.

Sincerely,

Sonja Corazza

Sonja Corazza
NPFA UFA Delegate and Secretary

Alaska Environmental Lobby, Inc.

P.O. Box 22151 Juneau, Alaska 99802 907-586-2345

March 3, 1988

Senator Dick Eliason
Alaska State Legislature
Pouch V
Juneau, Alaska 99811

Dear Senator Eliason:

The Alaska Environmental Lobby would like to take this opportunity to comment on SB 482, relating to farming of aquatic plants and animals. We would like to extend our thanks to you and your staff for the effort you have put into this issue. In general, we support the major components of the bill and feel that it addresses many of the public concerns raised during the previous hearings on the mariculture issue.

Though we support many aspects of the bill, we feel further clarification and additional language is necessary to fully address public concerns. The use and development of state tidelands is an important issue for us. While we are pleased to see mariculture-permitting criteria outlined in the bill, we must register concern that the land use and tideland uses are not as directly addressed. Our major concern is the lack of regional perspective in the current land use planning system. We feel the bill should include a directive to initiate tideland use studies and comprehensive regional planning to minimize use conflicts and to address cumulative impacts.

Legislation should also clearly outline siting criteria and provide guidelines for planning and development. Planning should include scoping sessions to identify areas that should be excluded from development and to direct activities toward previously developed areas and private lands of interested parties. There needs to be statutory prohibition on development of tidelands adjacent to sensitive areas such as wilderness, state parks, important subsistence areas, and anadromous fish streams. Additionally, Critical Habitat Areas, popular recreation areas, bird rookeries, marine mammal haul outs, and estuarine habitat for shellfish and benthic organisms need to be given special consideration to minimize negative impacts.

DNR should adopt regulations that provide guidelines and specific siting criteria to minimize these conflicts and environmental impacts. Guidelines should include requirements for minimum distance between facilities and a limit on the number and size of facilities. Potential development sites within a given area should be nominated by districts and addressed in a thorough public review process. We firmly believe that thorough public participation is necessary to address the cumulative effects of development and minimize conflicts for users of tidelands and navigable waters. It will also afford industry the certainty that sites being considered do not have public opposition. DNR currently has the regulatory authority to address our

concerns but we feel establishment of specific guidelines and siting criteria are needed to refine current policy in order to avoid scenarios similar to the Kelp Bay Lodge and Susitna Valley Timber Sale incidences.

Additionally, we support the establishment of standards and conditions for aquatic farms, including restrictions on the use of chemicals. These standards should also include guidelines for size and type of facility, distance separation between facilities, water depth, currents, tides, flushing capacity, and requirements for training and certification of chemical handlers, and requirements for record keeping and testing. We are concerned that currently DEC would not have the capacity to adequately monitor and enforce these regulations.

Listed below are some proposed amendments to SB 482 that we feel would help tighten up and further define the permitting and leasing process.

Page 2 Line 2 — after "finfish" insert "except on private property with no outlet to public waters"

This would prevent development of land-based mariculture facilities and potential impacts on public water resources.

Page 2 Line 20 — after "include" insert "a commitment bond, and"

Page 2 Line 22 — after "issued" insert ", and authority for the commissioner to revoke permits if development is not proceeding as proposed"

Page 3 Line 21 — after "commissioner" replace "may" with "shall"

Page 5 Line 6 — after "department" replace "may" with "shall"

Page 5 Line 28 — after "agency or a" insert "state certified"

Page 12 Line 9 — Insert Sec. 38.05.855. "IDENTIFICATION OF SITES FOR AQUATIC FARMS AND HATCHERIES." See attachment A.

This should be included to strengthen land use planning.

Page 12 Line 12-13 — after "operations" insert "at a site identified under AS 38.05.855(d). A permit under this section shall be issued by lottery"

Page 12 Line 13 — after "value" delete "of the permit"

We recommend the following amendment taken from SB 425 to ensure local public participation in the planning process.

Page 12 Line 26 — "The commissioner shall hold a public hearing in each district identified under AS 38.05.855 within 30 days after giving notice of a preliminary finding under AS 38.05.035(e) and 38.05.855(c) concerning sites for aquatic farms and related hatcheries"

Page 12 Line 26 after "commissioner" delete "may"

Page 12 Line 26-27 after "hearing" delete "if necessary to take testimony"

Page 13 Line 5 "commissioner shall require..."
This is a technical amendment.

Page 13 Line 8 Section (f) should be deleted if above amendments are adopted.

Page 14 Line 3 after "Sec. 21" add "AS 43 is amended by adding a new chapter to read: ...." Add aquatic farm products tax. See attachment B.

Page 14 Line 3 after "Sec." replace "21" with "22"

The following list of citations requires further clarification.

Page 12 Line 2 Clarify (c). Does changing the use by the assignee include increasing the size of the development?
We are concerned that this may have the potential to allow site takeover by a larger company and expansion of the existing project beyond initial intent.

Page 12 Line 5 The meaning of "performance bond" is not clear in this context.
Lessees should post a clean-up bond to ensure site rehabilitation in case of site abandonment.

Page 13 Line 5 The meaning of "performance bond" is not clear in this context.
Permittees should be required to post a commitment bond, development schedules, and clean-up bonds.

Finally, the agencies lack funding to adequately carry out the mandates of this bill. Where will the additional monies for testing, monitoring, enforcement, and permitting come from? A tax levied on the mariculture industry would provide a source of funds for the future but would not solve current agency funding needs.

We appreciate the time and effort you and your staff have put into developing workable solutions to this issue. We would like to continue working with your office. Please let us know if we can provide you further assistance.

Sincerely,

Gail Gatton
Executive Director

Kelly Kavanaugh
AEL Assistant

Laura Dameron
Mariculture Coordinator

(5) "fishery resource" means finfish, shellfish and fish by-products, including but not limited to salmon, halibut, herring, flounder, crab, clam, cod, shrimp, and pollack, that are not aquatic farm products as defined in AS 08.06.900;

* ~~Sec. 24.~~ AS 43 is amended by adding a new chapter to read:

CHAPTER 77. AQUATIC FARM PRODUCTS TAX.

Sec. 43.77.005. POLICY AND PURPOSE. It is the policy of the state to ensure a fair return to the state for the use of public water and tideland by aquatic farm businesses. The purpose of the aquatic farm product tax is to provide a mechanism for compensating the state for the use of these common property resources, for covering the cost of state services for the aquatic farming industry, and for ensuring that local governments have the financial resources to provide support services to aquatic farms.

Sec. 43.77.010. AQUATIC FARM PRODUCTS TAX. (a) A person licensed under AS 08.06.010 is liable for and shall pay the tax levied by this section on the value of each of the following aquatic farm products sold, consigned, or otherwise transferred during the year at the rate set out after each:

(1) aquatic farm finfish -- three percent;

(2) aquatic farm shellfish and aquatic farm sea vegetables -- two percent; and

(3) aquatic farm experimental species designated under AS 08.06.085 -- one percent.

(b) A person is not liable for the tax under (a) of this section for an aquatic farm product that

(1) is sold, consigned, or otherwise transferred by the taxpayer for the purpose of sale or resale by another for consumption within the state; and

Attachment B

(2) before the sale, consignment, or transfer by the taxpayer, is not processed beyond heading, gutting, cleaning, or shucking.

Sec. 43.77.020. FILING RETURN AND PAYMENT OF TAX. A person subject to the tax under AS 43.77.010 shall file a return, pay the tax, keep records, and provide information required by the department in the same manner as provided for the fisheries business tax under AS 43.75.030. All other provisions of AS 43.75.030 apply to this section, as appropriate.

Sec. 43.77.030. SECURITY FOR COLLECTION OF TAXES. Each applicant for a license under AS 08.06.010 shall, in or with the application, state under oath the amount of each of the aquatic farm products that the applicant expects to produce during the license year. The applicant shall further state the extent of lienable real property owned by the applicant in the state against which the tax under AS 43.77.010 may be collected, and other information with respect to description, location, and value of the property that the department specifies. If the lienable value of the property is not equal to three times the amount of the tax for which the applicant will probably be liable under this section, the Department of Commerce and Economic Development may not issue the license until the applicant files with the department a surety bond approved by the attorney general in a penal sum equal to twice the probable amount of the tax for which the applicant will be liable, conditioned upon payment of the tax in full when due, with interest if not paid before delinquency. The department may waive the bond requirement if the applicant posts other security in the form of collateral acceptable to the department, or prepays the estimated tax.

Sec. 43.77.040. REFUNDS TO LOCAL GOVERNMENTS. The commissioner

of revenue shall make refunds of the aquatic farm products tax to local governments in the same manner and in the same percentages as provided for refunds of the fisheries business tax under AS 43.75.-130(a).

Sec. 43.77.100. DEFINITIONS. In this chapter, unless the context indicates otherwise,

(1) "aquatic farm product" has the meaning given in AS 08.-06.900;

(2) "processing" means the preparation of aquatic farm products for marketing by cleaning, gutting, heading, filleting, freezing, canning, cooking, salting, shucking, smoking, or other methods;

(3) "value" means the market value of an aquatic farm product when taken from the water before processing or exporting from the state, or otherwise transferring from the ownership of the aquatic farmer for the ultimate purpose of processing or exporting from the state.

* Sec. 25. AS 16.05.340(a)(14) is repealed.

* Sec. 26. AS 08.06.012 is repealed.

* Sec. 27. Sections 1 - 25 of this Act take effect July 1, 1988.

* Sec. 28. Section 26 of this Act takes effect July 1, 1993.

farm products as defined in AS 03.06.900;

* Sec. 13. AS 38.05 is amended by adding a new section to read:

Sec. 38.05.088. AQUATIC FARM PERMITTEE'S LEASING PREFERENCE. Before offering to the public for lease a site that has been developed for aquatic farming or related hatchery activities under a permit issued under AS 38.05.856, the commissioner shall offer the site for leasing to the permittee at not less than its appraised fair market value.

* Sec. 14. AS 38.05 is amended by adding new sections to read:

Sec. 38.05.855. IDENTIFICATION OF SITES FOR AQUATIC FARMS AND HATCHERIES. (a) The commissioner, in consultation with the commissioner of fish and game, shall identify districts in the state within which sites may be selected for the establishment and operation of aquatic farms and related hatcheries required to have a permit under AS 08.06.010.

(b) The commissioner shall issue a call for nominations for each district identified under (a) of this section. A call for nominations shall invite interested persons and municipalities to identify sites within the district that are suitable for aquatic farms and related hatcheries.

(c) Based on comments received under (b) of this section, and after consultation with the commissioner of fish and game, the commissioner of environmental conservation, and the commissioner of commerce and economic development, the commissioner shall make a preliminary written finding under AS 38.05.035(e) that proposes sites in each district for which permits may be issued under AS 38.05.856.

(d) After notice is given under AS 38.05.945 and a hearing is held under AS 38.05.946(b), the commissioner shall issue a final written finding under AS 38.05.035(e) that identifies sites in each

Attachment A

district for which permits shall be issued under AS 38.05.856 and that specifies conditions and limitations for the development of each site.

Sec. 38.05.856. TIDELAND AND LAND USE PERMITS FOR AQUATIC FARMING. (a) The commissioner shall issue a tideland or land use permit for the establishment and operation of an aquatic farm and related hatchery operations at a site identified under AS 38.05.855(d). A permit under this section shall be issued by lottery for not less than the appraised fair market value.

(b) A permit under this section is valid for three years after the date of issuance. The permit may not be transferred.

(c) Before renewing a permit under this section, the commissioner shall require the applicant to (1) provide a copy of the application to newspapers, radio and television stations for public service announcement or (2) to provide paid notice of the application once each week for three successive weeks in a newspaper or by radio. The notice required in this subsection must be in more than one language if the commissioner decides it is necessary. The notice must state that interested persons may submit written testimony concerning the renewal to the commissioner within 30 days after the date of the notice.

(d) Before renewing a permit under this section, the commissioner shall consider all relevant testimony submitted. Based on the the testimony or other good cause, the commissioner may deny the application for renewal, but must provide the applicant with written findings that explain the reason for the denial.

* Sec. 15. AS 38.05.945(a) is amended to read:

(a) This section establishes the requirements for notice given by the department for the following actions:

(1) classification or reclassification of state land under

Alaska
Mariculture
Association

TESTIMONY TO THE SENATE RESOURCES COMMITTEE ON SB 482
by Rodger Painter, AMA Executive Director

Before addressing Senate Bill 482 directly, I'd like to ask the committee to deal with an abstract concept.

Imagine a renewable resource industry in rural Alaska producing hundreds of millions of dollars of exportable goods annually which are in high demand throughout the world. Tremendous new business opportunities would be created in direct production and support activities in urban transportation hubs, and thousands of Alaskans would be employed year-round.

The industry would be financed with private capital and would ask for no subsidies, permitting shortcuts, loan programs or other giveaways. All reasonable environmental and land use protections would be accepted and the new industry actually would propose a special new production tax on itself.

In abstract, the concept sounds too good to be true, particularly since the legislature and governor have both made economic diversification the top priorities of the session. What the Alaska Mariculture Association has discovered in trying to carry out such a proposal is that we are having to struggle to even stay alive long enough to deliver our message.

Last year we got slapped with a 13-month moratorium on finfish farming and this year our offer has been greeted with several bills designed to complete the kill. Caught in the crossfire are a handful of shellfish farmers struggling to scratch a living.

Our message to the legislature now is very simple: thanks for all your offers for support, but at this point we'd prefer that you do nothing. This includes Senate Bill 482 which my board of directors strongly opposed as introduced. This sentiment is shared by groups representing shellfish farmers in Southeast, Kodiak and Southcentral Alaska.

The committee substitute offered by Senator Eliason eliminates a number of objections AMA had with the original legislation and I'd like to thank Senator Eliason for responding to some of our suggestions. While my board hasn't been able to meet yet to consider the new measure, I would guess the changes probably would downgrade our position from being vehemently to strongly opposed.

Several additional major modifications and some cleanup amendments would have to be made to neutralize the anti-mariculture provisions of SB 482, and it will require even more work before it would be perceived as even being pro-shellfish farming.

I also would like to state that AMA does view some provisions of the committee substitute as positive steps. These include tranferable farming permits which should help farmers secure private financing, authorization of private hatcheries, and a lease preference for aquatic farmers. These provisions are important first steps toward creation of legislation that

would help development of mariculture.

Shellfish farmers object to SB 482 because it unfairly singles them out of all other tidelands users for special restrictions when they comprise only a tiny fraction of existing use and have smaller impacts than many other users.

Consider, for example, these estimates developed by the Department of Natural Resources in May 1987:

total number of tideland leases 2,000, mariculture none; and

total number of one-year tideland permits 370, mariculture 50.

Frankly, we don't believe these number justify the extraordinary approaches for mariculture uses of the tidelands contemplated in SB 482. We're at a particular loss to understand how a showing of 50 of a total of 2,370 tidelands permits and leases supports the imposition of a moratorium on the issuance of all permits and leases until the new systems are in place. I believe it will take a year or more to fully implement SB 482.

While it is difficult to estimate the fiscal impact of this legislation on shellfish farmers, we are concerned that costs to the operator will increase substantially. This is a source of serious concern since most existing shellfish farms are extremely marginal and a substantial portion of incomes already are tied up in meeting government regulations.

I'd like to provide some examples. Established oyster farmers probably handle between 25,000 and 150,000 oysters per year. At an average value to the farmer, the range of gross incomes are between $10,000 and $50,000 annually. We estimate that it costs the farmer $2,000 to $4,000 to certify the water quality at farm sites with DEC. A survey of a remote parcel to qualify for a lease costs about $1,500 to $3,000; we have no estimates of appraisal costs.

Although DEC does not charge for paralytic shellfish poisoning testing, farmers estimate it costs them about $60 in destroyed product per test, plus at least six hours of labor. The cost of testing and time involved prohibit the sales of small amounts of product. These figures do not include oysters lost to mortalities while sitting out of the water waiting for testing results.

We are concerned that the language in section 16 on page 12 of the committee substitute will result in much higher fees to these economically marginal operations for use of the tidelands. Presently, tideland permits cost $50 per acre for all users. We believe aquatic farmers would be singled out for substantially higher rental fees by going to the appraised fair market rental value of the site.

Since the shellfish farming industry believes pending regulations proposed by the Cowper Administration removes most existing regulatory barriers, we question what incentives farmers have to support a change in status quo. Although we do support some provisions in SB 482, our conclusion is that the gains do not offset the problems created by the bill.

Those interested farming arctic char, rainbow trout and black cod are restricted from taking advantage of the only real competitive edge Alaska has in mariculture--our superior marine environment. Since the controversy over fish farming has narrowly focused on the pen rearing of salmon, we can't understand why the legislature would be interested in blocking the farming of other finfish in the marine environment.

Maybe we've missed something, but we have not heard any specific

objections raised to the culturing of any finfish except salmon.

We also are concerned with SB 482's permanent ban on the farming of salmon in salt water. Although upland farming of salmon apparently is comtemplated in this legislation, it appears to preclude the pumping of salt water to upland farms.

This prohibition doesn't make sense to us since upland farms utilizing seawater would have no greater impact on wild stocks, the marine environment or competing uses of the tidelands than those using fresh water. Upland farms would be required to treat and filter discharges so there would be no chance of disease transference, sediment accumulation, farmed brookstock escapees or any of the other impacts feared by commercial fishermen from net pen rearing.

The use of seawater in upland salmon farms is critical, as slower growth rates and other factors make the farming of salmon an extremely marginal situation. As it is, upland salmon farms have several distinct disadvantages, since investment and operating costs are significantly higher than sea cage farms.

We also believe a permanent ban on the pen rearing of salmon represents poor public policy and would signal a shift towards resource development by popularity contests. AMA believes the legislature would be setting a dangerous precedent in resource development if it opts to ban salmon farming simply because commercial fishermen don't like it.

Such a move would be akin to the state deciding not to develop ANWAR until the environmental community decides it's a good idea, or to stopping oil development until coal producers are satisifed they won't suffer from economic competition by a new energy source.

We urge you to carefully analyze the facts about salmon farming and make a decision based upon the costs and benefits. Certainly you should carefully consider the potential impacts on commercial fishermen, but base your final decision on whether this new activity can occur in a manner that does not threaten wild stocks, the environment or beneficial existing uses of our coastal waters.

We respectfully request that you carefully weigh the enormous amount of information available and determine whether the Alaska Department of Fish and Game is correct that salmon farming is no more of a threat to wild stocks than our present hatchery programs. Reject it if you don't believe scientists who say that properly sited farms will not damage the environment. And decide whether the economists are correct that salmon farming in Alaska does not threaten the prices Alaska fishermen receive for their catches.

In summary, AMA opposes SB 482 and the proposed committee substitute as written. We believe that no mariculture legislation is necessary at this time unless the legislature decides it wants to actively promote growth of the promising new industry. However, we do offer to work constructively to improve this legislation to at least remove the most damaging provisions should you determine that a bill must pass out of this committee.

AQUABIONICS INC.
NEW WAVE SEAFOODS
P. O. BOX 80165
FAIRBANKS, AK 99708

STATEMENT TO THE SENATE RESOURCES COMMITTEE ON SENATE BILL NO. 482 - MARICULTURE. MARCH 11, 1988.

My name is Jack Van Hyning. I reside in Fairbanks, but we operate a family fishing business in Prince William Sound out of Whittier. I am a biologist and we have an application pending for a mariculture permit in Prince William Sound. I oppose No. 482 because of what Mr. Painter has stated in terms of its effect on shellfish farming and for its prohibition against farming finfish in salt water. I have attended several mariculture meetings this winter -- Hawaii, Olympia, Sitka -- and let me tell you gentlemen, the world is running ahead while we are sitting around cutting bait. An old fisherman's axiom is: "Are we going to fish or cut bait?" While we cut bait people everywhere else are growing fish. Pacific salmon in Hawaii! Pumping cold, rich water from the deep ocean and their coho are growing like mad; they have abalone ponds there the size of football stadiums. You have heard of the salmon farming in Norway and Canada; in addition a number of other countries are getting into the business -- Denmark, Iceland, Scotland, Ireland, Chile, New Zealand, etc. By the year 2,000, 12 years from now, it is estimated that one-half the world's sea food will be farm raised and already one-half the world's shrimp production comes from farms. At the turn of the century where will Alaska be in the mariculture business? A few subsistence oyster farms and nonprofit salmon hatcheries if we keep going the way we are headed.

Although the Canadians have done a lot of things wrong, they have a huge production of salmon in their pens which will be coming on line in the next couple of years aimed directly at the U. S. market. I was in Anchorage last week and at a leading seafood restaurant the only fresh salmon on the menu was Canadian farmed salmon. At Ivars in Seattle last month, farmed salmon from Puget Sound was the only fresh salmon. It is senseless to argue whether wild salmon are better than farmed. They are both good, but the fact is that farmed salmon are out in the market place, and a lot more are coming, and we better compete or Alaska will become a minor league player in the salmon game.

As British Columbia farmed salmon is pointed directly at the heart of the U.S. market, we Alaskans should be aiming at the huge Asian market. I attended a seminar on Japanese and Korean export potentials a few days ago put on by the State Office of International Trade. Everyone knows about the large seafood exports to Japan and the speaker from Korea stated that they too were very much interested in obtaining more quality Alaskan salmon. Our company successfully exports fresh, gourmet-quality Alaskan shrimp to Japan right in the face of the great Asian shrimp production. We can compete and the key is quality and reliability. The demand for salmon is increasing and the demand is being filled by foreign producers. Alaska no longer has a corner on the salmon business; we have to get in all markets with all products otherwise we will lose out.

Alaskan salmon fishermen have done very well indeed with aquaculture programs -- the public and private hatcheries -- but they do not seem to want other mariculture entrepreneurs to have a piece of the action. For example, between 50 and 75% of the near record pink salmon catch in Prince William Sound last year was from hatchery-produced fish. In terms of disease and genetics, there is nothing intrinsically different between the present hatchery program and proposed pen rearing. Most ocean ranching operations feed the fingerlings in salt-water pens before release and have the same disease and nutrition problems as would a salmon farmer. Last Wednesday, Dr. Allee of the FRED Division ably described the Department's excellent program of disease monitoring and control; there should be no concern at all that the ADFG will not make sure that the salmon farmers raise healthy fish. In fact, one cannot stay in business very long with chronic disease problems. In terms of genetics, it is very unlikely that any escaped farm salmon could breed successfully with wild salmon and the present hatchery program is a greater threat to genetic integrity than farming. These points have been repeated by several competent scientists and they are non-problems, but fishermen continue to bring them up. The greatest threat to wild stocks, in my opinion, is the overharvesting of wild stocks while the managers try to maximize the catch of hatchery fish. With proper siting, pollution is not a factor and the fish farmer must maintain a good environment or risk losing his investment. Disease, genetic and pollution problems have been greatly exaggerated.

Norway and B.C. both had a gold rush, frontier mentality in salmon farming. We can learn from their experience, both good and bad. We have a Coastal Zone Management Plan in place and an excellent program for agency review. In the case of Prince William Sound, both the U. S. Forest Service and the State Department of Natural Resources have completed large land-

use planning documents with extensive public participation. Multiple use is encouraged and special areas designated for wilderness, wildlife habitat, fisheries, mariculture, etc. I am confident that ADFG and the other agencies would not permit any operation that impacted the wild salmon stocks, wildlife, important fishery and recreations sites or the environment. Obtaining a permit should not be easy, but the process should be fair and reasonable.

I personally could live without salmon farming, if a compromise is possible, but not a total prohibition of farming fin fish in saltwater. Black cod or sablefish is a hot item under development in Canada and appears to offer some real potential for Alaska. Rainbow trout (steelhead) is native to our coast and is an important component of mariculture in the Scandinavian countries and might be a possibility for Alaska saltwater pen rearing. Arctic char is a topic of great interest in Norweigan and Canadian aquaculture circles and could be a winner for Alaska. Norweigans report that char do very well in salt-water pens. A Canadian report notes that the farming of spot prawns could be profitable in conjunction with polyculture in salmon net pens.

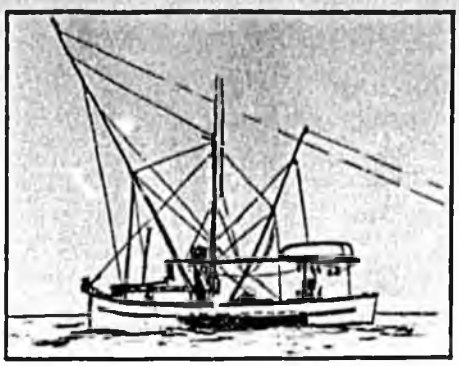
A speaker on Wednesday said there was only a few areas in Alaska that could grow salmon successfully. Experts said that oysters would not grow in Prince William Sound; apparently the oysters didn't hear that as they grow very well. The major constraints in other areas to mariculture is water pollution and lack of suitable sites. We in Alaska have an abundance of good, productive, clean water and a vast area to work in. The major expense in salmon farming is feed and here we have a great amount of fishery byproducts that are presently mostly wasted and could be used in the manufacture of fish feeds. As world fish farming expands there is concern about future fish food supplies and a whole new industry could develop here.

In summary, let us face reality, mariculture will be all around us whether we like it or not. Let us protect our traditional fisheries and other coastal values with appropriate environmental safeguards, but permit an orderly development which does not preclude the salt water farming of finfish.

Thank you,

Jack Van Hyning

Jack M. Van Hyning, Ph.D.



Alaska Trollers Association

REPRESENTING ALASKA POWER TROLLERS

130 Seward St., No. 213
Juneau, Alaska 99801
(907) 586-9400

February 24, 1988

Senator Richard Eliason
Alaska State Legislature
PO Box V (MS 3100)
Juneau, Alaska, 99811

Dear Senator Eliason,

This letter is to reaffirm my suggested changes to Senate Bill 482, per my conversation with Sheila on February 24, 1988.

The following comments are from the 2-23-88 draft:

Item 1. We suggest changing "or" to "and" on line 14 page 2.

Item 2. The words "substantially" and "significantly" on lines 20 and 23 of page 3 may allow too much interpretation as to protecting the species or disrupting users of the resource.

Item 3. We suggest that the term "aquatic animals" be inserted in item #3 lines 16 to 18 page 6, and the words "a plant" be replaced by "those". This is needed to define the concept of aquatic animals mentioned in the title.

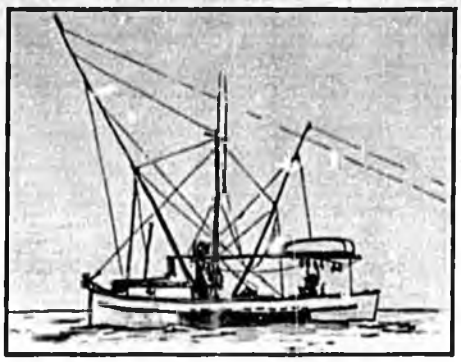
Item 4. We believe that either the "IDENTIFICATION OF SITES FOR AQUATIC FARMS AND HATCHERIES" lines 10 through 29, and lines 1 and 2 on pages 10 and 11 of Senator Jones' Bill 425 be inserted on page 11 line 22 of your Bill. The section of your Bill which is under the purview of DNR (AS 38-05) needs special protection under the development orientation of Commissioner Brady. In this manner the inclusion of "site identification criteria" would assure consideration of traditional users of areas even when existing users are not permitted (ie. winter anchorages, troll drags, gillnet drifts, etc)

We sincerely appreciate your efforts to conclude this thorny issue during this session of the Legislature.

Sincerely,

Earl E. Krygier

Earl E. Krygier
Executive Director



Alaska Trollers Association

REPRESENTING ALASKA POWER TROLLERS

130 Seward St., No 213
Juneau, Alaska 99801
(907) 586-9400

March 31, 1988

Senator Jack Coghill: Chairman
Senate Resources
PO Box V (MS 2100)
Juneau, Ak 99811

Dear Senator Coghill and members of Senate Resources:

We wish to submit the following questions, concerns and comments on the 3-28-88 CS for Senate Bill number 182 "An Act relating to the farming of aquatic farming --etc.":

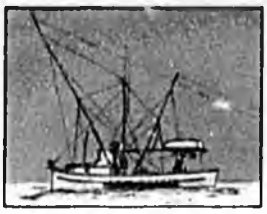
Page 1 Line 14-18) With what obligations would the state of Alaska encumber itself by formulating items 1 and 2 as "policies of the state". If these become a policy of the State, what then are the State's obligations?

Page 2 Line 12-15) We believe that this authorization to sell bi-valve spat outside the state may harm some Alaskan farmers although it may offer others short-term benefits. For example Kodiak is working to develop new technology on scallop culture, one farmer could "give away" the benefits of our research and development simply by selling spat to competing outside interests. An additional example involves the University of Washington who shared salmon eggs with Chile; now Chile is one of the major competitors with the Washington fishing industry for selling salmon.

Page 2 Line 15-16) We believe that the wording in this section needs to be corrected slightly to be consistent with existing similar statutes. The portion which reads "to a state owned body of water" should more correctly read: "into the waters of state." The meaning of the former is incorrectly worded to afford the protections DEC and other regulatory agencies require to safeguard the State's resources. Additionally, it may encourage legal challenges.

Page 2 Lines 17-19 and Page 3 Line 1-11) We believe that the rewrite of the "Criteria For Issuance Of Permits" is an excellent synopsis of the testimony presented during the recent teleconferences. In particular, criteria #3 and #4 addressed the most often expressed concerns. Criteria #3 affords a positive protection for fish and wildlife from the "adverse" effects of mariculture activities and its inclusion will moderate a lot of fears of other users.

Page 5 insert on line 21) The comments "Except that bi-valve spat ----" is reflective of our previous concerns commented on in Page 2 Line 12-15.



Alaska
Trollers
Association
130 Seward St., No. 213
Juneau, Alaska 99801
(907) 586-9400

Page 13 Section 17) We strongly encourage the members of the Senate Resource Committee to retain this whole section known to the members of the work group as "option #2". We can only suggest one addition: that is on line 26 adding after "hearing" the phrase ",between September 1 and May 15 of each year,". This clause is critical to insure that the comment period does not occur during the height of the fishing/tourism/outing season, thereby excluding input from important user groups.

Page 14 Line 29 - Page 15 Line 4) We strongly encourage the retention of this sentence to afford protection to both farmers and other users of the uplands. The conflict between upland use and seaward mariculture is best illustrated in the Robin Larson (oyster grower) conflict with the state land disposal sale upland from his site near Wrangell.

Page 15 Line 21) Shouldn't the word "advisory" go between "game" and "council" in this sentence?

Our Association, who has been involved in the development of a State mariculture policy since September 1985, believes that though the acceptance of this working draft is a major concession in the area of fish culture for fishermen, we could accept its implementation with the above mentioned modifications and/or retention of safeguards. If this committee can retain the strengths embodied in this draft, I believe that we can encourage the fishing industry to support its passage this session.

Sincerely,

Earl Krygier
Executive Director

UNITED FISHERMEN OF ALASKA

211 4th Street, Suite 106
Juneau, AK 99801
907-586-2820

March 2, 1988

Senator Richard Eliason
Alaska State Legislature
P.O. Box V
Juneau, Alaska 99811

Dear Senator Eliason:

The Board of Directors of United Fishermen of Alaska is appreciative of your efforts to resolve the issue of mariculture during this legislative session.

We have some suggestions for modifications to Senate Bill 482 which we believe will clarify and strengthen the bill.

* We suggest you add, on page 2, after line 2, a new section (f) that uses the same language found in the moratorium passed by the Legislature last spring: "A fish farming license may be issued for commercial finfish farming in a privately owned freshwater body that has no outlet to state water." This wording satisfies our concerns about the possible escapement of domesticated fish and about the possibility of environmental degradation. It addresses the concern Senator Fahrenkamp raised last spring about a project one of her constituents was beginning. It makes clearer the restrictions on on-land tank farming. We think it's a compromise most of us can agree with.

* We suggest changing "or" to "and", both on page 2 line 14 and on page 4 line 10. We can see the possibility that impacts on traditional fisheries could still occur with the present wording. Since proponents of mariculture have stated many times that they do not want to hurt the commercial fishing industry, we are sure there will be no objection to this change.

* We suggest deleting the word "significantly" on page 3 line 23, and the word "substantially" on page 2 line 12, page 3 line 20 and page 5 line 7. We think they allow too many possibilities for harm to the fish stocks or conflicts with the fishermen, both of which mariculture proponents have said they wish to avoid.

* We urge you to add on page 6 a definition for aquatic animals to clarify the prohibition on salmon farming and to ensure that everyone is "singing off the same sheet of music," as Senator Abood says.

* We ask that you include in SB 482 the section on pages 10 and 11 of Senator Jones' bill (SB 425) called "Identification of sites for aquatic farms and hatcheries." We think these provisions will help avoid siting conflicts and ensure the orderly development of mariculture in Alaska. The Department of Natural Resources, when considering tidelands use applications, has a tendency to forget about tidelands uses for which a permit is not required. These include recreational boating and fishing and subsistence activities, as well as commercial fishing. DNR also has a tendency to consider applications on a case-by-case basis without realizing the potential cumulative impacts on an area.

We think these modifications will be acceptable to most people and will strengthen the bill that already has so many good features. We are particularly pleased that it places the primary authority in the Department of Fish and Game, and that it addresses our concerns about land speculation.

Thank you for requesting our comments. We look forward to achieving resolution of this issue.

Sincerely,

Kate Graham

Kate Graham
Executive Director

UNITED FISHERMEN OF ALASKA

211 4th Street, Suite 106
Juneau, AK 99801
907-586-2820

April 8, 1988

Members of Senate Resources Committee:

As you are aware, United Fishermen of Alaska has stated its opposition to any form of finfish farming until enough information has been gathered to know the resulting effects on Alaska's wild fish stocks, fish habitat and commercial fishing industry.

UFA has stated its support for shellfish and kelp farming as long as an adequate site selection process is required to alleviate both potential conflicts and potential damage to fish habitat.

UFA has applauded the site identification process, which you now call Option 1, contained in SB 425. We were both surprised and pleased when the Department of Natural Resources proposed a less stringent but still reasonable version of this process (Option 2).

We have been finding it extremely difficult to understand why DNR now says it prefers the version suggested by the Alaska Mariculture Association (Option 4).

UFA believes that the committee may not have understood what Option 2 does. Option 2 does not put additional regulatory requirements on the mariculture industry. What Option 2 does is establish a public process to assess the need for sites by the mariculture industry in a given area, and it allows state agencies the opportunity to evaluate the carrying capacity of a given area for mariculture activities.

Option 2 has the advantage of providing the mariculture industry with information on site capabilities and possible user conflicts before spending great sums of money. It also allows the public and other interested parties an opportunity to understand how mariculture activities may affect other uses of the tidelands and hopefully minimize conflicts among all the users of our state tidelands.

We were very concerned to hear DNR say in your committee meeting yesterday that they want to issue tidelands leases and permits based not on statutes nor on regulations, but instead on something they call a policy. A policy is established at the discretion of the commissioner and may be changed at any time. What guarantee is there that DNR will implement the type of policy outlined in Option 2?

This is an especially important issue given that the bill provides a permit holder with a priority preference for a lease to the site. The amendments you have passed, plus the remaining amendments you are considering on Title 38, will remove virtually all public notice provisions,

all public hearing requirements, and any requirements that DNR develop and implement criteria to ensure that mariculture sites are compatible with existing uses. UFA recommends that, if these amendments are adopted, this preference provision be deleted as well until DNR presents their land use report to the next Legislature.

You had already voted to allow permits and leases to be issued before regulations were in place. Surely this is not the way to encourage orderly development of mariculture activities. Does the Legislature routinely allow commercial activities to take place with no regulation of them? Surely not in the case of the commercial fishing industry. We are probably the most regulated commercial activity in Alaska. We recognize, however, the need for these regulations. Why then is an exception being made for mariculture? We are sure the Alaska Mariculture Association supports us on this because they have stated time and again that they are asking for no permitting shortcuts and would accept all reasonable environmental and land use protections.

We cannot emphasize strongly enough how important an adequate site selection process is to UFA's members. Please keep in mind that we supported non-finfish mariculture only if such a process were in place.

In other amendments already agreed on you have:

- decided that established and ongoing uses of an area must be considered, but that a new farm does not have to be compatible with them;

- allowed the commissioner of DNR to use her own discretion as to whether or not to hold a public hearing when renewing a tidelands permit;

- removed language designed to ensure that mariculture activities do not adversely affect the ability of ADF&G to manage natural stocks.

You still have before you proposals that:

- refuse to insist that DNR limit the number of sites in an area to protect the natural resources, and that DNR consider whether the proposal is compatible with the traditional and existing uses of the area;

- say DNR does not have to provide public notice for a preliminary finding concerning siting proposals.

You have as your goal the establishment and responsible growth of mariculture activities in Alaska. How can this be possible if there are no provisions for advance planning, for the development of regulations prior to allowing the activities, or for the assurance that Alaskans who are already using the tidelands will not be displaced?

On behalf of the 12,000 commercial fishermen this organization represents, we urge you to reconsider these proposals.

Sincerely,

Kate Graham

Kate Graham
Executive Director

Kodiak Area Native Association

402 Center Avenue
Kodiak, Alaska 99615
Phone (907) 486-5725

MAR 18 1988

March 15, 1988

Senator Coghill
Alaska State Legislature
P.O. Box V (MS 3100)
Juneau, Alaska 99811

Dear Sen. Coghill:

Attached is the testimony that was submitted on behalf of the Kodiak Area Native Association to the Senate Resources Committee on March 11, 1988. Also attached is a copy of a resolution drafted by the KANA Board of Directors at their most reecent meeting encouraging the legislature to draft legislation supporting mariculture development in Alaska.

We support the efforts of your committee to develop a bill that encourages mariculture development. We hope that the necessary changes can be made to Senate Bill 482 so that it will support mariculture development. Without those changes, we cannot support the bill.

Thank you for you interest in our position.

Sincerely,
KODIAK AREA NATIVE ASSOCIATION
GORDON L. PULLAR, PRESIDENT

Bill Osborne

Bill Osborne
Mariculture Specialist

cc: Senate Resource Committee members

encl: testimony
Resolution 88-06

TESTIMONY BY THE KODIAK AREA NATIVE ASSOCIATION
SUBMITTED TO THE SENATE RESOURCE COMMITTEE
MARCH 11, 1988

For two years, the Kodiak Area Native Association has been cooperating with the Departments of Fish and Game and Commerce and with the Japanese Overseas Fishery Cooperation Foundation in a study on the feasibility of scallop aquaculture in the Kodiak Island area. The ultimate goal of this project is to promote economic development and increase job opportunities in the Native villages of the Kodiak Island area by developing a self-sustaining aqu ulture industry.

While pursuing the feasibility study, KANA has also taken initial steps toward commercial scallop aquaculture by obtaining a tidelands permit near the village of Akhiok. We are currently rearing pink scallop spat collected last summer, and we will be harvesting spat again this summer.

The collection of spat for commercial purposes was legalized last summer after the passage of Senate Bill 297, the compromise mariculture moratorium bill. This bill put a hold on the issuance of most types of mariculture permits while work was supposed to continue on a comprehensive mariculture bill. While we are now able to farm scallops legally under current statutes and regulations, we are still looking forward to legislation that will resolve some areas of uncertainty for both maricul turists and for traditional users of marine resources.

As it is written, Senate Bill 482 is not the comprehensive legislation we are hoping for. On the surface, SB 482 appears to encourage shellfish and kelp farming, but in fact the bill creates a much more restrictive environment for mariculture than current exists. We are particularly concerned about the criteria for issuance of permits listed on page 2. It is doubtful that one could use the marine environment in any way without adversely affecting wild stocks or their management. This same reference to adverse effects on marine mammals in the marine mammals act was recently interpreted in court to mean that whole commercial fisheries could be shut down because they disturb the mammals in some way. The amount of disturbance does not need to be quantified; the commercial activity must cease.

This bill requires an aquatic farmer to pass yet another set of still undefined criteria. On page 13 the commissioner of Natural Resources is required to develop a separate set of criteria for issuing tidelands permits. Why require two, possibly conflicting sets of criteria?

This bill will not allow the sale of harvested or hatchery-produced spat to operations outside of Alaska. Why should Alaska prevent this possible source of revenue? We have already been approached by firms from other states which are interested in purchasing scallop spat.

On page six, under the definition of aquatic farm product, it is implied that the only possible products are consumables, or kelp to be used in dyes. Is there any reason to limit the potential uses of aquatic products by writing such exclusive end products into legislation? Consultation with potential aquatic

farmers would provide suggestions for many products with which to broaden that definition.

Referring to the tidelands use permit section on page 12, although it is not clear how a fair market price can be determined for a non-transferable five year permit, we are concerned that this provision may drive the cost of operation below the profitable margin.

Finally, the operation of salmon net pen farms is not very different from the short term rearing of salmon fry in net pens. This is a common technique at most of the state and non-profit salmon hatcheries around Alaska. By closing the door on net pen culture of salmon, we are not closing the door on a culture technique. We are just closing the door on which groups can produce and sell salmon in Alaska. The limited entry program has left many small communities in western Alaska with limited oportunity to participate in the salmon fishery. Studies have just been concluded on the potential impacts of salmon farming in Alaska. The studies should at least be read before the door is closed on salmon farming in Alaska.

Unless this bill is revised to relax its restrictions on shellfish and kelp culture and its total opposition to salmon culture, it should not be allowed to pass. This current bill is not a comprehensive, compromise mariculture bill.

Thank you for this opportunity to testify.

Kodiak Area Native Association

402 Center Avenue
Kodiak, Alaska 99615
Phone (907) 486-5725

KANA BOARD OF DIRECTORS

RESOLUTION 88 - 06

A RESOLUTION OF SUPPORT FOR LEGISLATION TO PERMIT AQUATIC FARMING IN THE STATE OF ALASKA

WHEREAS the Kodiak Area Native Association is a non-profit organization whose mission is to promote pride and self-determination on the part of the Native peoples of the Kodiak Island area, and to promote the educational, physical, economic and social well-being of the Native individual and community; and

WHEREAS, in order to promote economic development of the Native villages of the Kodiak Island area, the KANA initiated plans to diversify village economies and increase employment opportunities by developing a self-sustaining mariculture industry; and

WHEREAS mariculture industry development can create substantial job opportunities in villages facing unemployment rates of up to 90 percent;

NOW THEREFORE BE IT RESOLVED in a public meeting at which a quorum is present that this Board encourages the Alaska Legislature to approve legislation to permit the farming by Alaskans of aquatic plants and animals.

Passed this 26th day of February 1988

by a vote of 6 for and 0 against.

Margaret Roberts
Chairperson

Attest: Gloria Cornell

CORDOVA DISTRICT FISHERMEN UNITED

P.O. Box 939

Cordova, Alaska 99574

(907) 424-3447

April 15, 1988

APR 19 1988

Cordova District Fishermen United has some grave concerns about the manner in which site selections and public notice for mariculture are being approached. We feel that commercial fishermen, as customary and traditional users of state tidelands and bodies of water should have some consideration in concentrated commercial fishery areas, especially in Coghill and private non-profit hatchery areas. We addressed this problem in the Cordova meetings on the proposed Prince William Sound Area Draft Plan and still maintain some areas should be closed to mariculture. Mariculture permanently takes up acres of tidelands which could possibly have other uses.

To avoid user conflicts, public participation is needed as a necessary component of the process. Public notice provisions should be expanded to require notice regarding tideland uses, especially mariculture, to appropriate commercial fisheries groups and commercial fish area managers in each area of the state.

Historic uses of both tidelands and adjacent upland areas should be documented to avoid user conflicts. Such uses include recreation, tourism, anchorages, navigation and areas of subsistence and commercial harvest. Public notice should be the DNR's number one concern along with public comment to avoid lawsuits and user conflict. We feel at this point that the DNR has not fulfilled their responsibility to the public or the state to avoid user conflicts or lawsuits by responding to the public.

Sincerely,

CORDOVA DISTRICT FISHERMEN UNITED

Gerald McCune

Gerald McCune
President

GM/mbl

MEETING NOTES

PWS Area Plan & Commercial Fishing Industry Concerns

December 9 & 10, 1987

Present (at one time or another):

James Brady, ADF&G Cordova
Herman Griese, ADF&G Cordova
Jack Hopkins, PWS Aquaculture Corporation
Bob Loeffler, DNR, Project Manager, PWS Area Plan
Jerry McCune, CDFU
Sam Sharr, ADF&G Cordova
Rick Steiner, Marine Advisory Program
Kim Sundberg, ADF&G, Anchorage, Planning Team Rep, PWS Area Plan
Wayne Donaldson, ADF&G Cordova
Dan Warren, PWS Aquaculture Corporation

Introduction. These meeting notes were written to be used to by ADF&G staff in Cordova in making their comments on the PWS Area Plan known to Kim Sundberg, the ADF&G representative on the planning team. In addition, they may help Jerry and other folk use them as they wish, either in writing their own comments, or signing on to ADF&G's comments, or whatever. In some cases, these notes suggest changes in wording; in other cases, they just identify problems and leave suggested wording changes to Kim Sundberg or to the planning team.

Organization. The notes are divided into the following categories:

* comments on the Chapter 2,
* a proposed new section on fisheries and hatcheries in Chapter 2,
* need for changes in management intent
* conflicts between a proposed lodge and existing Esther Island hatchery,
* mineral closures
* comments by Dan Warren,
* extension of the comment deadline, and
* scenes from coming attractions.

Dan Warren's comments are separated from the rest because we didn't suggest resolutions to his comments, but we did make suggested resolution for many other comments. Most of Dan's comments were covered in other suggestions, but it is still useful to record his concerns in the meeting notes.

CHAPTER 2 COMMENTS

Chapter 2 - Fish and Wildlife Habitat.

1. Salmon Spawning Areas. Add salmon spawning areas to Crucial Habitat. The definition of salmon spawning areas should be written so that it clear it includes all salmon spawning areas under state ownership or state jurisdiction -- streams on state uplands, navigable streams, tideland spawning, and the mouths of anadromous streams (that are on state tidelands).

2. Herring Spawning Areas. There was a discussion about whether Herring Spawning should be labelled "crucial" or "prime." After some discussion, it seemed that the category should stay in "prime," but that a guideline should be added to insure sufficient protection. A guideline could be worded as follows: To the extent feasible and prudent, permitted activities in mapped herring spawning areas will be conditioned to avoid or otherwise mitigate adverse affects on kelp, eel grass, and other substrates important for herring spawning."

3. Mountain Goat Winter Range. There was a discussion about the quality of existing information concerning mountain goat winter range, that most existing areas were not on state land, but that activities on state land should take account of adjacent non-state winter range areas. The suggestion was to note in the glossary that information did not exist to note winter range areas which met the crucial definition, but that as more information becomes available, some winter range areas are likely to be determined as crucial. In addition, the plan should contain a guideline that indicates that the state should avoid locating activities on state tidelands where the activity will produce a concentration of public use, repeated acoustical disturbance, or other activities likely to disturb the goats.

4. Other Crucial/Prime Definitions (actually, this is part of Appendix A.) James Brady was confused (justifiably so), about the fact that Purse Seine Hook-offs were shown under Crucial Habitat, but not listed in the Appendix. In addition, it was confusing to have sport fishing, but not any mention of commercial fishing in the Crucial, Prime, Important, sequence.

   The suggestion was to reorganize the definitions to include only habitat types under Crucial, Prime, and Important, and to add a new section called Human Use and Harvest that lists human use areas including at least, Purse Seine Hook-off Points, sport fishing sites, traditional purse seine areas, Herring Sac Roe fishery, etc....

5. Guideline B. Guideline B1 on page 2-6 (ie, the one that begins, "In estuaries; lagoons;..." needs a catch-all phrase at the end. Something like, "or other impacts that reduces the productivity and value of the habitat."

6. Guideline B (Problem #2). Take out the word "intertidal" before "salmon spawning" because the guideline should apply to stream spawning as well as intertidal spawning.

7. Guideline B (Problem #3). There was discussion indicating that 300 feet from anadromous fish stream was too close. There was considerable discussion about what the correct, minimum distance should be. Folks eventually thought that 300 yards should be substituted for 300 feet. This number should be changed from feet to yards elsewhere it appears in the plan.

8. Guideline L. (Page 2-9). The first sentence of the Fish and Game Enhancement on State Lands guideline should be changed. "Fish and Game" should be deleted and the guideline should read, "Enhancement activities on state lands whether by ADF&G or other agencies will be consistent with the..."

9. Guideline M. (Page 2-9). In the Soil Erosion Guideline, the word-"streams" should be changed to "water bodies" so that it is clear that it applies to lakes and the ocean.

10. Land Allocation Summary. (Pages 2-9 though 2-10). The summary should be changed to reflect changes made above and in other parts of the plan.

Chapter 2 - Forestry Guidelines.

1. Floating Logs. There was a discussion that the Chapter 2 guidelines did not contain adequate safeguards to minimize or prevent introduction of floating logs as a consequence of log transfer activities. People said that boats, now, can generally travel at night in Prince William Sound, but that they can't do so in Southeast, partly as a consequence of floating logs. There was also a discussion of possible resolutions to this problem including: using barges rather than log rafts; bundling (or banding) so that storms couldn't dislodge logs from a log raft as easily (including the requirement to recover the bands as opposed to dropping them in the water); limiting the amount of time logs can be stored in the water; requiring on-land storage; or other means. Requiring branding was brought up as a means of making guidelines more self-enforcing (i.e., that the damaged party could more easily claim liability), but ADF&G staff and Jerry McCune was skeptical that required branding would have any effect.

   The suggesting was that there was not enough detail in current log transfer proposals to determine which of these methods was correct for any of the general proposals in the plan, but that Chapter 2 should be revised to be sure that the permitters were given direction to include some method to minimize or avoid the problem.

2. Anchorages. LTS's should avoid taking up anchorages. This concept should be added to the chapter.

3. Retaining commercial fish use around the LTS. There was concern that an LTS could take up an entire bay if it was designed poorly. That is, that even though an LTS could be sited in part of the bay, through barge traffic, log rafts, and associated activities, seine or drift net use of the bay could effectively be blocked, or that the LTS could operate such that fishermen could use the bay only at risk to their gear. Chapter 2 guidelines should insure that an LTS is designed such that continued, safe commercial fishing use can be made of the bay around the log transfer site free from the threat of having a barge or tug run over someone's gear.

4. Guideline Q. (page 2-12). The title says Avoid (i.e., "Operating RTSs to avoid..."), but the sentence "RTFs should minimize." "Minimize" should be changed to "avoid."

Chapter 2 - Mariculture Guideline.

1. Application to fin-fish. The notes should be clear that these guidelines only apply to non-finfish mariculture, and that should finfish mariculture become legal, a set of guidelines will be developed appropriate for that use.

2. Step-down plan for fin fish mariculture. The plan should recommend that a separate, more detailed plan with guidelines and siting criteria be compiled for fin fish be completed if that type of mariculture becomes legal.

3. Guideline B. (page 2-17). The last sentence that reads, "Permit holders that may be affected by a proposed operation should..." should be changed to "Mariculture permit holders that may be affected by a proposed operation will..."

Chapter 2 - Materials.

1. Guideline A. (page 2-20). The last sentence of this guideline should be changed to read as follows "Sales or permits for gravel extraction will not be permitted in known fish spawning areas or crucial estuaries."

2. Guideline C. (page 2-20). Strike the last sentence that begins, "Where it is not feasible..."

Chapter 2 - Recreation.

1. Guideline A.2.b. "Inappropriate Locations". This guideline should be expanded to reference areas inappropriate because of conflicts with habitat and harvest use.

2. Guideline A.5. (page 2-27 & 2-28). There was a concern that floatlodge clients would deplete the fish, or huntable animal populations near the facility. This problem currently occurs with outfitters. A guideline specifically to address that should be added as guideline A.5.h., or that guideline A.5.b. (carrying capacity) should be beefed up. However, it wasn't exactly clear what to do. Herman thought that DNR and ADF&G may not really have all the tools necessary to control this problem.

3. Other Floatlodge problems. There was a general, somewhat wide-ranging discussion about floatlodges on Wednesday evening after most people had left. There was a feeling that the plan does not give the permitter enough direction to adequately address the problem should an application be received. But no solutions were proposed. Bob said that this problem has been similarly recognized at a number of the public meetings, and will have to be addressed in some fashion before the plan is finalized.

4. Miscellaneous. The third sentence in the third paragraph under the Land Allocation Summary (page 2-29) that reads, "Recreation is the primary use..." should be changed to "Recreation is a primary use..."

Chapter 2 - Subsurface Resources.

1. Application of Mineral Closures. (page 2-47). Guideline A on this page talks about standard DNR policy for closing four categories, but it doesn't mention salmon or habitat. Bob explained that there wasn't a standard policy for these resources. Everyone else said, "Yeah, well that may be true, but the way its written is still confusing, and you should change it so its clear what you're doing about salmon and other habitat." People suggested that a number 5 should be added and in it the salmon, Copper River and other closures should be noted.

2. OPPs, Guideline H on page 2-46 and 2-47. Sam was confused about how OPPs worked and what it meant that ADF&G has determined it was a non-conforming use. Bob explained it and then he understood it (or at least was agreeable enough to nod politely); however, Sam said that it should be rewritten to be made clearer to general public.

3. Esther Bay Closure. The Land Allocation Summary, last paragraph on page 2-48, states that four hatcheries are closed. It leaves out Esther Island Hatchery, because it is already closed. People said that unless you already know that, it's confusing and Esther Island hatchery should be mentioned.

PROPOSED NEW SECTION FOR CHAPTER 2 - FISHERIES AND HATCHERIES

People thought that hatcheries and commercial fishing was not adequately addressed in the plan. They felt that a new section of Chapter 2 was the most appropriate forum for these guidelines. We didn't make an effort to write any final guidelines, but just noted that guidelines should be written to address the following problems.

1. Conflicts with Terminal Harvest Areas. THA's are the areas near the hatcheries where much of the hatchery fish concentrate and where there is extremely concentrated purse seine and gill net fishing during certain openings.
   a. Mariculture, disease, pollution, and use of habitat. Because the THAs are so important for the hatchery, mariculture or similar uses should not be allowed because of the risk of disease transmission and ruining the hatchery stock. In addition, any use that is likely to complete with the available food supply for hatchery stock (e.g., plankton), make the habitat less productive for the hatchery stock, or introduce pollution should not be allowed.
   b. Interfering with commercial fishing operations. Because the drift and seine fleet use so much of the THA, particularly nearshore areas, any tideland facility that would obstruct the THA (i.e., rafts, floats, mooring systems, etc.) should be located elsewhere. These facilities could have a significant conflict with the commercial fishing fleet.
   c. Protecting water quality of hatchery source water. A guideline should be added that insures that DNR permits protect the water quality of the hatchery source water (for example, Esther Lake) or doesn't locate uses likely to pollute the water. It was recognized, however, that most of these lakes fall on USFS land.

d. Protection of future hatchery sites. Because there are only a limited number of potential future hatchery sties in PWS, DNR should avoid permitting activities at those locations if activities will preclude development of the hatchery. Two locations with the highest near-term hatchery development potential are Cascade Falls and Princeton Creek (Icy Bay). (Note: the existing plan has this protection for Cascade Falls, Princeton Creek, Marsha Bay, West Gable Cannery in McClure Bay (also called Port Nellie Juan)

2. Anchorages. This section should cross-reference the "anchorage" guideline in the recreation section. In addition, it should provide additional guidance for important fishing fleet anchorages (eg., Fox Farm anchorage) where 10-15 or more boats raft up, and for anchorages used by fishing fleet tenders.

3. Purse Seine Hook-offs. The existing purse-seine hook-off guideline from page 2-7 should be moved to the new section.

4. Concentrated Use Purse Seine and Gill Net Areas. Some areas of the Sound receive particularly concentrated commercial fishing use. A Guideline should be developed (similar or identical to the THA guideline needed under 1.b. above) that insure that tideland facilities do not interfere with the use of these areas. Jerry and James marked these areas on a map.

5. Herring. Guidelines need to reference the Herring Fishery. They should protect areas used for Sac Roe fishery, Herring Pounding, and Wild Kelp Harvest. The most specific protection that the group discussed was for Herring Pounding. This use requires protected anchorages for moorage. The anchorages need to be near the herring spawning areas. Thus, protected anchorages in these areas need special protection. Areas appropriate for these guidelines were also marked on the map.

6. Public Notice. Public notice provisions should be expanded to require notice of appropriate commercial fisheries groups. There was some discussion that not everything requires public notice -- the groups don't want to be inundated with paper about everything DNR does in the Sound; however, for significant actions in significant locations, the groups should be notified. We did not resolve exactly what is "significant."

PROPOSED CHANGES IN MANAGEMENT INTENT

There was some discussion that the management intent for the plan (ie., the written stuff in Chapter 3) did not recognize the importance of the commercial fishing industry and the resources it relies on. Therefore, Bob suggested that everywhere where traditional purse seine or gill not fishery exists, that the management intent be beefed up in some fashion. The traditional areas were reviewed on a 1:250,000 scale up. Exactly what the language is that would be inserted in these areas was not determined. (Jerry did inform Bob however, that the management intent for Main Bay needed to include Drift Net Use as well as set net use.) Bob will draft language with help from Kim and circulate it to James, Jerry, etc. for review.

CONFLICTS BETWEEN THE ESTHER IS. HATCHERY & THE PROPOSED LODGE AT QUILLIAN BAY

People thought the proposed commercial recreation site in Quillian Bay would conflict with operation of the hatchery at Esther Bay. The conflicts were of two types. First, there are so many commercial fishing boats near the hatchery and the mouth of Lake and Quillian Bay at certain times of the year, that the addition of many recreational boats would make everything difficult. Neither the recreational boats nor the fishing boats would appreciate it. Second, people were concerned that recreational use of Esther Lake (if encouraged or facilitated by the recreation site) might endanger the water quality of Esther Lake. People suggested that the recreation site be moved to either Granite Bay or Perry Island.

Bob noted that negotiating would be needed with interests representing commercial recreation. The Division of Parks (or whomever) might be able to suggest guidelines to minimize the impact, and would need to be sure that any new site created sufficient benefits. Bob wasn't predicting an irreconcilable conflict, just that other interests would need be present at the table to complete the discussion.

There was also a similar discussion about the possible settlement use of Esther Bay (two bays east of the Hatchery). While there was somewhat lesser conflict with the seining and drift net use is somewhat less concentrated at the mouth of the bay, boats do pursue fish most the way up the bay. In addition, an anchorage in the bay is used by commercial fishermen to raft up their boats during interruptions in the fishery -- that is, during periods when the fishery temporarily closes.

MINERAL CLOSURES

There was a very brief discussion of mineral closures. Bob said that these are likely to be very controversial, and the DNR would probably not reopen the issue to discus additional closures unless officially requested by ADF&G. Even then, the discussion is guaranteed to be controversial. The decision to reopen the discussion on mineral closures would need to be made at the Commissioner level.

DAN WARREN'S COMMENTS

Most of Dan Warren's comments have been covered above. They are summarized here to record what he said.

1. He was unsure of what the document was designed to do. He felt that Chapter 1 should be expanded to include more explanation of its purpose.

2. He noted the revision time as every five years. He felt that revision between the five-year benchmark should be addressed. Bob explained that every year the planning team gets together to discuss whether revisions are needed. Dan said that if so, the document should say that. After getting back to Anchorage, Bob reread the section about plan modification and noted that it does say that the planning team gets together once a year to see where amendments are needed. (Third sentence in the only full paragraph on page 1-7.)

3. He noted that there was very little mention of commercial fishing.

4. He had specific complaints about how the plan treated terminal hatchery areas near the Esther Island and Main Bay Hatchery. These are covered int he pages above and not repeated here. In addition, he also noted the conflict between the commercial recreation site on Esther Island the existing hatchery.

EXTENSION OF THE COMMENT PERIOD

There was some discussion that a January 8th comment deadline was too short. After the session was over, Bob agreed to extend the deadline to January 25th. He also offered to help Dan (and others) find easy and efficient ways for them to make their comments.

SCENES FROM COMING ATTRACTIONS

Bob spent a few minutes going over the process by which the comments (when they are officially submitted) will be incorporated in the plan. He said that another official public meeting is not planned, but that there is a 30-day comment period that people can review proposed changes to the draft before the commissioner signs the plan. In addition, ADF&G in Cordova and the commercial fishing community should get a chance to see how their comments are dealt with in advance of the 30-day comment period because of the number of recommended changes.

Bob also speculated (not guaranteed, mind you -- just speculated) that while some of the recommendations may require some discussion, there appeared to be little problem with adding most of the proposed changes to the plan. He also though it might be useful to have James Brady, Jerry McCune, or others available for certain planning team meetings.

FISH FARMING

Alaska aquaculture: an overview

Aquaculture, or the cultivation of seafood, is a controversial concept in fisheries that could change the way Alaskan fishermen make their livings. Free-lance writer Christopher Batin has prepared a four-part series on aquaculture in Alaska that will appear in the Outdoors section. This is the first installment. Succeeding installments will appear the following weeks.

By CHRISTOPHER BATIN
Correspondent

When oil prices dropped to a new low in 1986, economists were wide-eyed when a single sockeye salmon was bringing $10 while a single barrel of North Slope crude sold for only $9.

It's a success story to warm the hearts of investors everywhere, one where Alaskans are still reaping millions of dollars a year in economic benefit.

In the early 1970s, Alaska salmon stocks were at an all-time low. Realizing the importance of Alaska's fishing industry to the future of the state, the Alaska Legislature invested millions of oil revenue earnings into state and private nonprofit hatcheries.

The results are evident. The 1987 season marks the eighth consecutive year the total Alaska fish harvest exceeded 100 million salmon. Economists predict that Alaska's investment in the renewable natural resource will be producing dollars for the state long after the Prudhoe Bay oil derricks become rusted and inoperative.

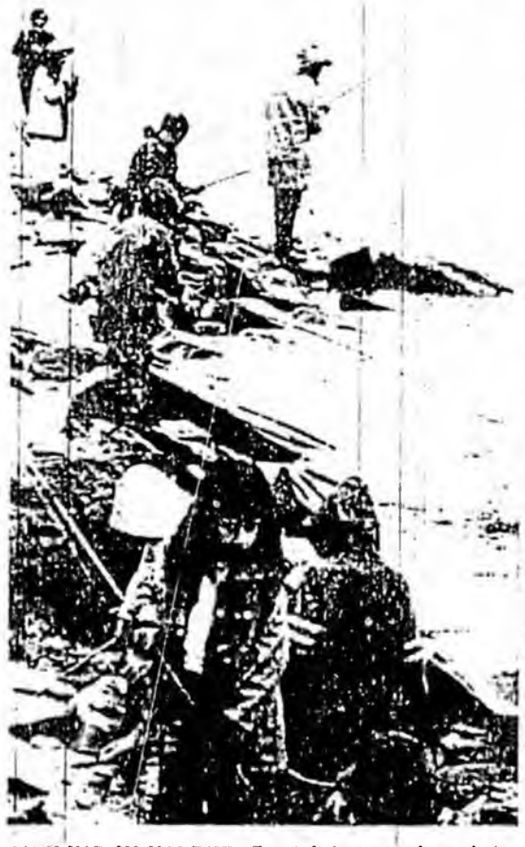
When it comes to seafood, Alaska is second to none. In 1985, the state produced 90 percent of the U.S. commercial salmon landings and approximately 43 percent of the world salmon supply, according to a study by Brad Pierce.

The controversy isn't whether Alaska should continue investing in its fisheries, but rather the means in which to do it.

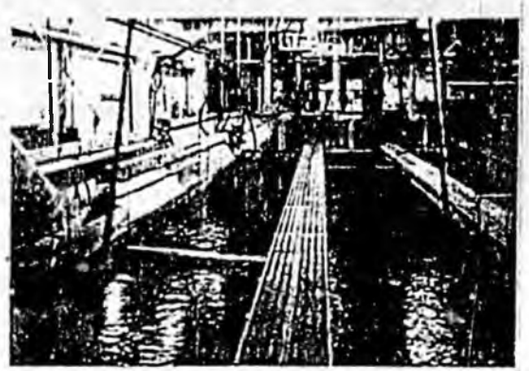
The new kid on the block is aquaculture, a generalized term that means the cultivation of seafood. In Alaska, aquaculture refers specifically to three major areas: ocean ranching, where eggs and salmon smolt are raised in hatcheries and released to grow in the sea to be harvested by commercial, sport and subsistence fishermen; mussel and oyster farming, where shellfish are grown for commercial harvest; and fish farming, where fish are raised their entire lives in concrete or net pens and sold to expensive restaurants and special markets.

If you've eaten trout or salmon in an Outside restaurant during the off season, chances are they were pen-raised fish. Farmers have been cultivating catfish and trout for the nation's supermarkets for years. And now they're interested in salmon. They predict that by 1990, "farmers" will be producing one out of every seven salmon worldwide.

Yet, salmon farming is an ugly word among Alaska's commercial fishermen. They say salmon farming is incompatible with traditional



ANGLING IN VALDEZ—Sport fishermen drop their lines into Port Valdez near the nonprofit Solomon Gulch Hatchery. Hatcheries have contributed to a healthy salmon industry in the state and may be a vital force in



SALMON REARING—Rearing pens line the interior of the state-run Clear Hatchery. In the early 1970s, Alaska salmon stocks were at an all-time low. Realizing the importance of Alaska's fishing industry to the future of the state, the Alaska Legislature invested millions of oil revenue earnings into state-run hatcheries.

Photo courtesy of Clear Hatchery

could put an end to Alaska's commercial fishing industry. As a precautionary move the Alaska Legislature placed a moratorium on all finfish farming until July 1 of this year, allowing only mussel and oyster farms.

If Alaska hopes to retain its share in the world market, it would do well to size up its competition. Many world leaders in fish farming, such as Norway, have a 25-year jump in farming technology. The expertise shows.

By 1990, Norway is expected to produce 80,000 metric tons, or 176 million pounds of farmed Atlantic salmon. The United Kingdom, Finland, Ireland, Canada, Iceland and Denmark are expected to produce a combined total of 23,160 metric tons of salmon. Of those countries raising Pacific salmon, Japan and Canada are expected to produce 14,000 and 15,000 metric tons, respectively. The United States is estimated to produce a mere 5,000 metric tons by 1990, with New Zealand, France and Chile expected to produce lesser amounts.

Alaska commercial fishermen say developing the fish farming industry would displace existing fishermen, leading to higher unemployment. It also would result in significant regulatory costs to the state through state agency involvement in areas such as disease and quality control, they say. To start many of the farms, the state would probably need to create subsidies and technical support, which would create additional expense on an already strained budget.

Proponents say development of salmon farming could create thousands of jobs as well as millions of dollars in support services such as equipment, marketing, fish food and distribution. Fish farming would develop the economies in rural, coastal areas receiving only seasonal monies from tourism and commercial fishing.

Proponents say the North American commercial fishing industry is not supplying enough salmon preferred by the U.S. white tablecloth restaurants. Foreign and domestic salmon farmers are taking advantage of those sales. Advocates of farming argue that unless Alaska immediately establishes control in the farmed and ranched salmon markets, its market share will decrease significantly over the next decade, further eroding salmon prices, which will ultimately put commercial fishermen out of business.

In "World Salmon Farming: An Overview with Emphasis on Possibilities and Problems in Alaska," author and biologist Curt Kerns writes: "If we elect not to farm salmon, the Alaskan salmon fishing industry will probably continue to be highly seasonal, staffed by seasonal workers. Tendering, processing, and distribution facilities and personnel will continue to be underused during late fall, winter and early spring. One thing is clear: commercial salmon growing will not go away. It is permanently changing the shape, form and substance of salmon production, marketing, distribution and consumption."

Christopher Batin is an award-winning outdoor journalist and frequent contributor to the Outdoors section.

The need for more fish

By CHRISTOPHER BATIN
Correspondent

Many experts predict the world is in the early stages of a "blue revolution," similar to the "green revolution" of the 1960s when the United States and Canada—food producing giants—turned food importing countries such as India and Indonesia into food exporters. Now, instead of crops, the harvest is fish, and lots of them.

Improvements in commercial fish harvesting techniques have improved ten-fold in recent years, resulting in world-wide fish catches of nearly 160 billion pounds. The National Marine Fisheries Service predicts an annual increase in catch of approximately 171 billion pounds by 2010, with landings subject to minor annual fluctuations. Analysts suggest that despite the improvements, fish are being harvested at or near their natural, upper level of capacity.

This would supply adequate food if the world population would hold steady. By the year 2000, however, the world population is expected to increase from today's 5 billion to 6.1 billion.

In addition, the U.S. Department of Commerce estimates that the current world per capita consumption of fish and shellfish is 28.6 pounds. That figure is expected to increase to 34 pounds by the year 2000, which would call for an additional 33 million pounds per year to meet worldwide demands.

Add to that the growing interest in seafood and fish in American diets. The U.S. Department of Commerce says that Americans ate 12.8 pounds of seafood in 1980. Current interest in eating seafood, the trend away from red meat, and heavy marketing campaigns by the U.S. seafood industry has increased the per capita consumption of seafood by 549 million pounds, to 14.5 pounds per capita by 1985.

The Alaska Mariculture Advisory Committee, in an effort to outline aquaculture development for the state, defined development into three categories: ocean ranching salmon, fish raised in hatcheries, then released to sea; pen-rearing salmon, where fish are grown for all their lives in holding pens; and other forms of mariculture, such as mussel and oyster growing.

Alaska is in a competitive and strategic position to develop aquaculture projects. The state has the [illegible] to provide processors, marketing programs and dependable air transportation to rush the salmon to market. Yet, unless the state agrees to finance fish farming, foreign investors will move in and develop the industry to their economic benefit.

Alaska residents are generally against outside economic domination of the fishing industry. At the turn of the century, Alaska's fisheries were caught in a stranglehold by Seattle-based companies. The industry was developed with Outside monies, and managed by companies with interests outside the state. This "colonial heritage" concept was the operating philosophy for many companies. Alaska was a far-off destination, and companies invested little in the hopes of reaping as much of the fish resources, and profits, as possible.

When Alaska implemented limited entry more than a decade ago, the Japanese high-seas catch of salmon declined from approximately 83 million fish to about 20 million fish. It was a major step in protecting a resource that was already severely depressed.

A special study by the Alaska Department of Labor indicates that in 1984, 65 percent of the 18,683 jobs and $58 million in earnings of Alaska's food processing industry (almost all seafood processing plants) went to non-residents who stayed for the fishing season and left to spend their earnings outside the state.

It doesn't stop there. According to a legislative report compiled by Brad Pierce on aquaculture in Alaska, the harvesting sector of the state's salmon industry in 1984 had 17,283 Alaska residents with gross earnings of 219.1 million ($12,700 per capita) while 5,858 nonresidents earned 121.8 million ($20,800) per capita). More than 20 percent of the permit holders in Alaska's limited fisheries are nonresidents. Additional revenue, in the form of investment capital by anglers in their equipment and boats, and secondary employment for services to the fishing fleet, escapes Alaska's economy.

Alaska's commercial fishermen insist that Alaska should follow the example of other countries and continue developing its ocean ranching program. It is the only way, they claim, that Alaska's salmon fishing industry can continue to develop, and the key to further diversification in salmon aquaculture.

CORDOVA DISTRICT FISHERMEN UNITED

P.O. Box 939

Cordova, Alaska 99574

(907) 424-3447

April 1, 1988

Cordova District Fishermen United supports the orderly and controlled development of shellfish and plant mariculture, but opposes pen rearing salmon in Alaska. The moratorium on fin fish farming will run out and we still have not seen any impact studies to commercial fisheries. So far fish farming has been promoted as a safe, controlled industry perfectly suited for Alaska.

The Alaska Mariculture Association has made the statement that "Alaskan fishermen are too emotional" and they compare this battle to the range wars of the 1800's.

We value our natural ocean resources and our present commercial and sportfishing industries too much to roll over and play dead. There is more evidence every day about hormone uses, antibiotics, and the effects to the wild stocks from escaping salmon from pens.

At this point, CDFU believes Alaskan fisherman should be emotional about their livelihood. We are being attacked by an industry which could reduce access to traditional fishing grounds and harm the environment for the hatcheries and the wild stocks. The biological impacts on Alaskan wild salmon are real and could very possibly alter our wild stocks. Wild salmon in Ireland and Norway are non-existent and their streams are now polluted with Atlantic stocks forcing Norway to close gillnetting and start a gene pool to try to rebuild the wild stocks. Canada already has escaped salmon in the wild streams that spawn with wild stocks. Canada has already allowed Atlantic stocks importation into Canada because domestic stocks are too costly and slow growing to raise economically. This is one of our arguments, fish farmers in Alaska will ultimately go broke growing domestic stocks and appeal to the State to allow importation of Atlantic stocks.

All farmed salmon raised in Alaska will be advertised as "Alaskan Salmon," taking advantage of an excellent wild salmon market, which took the State, Alaska Seafood Marketing Institute, fishermen and processors years to build. Fishermen have survived botulism, low prices and many closures to build and promote fisheries and build the private non-profit hatcheries.

The general public of Alaska elected to enhance wild salmon runs by building hatcheries for commercial, sportsfishermen, personal use and subsistence users. This program is having tremendous success in Prince William Sound and has contributed more money to commercial fisheries and the State of Alaska than it took to build the private non-profit hatcheries. The sportsfishermen alone caught 100,000 pinks returning to Valdez Fisheries Development Association in Valdez.

CORDOVA DISTRICT FISHERMEN UNITED

P.O. Box 939

Cordova, Alaska 99574

(907) 424-3447

April 1, 1988

APR 15 1988

Cordova District Fishermen United supports the orderly and controlled development of shellfish and plant mariculture, but opposes pen rearing salmon in Alaska. The moratorium on fin fish farming will run out and we still have not seen any impact studies to commercial fisheries. So far fish farming has been promoted as a safe, controlled industry perfectly suited for Alaska.

The Alaska Mariculture Association has made the statement that "Alaskan fishermen are too emotional" and they compare this battle to the range wars of the 1800's.

We value our natural ocean resources and our present commercial and sportfishing industries too much to roll over and play dead. There is more evidence every day about hormone uses, antibiotics, and the effects to the wild stocks from escaping salmon from pens.

At this point, CDFU believes Alaskan fisherman should be emotional about their livelihood. We are being attacked by an industry which could reduce access to traditional fishing grounds and harm the environment for the hatcheries and the wild stocks. The biological impacts on Alaskan wild salmon are real and could very possibly alter our wild stocks. Wild salmon in Ireland and Norway are non-existent and their streams are now polluted with Atlantic stocks forcing Norway to close gillnetting and start a gene pool to try to rebuild the wild stocks. Canada already has escaped salmon in the wild streams that spawn with wild stocks. Canada has already allowed Atlantic stocks importation into Canada because domestic stocks are too costly and slow growing to raise economically. This is one of our arguments, fish farmers in Alaska will ultimately go broke growing domestic stocks and appeal to the State to allow importation of Atlantic stocks.

All farmed salmon raised in Alaska will be advertised as "Alaskan Salmon," taking advantage of an excellent wild salmon market, which took the State, Alaska Seafood Marketing Institute, fishermen and processors years to build. Fishermen have survived botulism, low prices and many closures to build and promote fisheries and build the private non-profit hatcheries.

The general public of Alaska elected to enhance wild salmon runs by building hatcheries for commercial, sportsfishermen, personal use and subsistence users. This program is having tremendous success in Prince William Sound and has contributed more money to commercial fisheries and the State of Alaska than it took to build the private non-profit hatcheries. The sportsfishermen alone caught 100,000 pinks returning to Valdez Fisheries Development Association in Valdez.

CORRECTION

THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY

CORDOVA DISTRICT FISHERMEN UNITED

P.O. Box 939

Cordova, Alaska 99574

(907) 424-3447

April 1, 1988

Cordova District Fishermen United supports the orderly and controlled development of shellfish and plant mariculture, but opposes pen rearing salmon in Alaska. The moratorium on fin fish farming will run out and we still have not seen any impact studies to commercial fisheries. So far fish farming has been promoted as a safe, controlled industry perfectly suited for Alaska.

The Alaska Mariculture Association has made the statement that "Alaskan fishermen are too emotional" and they compare this battle to the range wars of the 1800's.

We value our natural ocean resources and our present commercial and sportfishing industries too much to roll over and play dead. There is more evidence every day about hormone uses, antibiotics, and the effects to the wild stocks from escaping salmon from pens.

At this point, CDFU believes Alaskan fisherman should be emotional about their livelihood. We are being attacked by an industry which could reduce access to traditional fishing grounds and harm the environment for the hatcheries and the wild stocks. The biological impacts on Alaskan wild salmon are real and could very possibly alter our wild stocks. Wild salmon in Ireland and Norway are non-existent and their streams are now polluted with Atlantic stocks forcing Norway to close gillnetting and start a gene pool to try to rebuild the wild stocks. Canada already has escaped salmon in the wild streams that spawn with wild stocks. Canada has already allowed Atlantic stocks importation into Canada because domestic stocks are too costly and slow growing to raise economically. This is one of our arguments, fish farmers in Alaska will ultimately go broke growing domestic stocks and appeal to the State to allow importation of Atlantic stocks.

All farmed salmon raised in Alaska will be advertised as "Alaskan Salmon," taking advantage of an excellent wild salmon market, which took the State, Alaska Seafood Marketing Institute, fishermen and processors years to build. Fishermen have survived botulism, low prices and many closures to build and promote fisheries and build the private non-profit hatcheries.

The general public of Alaska elected to enhance wild salmon runs by building hatcheries for commercial, sportsfishermen, personal use and subsistence users. This program is having tremendous success in Prince William Sound and has contributed more money to commercial fisheries and the State of Alaska than it took to build the private non-profit hatcheries. The sportsfishermen alone caught 100,000 pinks returning to Valdez Fisheries Development Association in Valdez.

The whole pen-raising industry is dominated by foreign interests and backed by foreign governments. The Norwegian franchise system, which can be compared to McDonald's, is that "we finance, insure and get you started, complete with Norwegian wo kers, and gladly take the farm back if you are not successful." Ireland blocked Norway out because of the fear of losing their whole coastline to the Norwegian franchise machine.

An American Bank will not finance a fish farm nor will American insurance companies insure an industry with fish as their only collateral. Encouraging foreign interests to invest and take contr·· of fish farming in Alaska is not in the best interest of Alaskans.

Pen rearing salmon will compete with existing commercial, subsistence users, sportfishing and future enhancement programs. All wild and hatchery fry will have to pass through fish farm sites upon their release to the ocean causing farmed fish predation on the hatchery fry.

In Prince William Sound, we are on the threshold of a great breakthrough in the fisheries due to Prince William Sound Aquaculture Corporation's great success in enhancing the wild runs. A new cannery and cold storage facility is currently being built in Valdez by Peter Pan Fisheries. St. Elias Ocean Products and Chugach Alaska Fisheries have increased their cold storage capacities, which will enable them to process and distribute more product throughout Alaska and create more jobs. The State of Alaska and fishermen have been waiting for breakthroughs in marketing and distribution of Alaskan products outside of Alaska.

Washington Dom Sea, which is a Norwegian investor, has switched from Pacific to Atlantic salmon; and the Norwegians have done the same in Canada. Safeway stores report they sold only half of the farmed fish this year compared to last year at this time. At the same time, we see tremendous sales in Southeast Alaska of wild winter kings. The general public shows a desire for nutritious wild Alaskan salmon caught by Alaskan fishermen.

Sincerely,

CORDOVA DISTRICT FISHERMEN UNITED

Gerald McCune

Gerald McCune
President

GM/mbl

CORDOVA DISTRICT FISHERMEN UNITED

P.O. Box 939

Cordova, Alaska 99574

(907) 424-3447

April 1, 1988

APR 15 1988

Cordova District Fishermen United supports the orderly and controlled development of shellfish and plant mariculture, but opposes pen rearing salmon in Alaska. The moratorium on fin fish farming will run out and we still have not seen any impact studies to commercial fisheries. So far fish farming has been promoted as a safe, controlled industry perfectly suited for Alaska.

The Alaska Mariculture Association has made the statement that "Alaskan fishermen are too emotional" and they compare this battle to the range wars of the 1800's.

We value our natural ocean resources and our present commercial and sportfishing industries too much to roll over and play dead. There is more evidence every day about hormone uses, antibiotics, and the effects to the wild stocks from escaping salmon from pens.

At this point, CDFU believes Alaskan fisherman should be emotional about their livelihood. We are being attacked by an industry which could reduce access to traditional fishing grounds and harm the environment for the hatcheries and the wild stocks. The biological impacts on Alaskan wild salmon are real and could very possibly alter our wild stocks. Wild salmon in Ireland and Norway are non-existent and their streams are now polluted with Atlantic stocks forcing Norway to close gillnetting and start a gene pool to try to rebuild the wild stocks. Canada already has escaped salmon in the wild streams that spawn with wild stocks. Canada has already allowed Atlantic stocks importation into Canada because domestic stocks are too costly and slow growing to raise economically. This is one of our arguments, fish farmers in Alaska will ultimately go broke growing domestic stocks and appeal to the State to allow importation of Atlantic stocks.

All farmed salmon raised in Alaska will be advertised as "Alaskan Salmon," taking advantage of an excellent wild salmon market, which took the State, Alaska Seafood Marketing Institute, fishermen and processors years to build. Fishermen have survived botulism, low prices and many closures to build and promote fisheries and build the private non-profit hatcheries.

The general public of Alaska elected to enhance wild salmon runs by building hatcheries for commercial, sportsfishermen, personal use and subsistence users. This program is having tremendous success in Prince William Sound and has contributed more money to commercial fisheries and the State of Alaska than it took to build the private non-profit hatcheries. The sportsfishermen alone caught 100,000 pinks returning to Valdez Fisheries Development Association in Valdez.

Cordova Fishermen Say No to Net Pens

Cordova District Fishermen United (CDFU) supports the orderly and controlled development of shellfish and plant mariculture, but we are opposed to pen rearing salmon in Alaska. Norway, Iceland and Ireland ve altered or destroyed most of ir salmon rearing and spawning abitat and have chosen to fish farm. Keeping in mind Alaska has 43% of the world's wild stocks, I will address the concerns of fish farming when introduced into a highly populated wild stocks area.

Introduction of Exotic Species

If culture operations require the importation of live materials into the state, the potential introduction of exotic species probably represents the greatest environmental threat posed by mariculture. Introduced species may establish self-sustaining wild populations, potentially becoming a pest or eliminating natural species. Norwegian fish farmers have had serious disease problems in several operations caused by importing Atlantic salmon smolts from Scotland because they were unable to produce sufficient quantities.

When antibiotics are administered to cultured fish, what effects do the often major additions of disease treatment chemicals have on the surrounding environment? Could the antibiotics eventually result in treatment-resistant strains of certain pathogens (a disease-producing organism) previously not encountered by wild fish stocks in the vicinity? This may be a very real and dangerous possibility.

One note here is that Prince William Sound has about 900 wild streams and the conditions are the same in Southeast Alaska. Where are the salmon farms going to be placed so as not to interfere with wild stream or hatchery fry or migration patterns?

Diseases

Cultural environment may serve as a reservoir for these diseases which are present in an environment but demonstrating no clinical symptoms in wild fish. There is fear that the disease organism may proliferate among the cultured fish, become more virulent and reinfect the wild stocks. However, there is no evidence to indicate that this scenario has ever occurred. The outbreak of a disease is often associated with some forms of stress. In the cultural environment, fish may be stressed by overcrowding, undernourishment, poor water quality and physical damage associated with handling and confinement. Fish held in culture are likely to show more frequent appearance of disease than wild fish.

Salmon netpens, unless located properly, may cause smothering of valuable fish habitats such as herring spawning substrates and intertidal clam beds. Netpens may attract juvenile wild salmon and herring in the vicinity of migration routes, resulting in predation on the small fish by penned stocks or disease transfer between wild and cultured fish. There are five hatcheries in Prince William Sound which also release fry.

The rapid expansion of salmon farms and other mariculture operations on the Pacific coast has raised concerns about possible environmental impacts on herring spawning areas. There are also concerns about impacts on herring roe-fishery sites which occur mainly in the vicinity of spawning areas. Salmon farms and herring could interact in several ways. Organic waste from netpens could contaminate nearby spawning locations and force herring to spawn in other secondary locations or it could jeopardize egg survival after spawning. Alternately, herring will spawn on fishing nets and netpens, and heavy egg deposition on salmon netpens could be deleterious to fish farm operators. Some diseases may be transmitted between wild herring stocks and salmon in farms. Further, if netpens were located in the vicinity of near-shore herring gillnet fisheries, there could be mutual gear interference during the fishing season.

A person could go on forever, but as you can see, the concerns are real. Will the State of Alaska harm the wild stocks or hatchery fry by introducing salmon farming. If this is the case, a valuable resource could be severely damaged. The revenues gained would be lost on progress we have already made on private non-profit hatchery programs and wild stock lost. The present forecast for Prince William Sound is a harvest up to 16 million fish. If both the wild stock and hatchery forecasts are correct, then it will be the second year in a row that Prince William Sound hatcheries have contributed the largest portion of pink salmon to the common property fisheries.

The question is, can Alaska take the chance of any of these disease factors coming true?

Sincerely,
Gerald McCune
President, Cordova District
Fishermen United

LETTERS

continued from previous page

North Pacific Fishery Management Council that you reference, I and other members of the legislature's bush caucus requested the council to make a "sufficient" Pacific cod allocation so that joint ventures could continue with the resident fishermen of Bristol Bay and Norton Sound. We did not request a specific amount. The council's final decision was to recommend that the longliners receive a 22,000 m.t. allocation, leaving 258,000 m.t. to be taken by the domestic industry.

I signed the letter in order to support the herring joint venture between the Japanese longliners and the Bristol Bay Herring Marketing Cooperative. This joint venture directly benefits the resident, small boat gillnetters of Bristol Bay, who, to date, have never been able to secure commitments from domestic processors for markets. The joint venture, unfortunately, would not be economically viable unless the longliner fleet had access to Bering Sea bottomfish, in this case Pacific cod. The herring cooperative is on notice that it cannot count on the continued presence of the Japanese in our waters. It must develop alternate markets. While I am willing to support this exception this year in

see **LETTERS** page 32

Aquaculture—third of a series

Fairbanks Daily News-Miner, Fairbanks, Alaska

Commercial fishermen cite farming threat

Tourism, fishing grounds may be affected

Thursday, February 11, 1988

Aquaculture, or cultivation of seafoods, is a controversial concept in fisheries that could change the way Alaskan fishermen make their livings. This is the third part of a four-part series on the subject.

By CHRISTOPHER BATIN
Correspondent

Alaska is a state divided over the issue of fish farming: the raising of fish in made-made pens for sale to domestic and world markets.

According to commercial fisheries officials, Alaska boasts 70 percent of the U.S. salmon production and 43 percent of the world salmon production, excluding pen-reared salmon. Yet, farmed salmon is one of the most rapidly growing segments of the U.S. fish market. Pen-raised Atlantic salmon have increased dramatically, growing to more than 16 million pounds in just three years, at a net value of $50 million.

But, commercial fishermen claim a fish-farming industry will cripple them, cause a glut of fish on world markets and provide an inferior product to the consumer.

"We've seen our market share for trolled fish from Alaska get smaller over the last seven years," said Barry Lester with the Alaska Troll Salmon Processors Association. "The foreign fish farmers are definitely making inroads."

Fishermen say pen-reared salmon will either be a "Mom and Pop" industry, with farms scattered up and down the coast, or the state will use its resources to develop a market for foreign investors to exploit and take home the profits.

Lester said the problem facing commercial fishermen lies in educating salmon buyers and improving the quality and grading system of salmon.

"We don't want to tell people that farmed salmon swim in their own waste and are filled with chemicals against disease. We just want people to know the virtues of wild salmon," he said.

Kate Graham, executive director of United Fishermen of Alaska, said Alaska commercial fishermen strongly support the moratorium imposed on salmon farming in Alaska. "We're reaping the benefits of our non-profit hatchery system. It would be a real mistake to bring fish farms in here."

UFA represents 19 organizational members and about 12,000 commercial fishermen. The 22-member board of directors is concerned that when the moratorium prohibiting finfish farming expires in July, regulations won't be in place.

"If the moratorium expires, without clarification, farmers

industry that has virtually no regulation. We want to make it (fish farming) illegal," Graham said. "The state would need to make a tremendous investment, in addition to what it's already made, if it hopes to see fish farming take off."

Alaska commerical fishermen list several reasons for being against fish farming. One is the disruption of traditional fishing grounds and anchorages. Depending on the location of the farms, waterfront properties could diminish.

It also could affect tourism, they say.

Also, opponents of fish farming claim fish feed and feces can collect on the ocean bottom under pens in layers a foot deep. Biologists say that a salmon farm of a few acres could generate as much feces and urine as a city of 4,000 people.

They also cite toxics. Last year, British Columbia's Ministry of the Environment discovered a substance called tributyltin, or TBT, in pen-reared salmon sold in U.S. seafood markets. TBT, with toxicity levels reached in as little as five parts per trillion, is commonly used in anti-fouling paint for boat bottoms, and is sometimes used to treat netting in salmon pens. European countries have banned the substance because of the damage it inflicts on the environment. Researchers have concluded that exposure to low doses of TBT may increase susceptibility of disease among salmon and other fish.

Among penned fish, the spread of bacterial disease is a gray area that needs more study. The use of antibiotics—especially oxytetracycline—would help control disease. Yet opponents to farming claim bacteria could develop a resistance to the antibiotic, and be harder to treat, especially if spread among wild fish stocks.

Also, after several cycles of pen rearing, they claim genetic alterations could occur and domestic pen-raised salmon could affect the gene pool of wild salmon stocks.

As for costs, "Fish farming is touted as an activity for small, coastal villages," Graham said. "The trouble is, the costs of operation are so high, that it'll be extremely difficult for a small family or village to meet everyday costs, let alone the cost of services offered by FRED (Fish and Game's Fisheries Rehabilitation Enhancement Division). Farmers want the state to wait until after they've made a profit to collect fees. That's two to three years after the start-up, and that's if they survive that long. Commercial fishermen have always had to take their

don't have to pay our enhancement tax until we make a profit.

"The state should meet its current needs before creating a new industry," Graham said.

House Research Agency analyst Brad Pierce indicated that Alaska fishermen will face competition from farmed salmon whether or not fish come from Alaska farms.

"At the rate that worldwide production of farmed salmon is growing, domestic markets can be expected to become saturated in the intermediate (next five to 10 years) future. This means that there is a limited 'window of opportunity' for Alaska to enter salmon farming and gain a market share. If traditional fishermen in Alaska can learn from their counterparts in other countries and adopt some of the cooperative methods that have made others more competitive, then the greatest loss they suffer from farmed salmon may be some of their sense of autonomy and individual freedom."

"Fish farmers would have the public believe that they're not competition for us," Graham said. "You bet they'll be competition. But that's not the main reason we're fighting it. There are serious problems that need to be addresed that concern everyone, from the sport fisherman to the subsistence user to the man on the street.

"Alaska has the last great runs of wild salmon in the world. With the proper marketing, and additional help from the state, we need to continue extolling the wonders and virtures of Alaska wild salmon. We already have the resource. Let's use it."

In Alaska, commercial fishermen claim in-state salmon farming will seriously hurt Alaska's salmon market.

Salmon farmers disagree, saying the state's commercial salmon fishery supplies fish predominantly during the summer months. Fish farmers also claim that profits, timing of the salmon run and competition from other boats often are reasons why some fishermen don't treat their fish with the care that premium salmon

(The exception is troll fish men who fish year-round kings and cohos and handle process their fish individua Both farmers and troll fish men sell premium salmon to same markets.)

Fish farmers say they p duce carefully handled f without bruises or blemish that are uniform in size, and t are fresh, not frozen, every of the year.

Proponents of Alaska salm farming say the state shou cash in on the market bef other nations take control. Th claim the benefits to Alask economy are many and incl market penetration and c tinuity of product during winter when commercial mon fishing is at a standstill

Also, fish wastes and entr can be remanufactured into food and fertilizers.

A variety of species are av able in-state to reduce the ris disease, they add. Prospect species for Alaska fish farm are coho, chinook and steelhe Arctic char might also be a sibility because of its red-ora flesh and high prices in the E pean market.

FRED's Mike Kaill said m fish farmers he's talked to ar favor of an industry that is supportive.

In regard to fears stresse the commercial fishermen environmental groups, he re red to Gov. Steve Cowp eight-point policy on mari ture released in 1987. That p stresses that mariculture m benefit Alaskans; must pay itself and the state must g fair return for its resour must be done in an ord fashion to develop a stabl dustry; must meet all fed and state requirements health and sanitation; mus manage to protect plant animal stocks; must be m aged to ensure adequate vironmental safeguards habitat protection; must m mize land use conflicts; n allow for navigation and em access to upland areas; stipulate that brood stoc carefully regulated when t from limited entry fisherie

Kaill said despite the res tions, there's much interes salmon farming from in-s and Outside investors.

"The type of farm will d mine the type of investor y attract," he said. "Large fa will probably attract la firms, perhaps from Outsid the state wants to keep ership in Alaska, with local ple, the farms will probabl small."

Christopher Batin is an as

Pen-raised fish cut into market for Alaska troll-caught salmon

Fairbanks Daily News Feb 18'88

Aquaculture, the cultivation f seafood, is a controversial oncept in fisheries that could hange the way Alaskan fisher-ien make their livings. This fin-l segment of a four-part series n the subject looks at narketing.

By CHRISTOPHER BATIN
Correspondent

An elite restaurant in New ork has a menu listing two ypes of salmon: fresh frozen laska king salmon, cooked to rder, or fresh Norwegian tlantic salmon air-shipped the ame day from Norway, pre-ared to order. Prices are the ame for both.

If you were the customer, you night assume that both fish vere caught fresh and silvery rom the high seas. While this is sually the case with Alaska Pacific salmon sold fresh-frozen o Outside restaurants, it is not he case with Norwegian Atlan-ics.

Most Atlantic salmon shipped o "white tablecloth res-aurants" in major U.S. cities re pen-raised fish that have ived their entire lives in huge olding pens with hundreds of ther salmon. Years of domes-ication have conditioned the fish to feed strictly on fish food pellets.

When the fish are ready to be harvested, they are vacuum pumped out of their pen and taken on a turbulent ride to a processing plant, where they are killed with a blow to the head, then gutted and chilled before being sent to market.

Alaska is battling for position in restaurants around the world against Norwegian Atlantics and pen-raised kings. It's a battle that commercial fishermen say needs to be won now, before Alaska loses its share of the market.

"It would be nice if we could make wild Alaska salmon as common in homes as tuna fish," said Pete Carlson, a comptroller with the Alaska Seafood Marketing Institute in Juneau. "But we have lots of competition from foreign markets dealing pen-raised fish."

The differences between pen-raised fish and troll-caught salmon deal with price, uniformity and seasonal availability. Commercial fishermen fear these differences will shrink in the near future, hurting the entire salmon fishing industry.

Based on opposition from commercial fishing interests, and uncertainty about its potential impact on the economy, the Legislature issued a moratorium until July 1 on the granting of licenses, permits, leases or authorizations for commercial finfish farming. "The Legislature has advised us that we can promote only naturally raised and traditionally harvested fish at this time," Carlson said.

He said the institute has taken a neutral position regarding farmed fish and fish farming.

"We do have, however, several campaigns at the present that promote the overall qualities of Alaska salmon."

One of those campaigns is aimed at promoting canned salmon in the southeast and northeast United States. "The canned salmon market is big in these areas," he said. "The scare over botulism-tainted canned salmon that took place in 1982 has long been neutralized."

ASMI also promotes fresh and frozen Alaska salmon, along with halibut and shellfish nationwide.

Carlson said his agency spends about $4.2 million to market the advantages of Alaska seafood to consumers around the world.

"Part of our advertising revenue comes from federal funds," he said. "We're involved in Target Export Assistance (TEA), a federal program that helps us penetrate known trade barriers in foreign countries.

"There s resistance to marketing Alaska salmon to Japan and western Europe, countries that have already established seafood industries or supply markets. We're trying to turn that around."

Economists indicated the rapidly growing national trade deficit can be slowed by enhancing overseas markets for Alaska salmon. Yet, Carlson said the Alaska seafood industry is undoubtedly going to face some stiff competition in the United States from foreign farmed fish.

"Alaska is a world leader in commercial fisheries," he said. "That's the main thrust of our marketing strategy, to sell a consistently good product, and lots of it."

Sandra Cesarini, executive vice president of Sea Hawk Seafoods in Valdez, said interest in Alaska salmon is rising annually, especially for specific types of salmon.

"We deal with a high quality of salmon," she said. "Over 20 percent of our product comes in alive, mostly on larger boats that can refrigerate seawater and hold the fish they catch. These are bright, silver, deep-running fish. If the salmon has a tint of blush, it's a second-hand fish for us."

Processors like Cesarini say that most of their sales go to Asian and European markets, with premium prices coming from refrigerated saltwater fish. The demand by Japanese consumers for whole frozen and dressed Alaska sockeye salmon has seen phenomonal growth. Japan imported more than 227 million pounds of frozen U.S. salmon in 1985, roughly 83 percent of the total U.S. exports of salmon. Japan doesn't have the lake systems necessary to raise large quantities of sockeye salmon. Chum salmon also is popular fresh or frozen, however, Japan su' 'ltutes Alaska-

total Alaska salmon harvest has exceeded 100 million fish per year. About 97 percent of the premium species—coho, king and sockeye salmon—is sold frozen and 3 percent fresh. Washington, Oregon and British Columbia typically sell a higher percentage fresh. According to seafood distributors, West coast residents prefer the deep red color of premium Pacific salmon over the light pink color of pen-raised salmon. Yet despite consumer preferences for wild Alaska salmon, economic surveys show fresh pen-raised salmon are making inroads into the Alaska troll-caught salmon market.

Alaska salmon has several advantages over imported Atlantics. One is price. Wild salmon sells for about $2.50 a pound, wholesale, while farmed salmon sells for over $5 a pound. But analysts predict current technological advances in fish farming could eventually make it extremely competitive with wild fish.

Barry Lester, president of the Alaska Troll Salmon Processors Association, said that European fish farmers have established a good foothold in the U.S. salmon market, with an effective campaign that promotes their fresh, pen-reared salmon over frozen.

He said marketing efforts need to educate consumers on the gray areas of frozen and fresh.

"Pen-raised salmon labled 'fresh' is often misleading to the consumer," Lester said. "That product could have been sitting there three or four days or longer. The consumer has no idea of when those fish were taken from the water."

He said fresh-caught Alaska salmon can be frozen within hours of being caught.

"Oftentimes, the fish is better quality. It maintains its color, texture and flavor longer than fresh unfrozen fish that have been sitting in a refrigerated locker.

"We need to make Alaska salmon more attractive to the world," he said. "If we're unable to develop a market preference for wild salmon, the only thing left is price competition. We can't allow farmers to sell an inferior product from pens for less than what it takes us to catch wild salmon. The Alaska fishing industry will disappear, because the price of salmon will be very low, due to the glut of fish."

caught Alaska king salmon isn't always that easy.

"I've been having problems in obtaining fresh king salmon on a regular basis," he said. "When I started my business eight years ago, I could get fresh, troll caught Alaska kings during 9(percent of the season. Now I can only get them about 50 percent o the season.

"We use troll-caught kings be cause they're the best," he said "When they're unavailable, w use fresh frozen king, which i also excellent."

He said Norwegian pen-raise king salmon is excellent, and i the price would drop, he'd cor sider using it.

"It's a bit paler than troll caught kings, but the quality i excellent."

Winther said that while o business travels outside Alask he's constantly on the lookout fc salmon on restaurant menus.

"Many of the restaurants Ou side carry Norweigian, pen raised salmon," he said. "I'v had it in Chicago, and just r cently, in Disneyland. It's exce lent fish."

Biologists say there may b nutritional differences betwee wild salmon and farmed sa mon. Wild salmon is rich in anc that helps prevent heart attacl and high blood pressur Farmed salmon contain less this oil because of a diet based c processed fish pellets rath(than a natural diet of forage fis such as herring.

Alaska also has a distin advantage over countries th export salmon to the Unit(States. State processors have i international borders to cross. factor that will assist in elim nating marketing and shippi hassles, a major deterrent foreign fish farmers.

Farmed salmon has adva tages, though. It's availab year round. Alaska wild salm is available only from M. through September.

Freshness of product another angle that troll fish men are finding difficult to be Restaurants and caterers New York or Los Angeles c order a 10-pound box of ba coho and choose from 8-, 10- 12-ounce fish, all uniform shaped and sized, and proces according to specifications. I customer orders on Wednesd the farmers take the fish fr the water the next morning, a it's usually delivered within hours.

While fresh seems to be fir there is a growing demand canned salmon. The Unit Kingdom imports about 50 p cent of Alaska's canned pink mon, followed by Australia percent) and Canada (17 p cent).

While prices for salmon v seasonally, based on harv levels and time of return, e nomists are finding Ameri consumers are shifting aw from canned salmon, preferr more fresh and frozen produ

FISH FARMING — First hand experiences during recent trip to Norway are related to TFN's Marilyn E. Geoerge, SE Alaska correspondent. TFN photo

Alaska Senator Lloyd Jones reports on Norwegian farming

by Marilyn E. George

"We do not want Alaska to go into fish farming if it will be a detriment to the existing fishery. It needs to complement what we now have," Alaskan Senator Lloyd Jones told your reporter when he visited Petersburg in September after a week long visit to Norwegian salmon farms.

"It could be a viable industry here, but they have an entirely different situation as little commercial fishing exists on wild stocks. The uplands are privately owned, and often those owning the uplands set-up the fish farms.

None of the farms were far from the end of the roads, making getting in supplies and shipping out fish relatively easy. They also have many small ferries and freight boats plying between the settlements," Jones continued.

Jones along with seven other Alaskan legislators flew to Norway in July to observe the Norwegian fish farming. The MOWI farm, the largest in Norway, was producing 500,000 fish a year. It had started with trout before restrictions as to size were in effect. It needed 200,000 cubic meters of water. As only one meter of tide flowed there, they set up large propellers to drive the water around the pens and through the channels.

The National Government was doing the majority of the research needed. They determined what areas would support salmon farms. Jones did not know the criteria used to determine who obtained the rights to set up the farms.

Family farms not profitable

The 2,000 meter family farm has not been profitable and they are merging into associations or being acquired by corporations, Jones found. The 8,000 meter farm with an investment of $1 million is needed to be efficient. Now pressure is being put on the government to allow these farms to expand to 10,000-12,000 cubic meters in order to be profitable.

Norway now has 700 farms employing 3-4 workers per farm, and producing 50,000 metric tons of fish. When they are in full production, they have a potential to produce 90,000 metric tons. Norway is shipping 27 percent of this to U.S. markets and 26 percent is going to France, Jones reported.

The Norwegian government has found a way to vaccinate the fish by absorption so as not to transfer the antibiotics into the final product. The

Protecting the fish and the fishermen

American fishermen apparently have clear and convincing evidence that foreign trawlers have been operating illegally in U.S. waters. Videotape of seven ships — four Japanese, three unidentified — 39 miles inside the 200-mile limit north of the Aleutians seems to provide incontrovertible proof of the illegal activity.

Quite rightly, the U.S. fishermen want the violators punished and not just with the rather minor 90-day confinement to port provided by Japanese law. Foreign fishermen who enter U.S. waters threaten American fishermen's livelihood — and the health of fish stocks that are the basis for the billion dollar bottomfish industry.

Washington should make it clear to the Japanese that such intrusions will not be tolerated, perhaps by proposing stiff new penalties for documented violations. Banning foreign violators from joint ventures with American fishermen is a potent example of what could be done.

The federal government also should fund improved Coast Guard surveillance in the Bering Sea. The waters along Alaska's coast deserve protection in the national interest — and only Uncle Sam can do the job.

But laying down the law to Japan and tougher enforcement may not be the only measures needed to protect U.S. fishermen and the fish.

The history of big-time fishing is replete with stories of boom and bust. The bottomfish industry is booming today but will bust if improperly managed. The North Pacific Fishery Management Council is attempting to keep catches well below maximum sustainable yields, but does it have enough biological information to guarantee such protection? Is its management system adequate to ensure a steady harvest?

If the Japanese are poaching in U.S. waters they should be disciplined. But U.S. fishery managers must remain ever vigilant to the dangers of over-fishing even if the Japanese toe the line.

1-21-87 Juneau Daily News

Fish farming legislation remains stalled

By LARRY PERSILY
The Associated Press

JUNEAU — Supporters of salmon mariculture in Alaska says they're disappointed by lack of action on the issue, but still hope to answer fishermen's concerns about competition and diseases.

"It is counterproductive not to discuss it," said Rep. Johnny Ellis, D-Anchorage, prime sponsor of a bill that would clear the way for fish farming in Alaska.

"This is not a fishing debate; this is an economic development issue," said Rodger Painter, executive director of the Alaska Mariculture Association.

However, the Senate president and the Senate majority leader are not optimistic about the measure's chances this year.

"We don't want to create an industry that in any way will hinder or hamper an existing industry," said Senate President Jan Faiks, R-Anchorage.

Senate Majority Leader Dick Eliason, R-Sitka, said there is a future for mariculture in Alaska for seaweed, oysters and shellfish, but not necessarily for pen-reared salmon.

"I for one am not going to support a bill that is not supported by the fishing industry," Eliason said. The Senate mariculture bill (SB106) has been stuck since last year in the Resources subcommittee on fisheries, chaired by Eliason.

"It is not a high priority of many of the people I represent," said the Sitka senator.

Another coastal senator with a large constituency of fishermen, Fred Zharoff, D-Kodiak, refused to proclaim the bill "stalled in the water."

He said not all of the conflicts

See Page C-7, MARICULTURE

MARICULTURE: Supporters still hope to address concerns

Continued from Page C-6

have been resolved between commercial fishermen and fish farming supporters, and those issues would have to be settled before he could actively support pen-rearing of salmon.

Ellis said he wants to amend mariculture legislation this session to address concerns of commercial fishermen, including the issues of alleged competition from salmon farming and diseases spreading from pens to natural stocks.

The House bill (HB108) is in the Resources Committee.

Painter said he disagrees with the position of Faiks and Eliason that fish farming could harm the state's fishing industry.

Commercial fishermen could benefit from an increased presence of Alaska salmon in the worldwide market with a year-round supply from fish farms, Painter said.

"It's a fairly emotional issue," he said, comparing the debate to the range wars of the late 1800s between cowboys and farmers.

Mariculture already exists on a small scale in Alaska, with some oyster farming near Wrangell and mussel farming at Halibut Cove. The legislature last year approved a moratorium on finfish farming in Alaska, but it does not apply to oysters or shellfish.

The moratorium expires in July.

"The moratorium falling is really a no-win situation for everybody," he said. Although there is no law against fish farming, there is no law specifically allowing it either, he said, and lawsuits could result if the legislature fails to address the issue before the moratorium expires.

An extension of last year's moratorium is not the best answer, Painter said.

Panel: Ban salmon ranching

KETCHIKAN — The Southeast Alaska Conservation Council (SEACC) is calling for a ban on salmon ranching and a moratorium on all other forms of tideland development. The environmentalist group says mariculture would result in reduced concern over the maintenance and retention of wild stocks of salmon and their habitat.

Mariculture is hot topic among state legislators

By LARRY PERSILY
The Associated Press

JUNEAU — Despite efforts to amend the mariculture bill to make it more palatable to its adversaries, opponents of salmon farming still resist the measure.

The legislature last year imposed a moratorium on salmon farming, with the prohibition on the new industry due to expire this summer.

A measure that would allow salmon farms (HB108) was amended this session to limit their number and size, an attempt to win support from those who favor continuing the ban.

Although some legislators favor extending the moratorium, one opponent, Sen. Lloyd Jones, goes a step beyond that — he has introduced a bill (SB425) to impose a permanent ban on salmon farming.

Extending the moratorium, the Ketchikan Republican said, would only extend the turmoil by creating uncertainty every time the moratorium comes up for consideration.

Jones wants to end that uncertainty by prohibiting salmon farms, and then studying the issue for possible future changes in the law.

"We're not precluding further research for finfish farming," Jones said.

His bill would allow shellfish and plant farming.

Neither shellfish nor plant farms have attracted the controversy generated by salmon farming proposals.

There is some oyster farming near Wrangell and a mussel project near Halibut Cove, but efforts to set up salmon farms have been blocked by opponents who fear its impact on the commercial fishing industry.

Salmon farms would raise the fish in floating pens, providing a year-round supply of fresh salmon.

Rep. Robin Taylor has a bill (HB455) that would extend the moratorium 10 years.

The Wrangell Republican said he worries about the impact

See Page B-3, SALMON

Lloyd Jones

Ban on salmon farming urged

KENAI — The Kenai Peninsula Borough Assembly has passed a resolution asking the state legislature to continue a ban on salmon farming in Alaska waters. The measure, which also asks the state to carefully regulate shellfish mariculture projects, passed unanimously Tuesday. It also asks lawmakers to avoid using depleted commercial and sports fishing budgets to underwrite any mariculture industry. Salmon are farmed — reared in pens until processed — throughout the world. Opponents of the industry say diseases and the genetic inferiority of pen-reared salmon could devastate native Pacific salmon.

SALMON: Lawmakers worried about impact on market

Continued from Page B-1

salmon farms would have on the market share and prices paid for natural salmon. The pen-reared fish could cost Alaska's commercial fishermen a share of the market for fresh fish, he said.

He also questions whether salmon farms would take away too many of the state's favorite beachfront recreation sites.

Rep. Johnny Ellis, sponsor of the bill to allow salmon farms, said, "It's an important potential industry in Alaska." Another moratorium would be disservice to those who are waiting to go to work.

The Anchorage Democrat is waiting for a report due next month from the Department of Fish and Game, which will review the potential impact of pen-reared salmon on the Alaska seafood market.

Ellis said he hopes the report will answer market questions raised by opponents and increase the chance of passing his bill this year.

In addition to limiting the size and number of salmon farms, his amended bill would impose taxes on all mariculture products.

It would allow Fish and Game to order destruction of diseased farm stocks, to reduce the possibility of spreading the infection to natural salmon runs.

"While many of my members are not exactly thrilled with the level of government controls in Ellis' new bill, we believe it does adequately respond to criticism of the original bill," said Rodger Painter, Alaska Mariculture Association executive director.

"Mariculture is one of Alaska's best opportunities for diversifying our private economy," Painter said. "Salmon farming offers the greatest immediate opportunity for creating year-round jobs."

Agencies study shellfish mariculture on Etolin Island

The Associated Press

KETCHIKAN — Researchers from several state and federal agencies have started a study on Etolin Island to determine the possibility of developing shellfish mariculture sites in Southeast Alaska.

The completed study should provide a comprehensive package of information on shellfish mariculture, said Terry Rader of the Alaska Department of Natural Resources. Rader is coordinator of the project.

The project addresses only shellfish and kelp development, he said, and is not a plan for fish farming.

Etolin Island, near Wrangell, was selected for the project because there are a dozen mariculture permits in the area. The permits are for oyster mariculture, the main target of the project. The study also will look at kelp, mussels and scallops, Rader said.

The area is not subject to a coastal management plan and appears viable for shellfish mariculture, he said.

Researchers plan to develop mariculture criteria for potential shellfish farmers and agencies that issue the necessary permits.

The project will study access to mariculture sites, power, source of labor, security, distance to market, supplies and user conflicts. Possible conflict with recreational uses will be looked at closely, Rader said.

"We're trying to find out what the existing uses are," he said. "We'll look at what is compatible and possible mitigation measures that could be recommended."

Researchers also will evaluate potential sites for water temperature, phytoplankton counts, water strata, paralytic shellfish poisoning, oxygen and current, he said.

Some of the information may come from a satellite being used in a project being done by the state's Marine Advisory Program.

A French satellite, named Spot, will pass over southeast Alaska, taking photos which could give information on water temperature, salinity, sediment and color.

The satellite will record information for the new project four times a year. Each pass

New Guinea, will cost as much as $2,000. But officials say the cost would be minimal compared to the expense of using a boat to gather the information.

Public workshops are slated in Wrangell and Petersburg later this month.

After a draft report is compiled, the agencies will go back to the communities in May. The report is scheduled to be completed June 30.

State should weigh mariculture decisions carefully

By SONJA CORAZZA

Those interested in passing a mariculture bill have proposed that all Alaskans have to do is stand back and let the industry develop, that government is merely in the way of an innovative new industry. But Alaskans who value our natural ocean resources and present commercial and sportsfishing industries believe this is an unacceptable attitude.

Who will own this industry and who will reap the economic benefits? How will use of our tidelands and waterfront property values be affected? How will our natural salmon runs and shellfish populations co-exist with an industry that puts hormones and antibiotics directly into the ocean?

Norway has been involved in mariculture for more than 20 years and has recently discovered that 10-57 percent of the salmon in their streams are escaped pen-reared salmon. This concerns scientists so greatly that they have instituted a wild salmon gene bank and stringent restrictions on their own industry to protect the few remaining wild salmon. The last of their wild stock commercial fishery will be closed down in 1989 and their sports fishery will be severely limited.

Alaska contains 43 percent of the wild salmon runs left in the world and 90 percent of the wild salmon left in the United States. Scientists worldwide admit they don't know the effects of genetic engineering and the use of antibiotics and hormones.

People concerned with our ecosystem regard the pen-farming of salmon as an example of the "anything to make a fast buck" syndrome. Unfortunately, what may be at stake is the health of the last natural salmon fisheries in the world.

Canada opened their doors to mariculture of finfish several years ago and now reports that 65 to 90 percent of the industry is owned by Norwegian corporations — the joke is if you want a job on the fish farm, you'd better speak Norwegian. Canadians complain that only low-paying jobs are left for them.

The Prince Rupert Fisherman's Co-Op that was to be an example of how local residents and fisherman could succeed announced last summer that they were selling out due to the technical difficulties of raising fish, diseases in the pens and a problem with marine mammals as predators. Canadians say any hope they had of salmon farming being profitable for small local operations was "just a dream."

In July 1986, Ireland slapped a ban on foreign ownership of salmon farm leases to head off what officials feared could be a takeover of the country's leading industry. "We could fill every bay on the Irish Coast with salmon cages within two years if we allow the Norwegians in without restriction," they said, and referred to Scotland where they claimed that Norwegians owned over 60 percent of the industry. In Seattle, Global Aqua A-S, a Norwegian corporation, is buying the oldest and largest salmon farm in Washington, previously owned by Campbell Soup Co.

Why are the Norwegians expanding worldwide? Obviously they have the technology to grow fish and want to dominate the markets. But just as importantly, they now face strict regulations in Norway where in the past three years they have lost thousands of tons of fish to diseases in the pens. Disease and environmental problems, combined with the genetic questions, forced Norway to place controls on salmon farmers that do not presently exist in other countries.

People concerned with our ecosystem regard the pen-farming of salmon as an example of the "anything to make a fast buck" syndrome.

Lest Alaskans think we will be immune from this Norwegian takeover trend, our coastal residents have already been approached by Alaskan-named, Norwegian-backed companies who have offered them deals for their waterfront ... "just sign your name and you will be the proud owner of a fish farm ... all equipment built in Norway." Is this what Alaskans choose for their future?

Years ago, Alaskans did make a choice — they chose to enhance natural stocks through an ocean ranching program (wild salmon enhancement). Alaskans also wisely chose to make ocean ranching private non-profit so all public user groups would benefit.

Last summer in Prince William Sound sportsfishermen caught 100,000 pink salmon. Sports, commercial and subsistence users all profited from the state's and the commercial fishermen's direct investment in fisheries enhancement.

How successful monetarily are our present enhancement programs? For example, the Cook Inlet Aquaculture Association reports a 458 percent profit on enhanced fish plus 21 permanent full-time jobs and 60-70 established seasonal jobs, most of which go to Alaskans. Alaska is recognized as having one of the strongest ocean ranching programs, third only to Japan and Russia. It is inconceivable that our government is cutting back on our state hatchery system.

Lastly, Norway views Pacific Ocean ranching as their greatest competitor and has started their own private ocean ranching program.

This year promises to be a crucial one for both the future of our natural resources and the future of our common property fisheries. Let's hope Alaskans make decisions that we won't regret for generations to come.

☐ Sonja Corazza is President of the North Pacific Fisheries Association.

South Point coalition formed, claiming, Hood Canal salmon farm would obstruct fishery

/ Gina McMather

The South Point Coalition, an liance of commercial fishermen and efferson County property owners, lebrated its first anniversary in ctober, 1987.

I'm not sure "celebrated" is the ght word, however, to describe a ear of intense frustration. A grass ots organization of "little guys," e're still battling the corporate uaculture interests who want to ace a huge salmon pen complex at outh Po t in the Hood Canal.

The major beef of the gillnetters nd purse seiners in the organization s simple – the pens would create a langerous obstacle that would dislace fishing operations in a heavily shed area. At the peak of the fall eason, Area 12, just south of the lood Canal Bridge, has frequently een described by local residents as a city of boats." The guys on the ater are constantly jockeying for oom to lay their gear and trying to void running over each other's nets. his is where they want to put a fish rm!

The first permit request Olympic ea Farm, Inc. brought to Jefferson ounty showed 22 pens, each 49'x49', o be attached to the old South Point erry dock, about two miles below the lood Canal Bridge on the west side. he complex would have extended 00 feet out into the canal.

Frank Fletcher, president of the cal PSGA chapter, estimated as any as 30 percent of the customary rift gillnet sets between Hood Canal ridge and the U.S. Navy installation t Bangor would be obstructed. For einers it would mean the loss of the ustomary South Point set.

It never occurred to county offic-ls the proposal might impact fishing perations. The project had already assed through the preliminary oops in the county permitting rocess before fishermen even learnd about it. (We became aware of the roposal because something possessd me to read the legal notices in the cal paper the week it was to go efore the shorelines advisory comittee.)

When we did raise our voices, we ound we had little effect. County horelines advisors and the county ommissioners had little understandng of fishing operations. Why one pot might be better fishing than nother or why we couldn't just "go round it" was a mystery to them. esides, the local shorelines manageent plan didn't address the possibil- problem some other agency should deal with."

It was true, the local management plan was no help. It had been adopted when aquaculture was generally meant to mean oyster-growing. The fact that the commissioners' meetings were held on days that conflicted with fishing openings in Area 12 also made it difficult to convey the depth of our concern.

John Pitts, an outspoken proponent of aquaculture, resigned from the county commission only several months previously to accept the post of Director of Aquaculture by appointment from Governor Booth Gardner. His influence on the board was still evident.

The two remaining commissioners approved the Olympic Sea Farm, Inc. permit.

Enter the South Point Coalition!

When the commissioners approved the request, the frustrated opponents of the project milled in the high-ceilinged, Victorian hallways of the Jefferson County courthouse. One indefatigable, middle-aged woman who owned property near South Point, approached one of the fishermen. What could we do now? She wanted to know.

What happened next was the founding of the South Point Coalition and the forging of an alliance between property owners and fishermen. We hired a lawyer, and recruited members. We raised money, and we appealed the county's decision to the state Shorelines Hearings Board.

It was a real grass roots effort. We have no millionaires -- at least that we know of -- among our members, who can step forward to pick up the tab for legal fees. Often it has been a week-to-week struggle to keep up with the legal bills, telephone and postage. Except for our attorney, all labor is volunteer.

Peter Eglick, ecology issue lawyer, built our case and detailed our objections. At a pre-hearing conference in December, 1986, both sides laid their cards on the table. The Washington Department of Fisheries and the Department of Ecology joined as appellant-intervenors on the side of the Coalition, although their objections to the proposal did not exactly coincide with ours.

The Department of Natural Resources, who would be leasing state tidelands to Olympic Sea Farm, Inc., took the fish farmers side -- as did Jefferson County, which had approved the permit.

Each side drew up its list of witnesses who would be called upon to testify and noted the exhibits they planned to present. The Shorelines Hearings Board scheduled a final hearing for June 1986, and estimated it would take at least twelve days for all parties to have their say. The projected expense of such a long hearing was staggering.

Only a matter of weeks before the hearing, the Shorelines Hearings Board considered a pre-hearing motion our attorney had filed. Based on his brief, the board decided that the county had committed a procedural error. The county had failed to notify the affected Indian tribes of this proposed project, as the county is specifically required by law to do. The shorelines hearings board therefore negated the county's permit and cancelled the hearing.

While the appeal was in the works, the Jefferson County Commissioners were persuaded to enact a moratorium on fish pens until such time as the county management plan is brought up to date. All new permit applications were put on hold.

Olympic Sea Farm returned with their new proposal (Fall 1987), with an application looking much like their old one. The only significant difference is that the two shoremost pens were eliminated in an attempt to counter the DOE's previous objection that the shoremost pens were sited in water too shallow.

This time, we were ready for them. Their "enfironmental checklist" submitted with their proposal did not deal adequately with all the probable impacts -- especially the conflict with the pre-existing commercial fishery, we argued.

This time, someone was listening. A new commissioner had taken John Pitts' vacant seat and he has expressed skepticism about unrestricted fish pen development.

The other two commissioners now seem to be [illegible] the conflict with the commercial fishery is part of the county's responsibility. The commissioners wanted Olympic Sea Farm to return with more information about possible impacts the project might have.

At the time of this writing, that is where the project stands. We expect Olympic Sea Farm, Inc., to return before the county commissioners after the first of the year, armed with a fuller defense of the project.

...onvince the commissioners that our concerns are not only valid but of such magnitude, that the county should require the proponents to prepare an environmental impact study before proceeding further.

That is the step the law requires if the commissioners feel the project would have significant adverse impacts to the environment -- which includes any commercial fishing operations which occur at the site.

Then finally, if we succeed to that point, we need to convince the commissioners that *salmon pens should not be allowed to displace the traditional fishery.*

In the light of the governor's whole-hearted support of any and all aquaculture, it may require courage on the commissioners' parts to arrive at a conclusion that departs from the governor's political agenda.

It appears we may have been the first group to raise the issue of site conflicts between aquaculture projects and commercial fisheries. *We certainly won't be the last.*

In fact, Sea Farms of Norway has just changed their name to Sea Farm Washington and has applied for offshore sites along the Strait of Juan de Fuca.

Another project is proposed for the bight between Hood and Tekiu Points in the Hood Canal in salmon management Area 12B.

Sometimes it seems like we are fighting a series of flash fires and can't stop passing the water buckets to deal with the long term problem.

But there is hope. The SPC has been providing input into a new, revised county shoreline management plan, which we hope will address the problem of conflict with commercial fisheries, and presents the potential for fish escapement and transmission of disease to wild stocks, along with concerns raised by property owners.

The SPC has joined a collection of other citizen groups around Puget Sound who are trying to get the state legislature to regulate the aquaculture industry more stringently in regard to fish pen culture.

So far, the SPC is the only group among the dozen or so comprising the Marine Environment Consortium which represents a sizeable number of fishermen.

The MEC this year is supporting a lobbyist in Olympia to counteract the efforts of the heavily financed salmon growers lobby.

With our second year of effort underway, it begins to appear that "we've only just begun..."

(Ed.: Gina McMather is crew on the gillnet boat *F/V Hotejan*, and serves as president of the South Point Coalition. She urges fishermen interested in joining or contributing to the SPC, to contact her at (206)385-2602, or write The South Point Coalition, P.O. Box 506, Port Townsend, WA 98368. The SPC is endorsed by the Puget Sound Gillnetters' Association and the Purse Seine Vessel Owners' Association and has members from all over Puget Sound and as far away as Alaska and California.)

SETTING OFF SOUTH POINT Ferry Dock, during fall Area 12 opening, Ralph Cole's F/V D.C. COLE, out of Anacortes, Wa. A 20-pen net complex for rearing of Atlantic salmon is proposed by Olympic Sea Farms, Inc., just off the ferry dock. Property owners of the area are joining with commercial fishermen in the South Point Coalition in objecting to the operation.

CIRCLE THIS — South Point is the closer, in circled area, about two miles south of the Hood Canal Bridge, which forms the northernmost boundary of Area 12. Olympic Sea Farm, Inc. permit to set up salmon-farming operation

SHORE ATTACHMENT is indicated by arrow, of the 700-foot dock outermost pen of 20-net pen complex proposed by Olympic Sea Farm, I... The proposed salmon farm would stretch out into 80-to 100-foot water in... former South Point ferry terminal.

Apprcach fish farming with a degree of caution

By SEN. RICHARD I. ELIASON

COMPASS
POINTS OF VIEW FROM OUR COMMUNITY

There is a groundswell of interest in Alaska and around the world in the mariculture/aquatic farming industry, including the farming of finfish, shellfish and sea vegetables. Alaskans are actively exploring economic development possibilities, and the concept of launching a new renewable resource industry is a tantalizing one. Enthusiasm, however, needs to be tempered with prudence.

The states and foreign countries currently involved in intensive fish-farming have become involved because their natural stocks are no longer strong. However, the opposite is true in Alaska. Our wild salmon stocks yield harvests among the most abundant in the world.

Alaska now produces 43 percent of the worldwide total wild salmon, and 99 percent of all the wild salmon produced in the U.S. It's no exaggeration to assert that salmon is a mainstay of the state economy.

The actual economic impact of Alaska's salmon harvest is worth many times the harvest value. Processing alone can nearly double the value of the catch. The seafood industry, in which salmon play the leading role, provides more jobs than any other.

The state's natural fishing resources and the industry they support must be protected. Conscientious stewardship of Alaska's valuable seafood resources is of overriding importance. If Alaska proceeds with finfish farming, the cost of this stewardship will increase significantly.

Concern has been expressed about the potentially negative effect of fish farms on water quality. Water pollution from fish feces, unconsumed feed and land-based farm operations must be carefully controlled, necessitating the careful development of siting guidelines and a process for site reviews. The appropriate regulatory agency must have funding to carry out monitoring and enforcement. A means for resolving disputes over use of coastal waters must be created: Many of the best prospective sites for finfish farming are cherished as safe harbors by fishermen and recreational boaters.

The subject of fish disease has generated heated controversy. Indigenous fish diseases are found in natural stocks, but most are self-limiting in the wild. Wild fish tend to be dispersed, and are not subject to the stress of a pen-rearing environment. The effects of large concentrations of biomass in a limited area are largely unknown. The presence of unconsumed fish feed and feces provides a nutrient-rich environment conducive to the growth of bacterial populations harmful to fish, and no matter how clean the environment of a pen, there is always the risk of disease: bacterial, viral and parasitic.

The most disturbing aspect of the subject of fish disease is that most diseases are easily transferable. Many pens are not designed to adequately safeguard against escapement of farm fish, wild fish can be attracted to the proximity of the pen by the presence of nutrients, and some diseases can even be borne in the water by currents. One can only speculate upon the impact of intensive pen-rearing of salmon on wild fish stocks. It won't necessarily be detrimental, but not enough scientific research has been conducted to prove that it won't be detrimental.

If private for-profit pen-rearing of salmon is authorized, the state will have to determine what government's regulation and support role will be. To what degree should the state regulate salmon farms to insure their stocks are healthy? Is Alaska willing to expend public funds to gear up for a large-scale application of technical disciplines including fish-disease control? Failure to do so has been a source of a number of British Columbia's problems in its trouble-plagued experience with salmon farming.

The Norwegian government subsidies have effectively reduced the price of their farmed salmon enabling that nation to become a leader in this new industry. Assistance takes the form of capital investment subsidies, capital grants, salmon shipping and transportation subsidies (including the creation of a complete road-sea-air system), and salmon product and price subsidies.

If private for-profit pen-rearing of salmon is authorized, the state will have to determine what government's regulation and support role will be.

The government provides support in the areas of research and development, quality control, advisory services, free disease-diagnostic services and marketing assistance including international trade provision.

These forms of government support make Norway a formidable competitor and will enable that nation to outstrip the United States as a leading fish exporter by 1990. By that time, worldwide farm production of the premium species of salmon may account for half of total production of fresh and frozen salmon available on the world market. Some industry analysts predict that the supply of Atlantic salmon will overtake the demand by 1990.

Given this scenario, will Alaska fish-farmers be able to compete successfully? Just in order to gear up for the industry, the state would need to make operating budget appropriations to various agencies. How much support can the state afford to provide, or not to provide? Where will the money come from? Will we take resources away from our existing rehabilitation programs and product promotion efforts, programs which have already suffered from significant budget cuts the last two years? Will we really be creating new jobs or will we be taking them away from one group and giving them to another? (Norway's 500 gillnetters will be legislated out of business next year — permanently.)

There may indeed be a place for mariculture in Alaska, but the unanswered questions about market conditions, profitability, fish disease and its impact on natural stocks, and the degree to which the state is willing to support and subsidize the industry point to a cautious approach to finfish farming.

□ **Sen. Richard I. Eliason chairs the Fisheries Subcommittee of the Senate Resource Committee in the Alaska Legislature. He was one of the legislators who traveled to Norway in August to study Atlantic salmon farming.**

Net pen dispute faces mediation

by Jim Larsen

A mediated solution to differences is omething South Whidbey foes of almon net pens look upon with kepticism if not outright fear and athing, but they have no choice but to ooperate.

Several bills to regulate salmon net ens and other forms of aquaculture ot nowhere in the state Legislature his year. A major reason is that the overnor's office and legislative eaders have decided mediation - not gislation - is the path to follow.

To that end, an all-day meeting has een called for Saturday, March 12 at horeline Community College to iscuss mediation. The topic will be et pen aquaculture.

The state Department of griculture, which promotes quaculture, is paying for the initial ediation effort, according to Frank affner, project director for Norwest Renewable Resources Center in eattle.

Gaffner's organization mediated the ispute over logging practices in which mber companies, environmentalists nd other interest groups were at one nother's throat.

The effort became known as the timber, fish and wildlife" mediation nd resulted in the state's new forest ractices act that just took effect Jan.

The logging practices mediation ffort took over 100 meetings and six onths and cost $165,000, Gaffney said y telephone Friday. He was project irector of timber, fish & wildlife ediation.

Generally, the mediated agreement as heralded as a success. Gaffney nd it attracted nation-wide attention, nd now other states are seeking to ediate difficult issues involving pposing interest groups.

Aquaculture certainly has its opposing interest groups. Environmentalists and shoreline roperty owners say the industry is olluting, interferes with traditonal ses of the waters, and threatens ative salmon runs as well as the ommercial fishing industry.

(Please turn to page 3)

Salmon farm owner to switch harvests

The Associated Press

SEATTLE — The state's oldest and largest salmon farm has been purchased by a Norwegian aquaculture business which plans to switch the fish-farming operation from Pacific salmon to Atlantic salmon.

The Domsea salmon farm was sold by Campbell Soup Co. to Global Aqua USA Inc. which says it will harvest four million pounds of Atlantic salmon a year and hatch another four million young salmon annually, a spokesman said.

Global Aqua is owned by Global Aqua A-S of Norway and a Norwegian investor group. The sale price was not disclosed. The sale involved four farm sites, three off Bainbridge Island and one near Port Townsend.

John Pitts of the Washington Department of Agriculture said Atlantic salmon are easier to domesticate than Pacific salmon and that the switch should be seen as a positive move for the state.

"It will combine Norwegian and American expertise that will contribute to the further development of fish farming here," said Havard Rabben, general manager of Global Aqua.

"By raising Atlantic salmon we will not be competing with the commercial fishery of Pacific salmon," Rabben said.

Under the Campbell Soup Co.'s ownership the Domsea farm raised chinook salmon and produced about 1 million pounds of fish per year.

salmon pens subject of mediation

(Continued from page 1)

Net pen supporters disagree on all unts, of course, and have received rong support from Governor Booth arner and the Dept. of Agriculture.

There are several net pens in Puget und but none in Island County. The unty has a moratorium on new quaculture applications until a state nvironmental Impact Statement is ne on the industry, an endeavor that ll take about 15 months. However, me net pen sites have already been ghed for, particularly in the quaculture district off Bell's Beach in ratoga Cove.

Margaret Johnston, Bell's Beach sident and legislative liason for the ratoga Cove Foundation, said of the ediation effort, "That's the way the me is trying to be played in Olympia ese days."

Because of the fondness for ediation, legislative efforts to stop

"doesn't like all those (aquaculture) bills coming at them." Sayan is a major force behind the mediation effort.

Johnston said "we can't help but be skeptical" of the mediation effort, but her group will have to go along. "The state is pushing it, we don't want to get blamed for breaking it down."

The other Whidbey Island anti-aquaculture group, Save Our Shores shares Johnston's feelings, according to leader Joe Miller who lives south of Lagoon Point.

Miller worries that net pen opponents will face unwelcome pressure to compromise during the mediation process, "but we have no choice but to participate."

Miller and Johnston agree that in the initial meeting they will seek a moratorium on further net pen development during mediation if it is decided to proceed with the process.

issues which might be covered in negotiations, and to decide if enough opportunity exists to proceed beyond this first meeting. It is simply an effort to identify issues and assess the opportunity to proceed."

Gaffney acknowledges there are huge differences of opinion on the subject of net pens, but he said the timber practices interests "were just as contentious as these folks at the beginning."

The meeting begins at 9 a.m. and is scheduled to last until 4:30. The address is 16101 Greenwood Avenue North, in Building 900 of Shoreline Community College. For a box lunch costing $4 call the Northwest Renewable Resources Center, 623-7361, before March 1, or bring your own lunch.

Fish farming in Alaska — a no win proposition

By FRANK MULLEN

COMPASS
POINTS OF VIEW FROM OUR COMMUNITY

Recently there has been much talk regarding mariculture as a developing industry in Alaska. Proponents of mariculture have unleashed a lobbying program designed to convince Alaskans that an aggressive mariculture program would be a great addition to the economy. The idea is being considered so seriously that a delegation of Alaska politicians took some time over the summer to make a trip to Norway to inspect some salmon rearing facilities there.

There are few, if any, objections to the idea of allowing the domestic production of shellfish or crustaceans. But the idea of raising salmon in pens along the coastline of Alaska has raised the concerns and objections of those Alaskans who currently harvest wild salmon.

Salmon pen operations proliferate in various parts of the world. Norway, Chile, British Columbia, the State of Washington (and others) are currently raising and marketing salmon in vast quantities. Proponents of "pens" insist that if Alaska doesn't jump into the feed-lot salmon business very quickly, we'll be left in the dust. Skeptics contend that if we accept this idea without considering some of the negative effects, the adverse consequences will far exceed those of the Delta barley project or the MacKenzie dairy project.

To allow pen-reared salmon operations to dot the Alaskan coastline invites conflict with the wild salmon harvesters who helped pioneer this state. It is inevitable that there will be marketing conflicts. It will be easy for salmon buyers to offer unrealistically low prices to commercial fishermen, using the threat of being able to fill contracts with pen-reared salmon.

Decision-makers in Alaska ought to closely scrutinize the dollar-for-dollar exchange which would likely occur if salmon pens are allowed to proliferate. Taking value from existing businesses and giving it to new businesses represents no gain to the state's economy.

The cost of establishing a viable salmon pen operation and carrying it until salmon could be marketed has been estimated to exceed $500,000. This amount would prohibit "mom and pop" operations. So are we to allow large companies to lease Alaskan tidelands and operate marginal business ventures that employ relatively few Alaskans and ship their profits south? Or should we encourage the continued development of wild salmon fisheries and thereby further strengthen the economic basis of our state?

If pen-reared salmon proliferate along Alaska's coastline, these domesticated salmon could introduce disease and genetic dilution to wild stocks. Norwegian salmon farmers, who are now 18 years into an aggressive salmon farming program, are now becoming aware of problems caused by [illegible]ees from salmon pens mixing with wil[illegible]

The cost to the state [illegible]ate and maintain a mariculture in[illegible] will be substantial. These costs wi[illegible] predictably come out of sportfish budgets and commercial fish budgets which have been greatly reduced in the past two years, and cannot afford to be stretched any thinner.

The mature approach to promoting the fishing industry in Alaska is to take care of and enhance the billion-dollar industry we alread[illegible] have. We can promote Alaska salmon on the worldwide market. In a few short years, this may be the last place on earth where consumers can be assured of purchasing a truly wild product. To be able to put "WILD" or "NATURAL" on the label could be a tremendous advantage.

It just doesn't make sense to encourage a fish farming industry that will likely be controlled by out-of-state interests and provide relatively few jobs for Alaskans, particularly when the ultimate losers on this deal will be commercial and recreational users with longtime investments in family, equipment, lifestyle, and Alaska heritage.

There remains significant opportunity in Alaska to increase wild stock production through aquaculture and enhancement programs. I hope Alaskans agree that the best way to cultivate and ensure long-term economic health in Alaskan fisheries is to promote the wild stock fishery which currently exists, rather than threaten it with a competitive fish farming program.

☐ Frank Mullen is a Soldotna businessman and commercial fisherman.

Environmentalists oppose mariculture: The Southeast Alaska Conservation Council is calling for a ban on salmon ranching and a moratorium on all other forms of tideland development.

The environmentalist group says mariculture would result in reduced concern over the maintenance and retention of wild stocks of salmon and their habitat.

"In Southeast Alaska, 85 percent of the salmon harvested are spawned and reared within the watersheds of the Tongass National Forest. Reduced concern over protecting natural habitat for wild stocks could open the door for increased logging and road building in important fish habitat areas," said Bart Koehler, SEACC's executive director.

"We think that it would be a very dangerous course to take, especially when a number of top commercial fishing watersheds within the Tongass are currently threatened by logging and roads."

The council also proposed a moratorium on shellfish and sea vegetable farms until regional planning for state tidelands has been completed. The permitting process needs to be stopped until the public and scientific groups have been included in planning and locating of projects, according to the SEACC.

The Alaska Legislature, while showing little interest in permitting salmon farming, has been moving toward a bill revamping a ban on all mariculture imposed last year. The bill would permit oyster and sea vegetable farming.

The entire issue is still under debate by both the Senate and House Resources Committees.

Letters to the Editor

Junk salmon

April 27, 1987
120 Katlian St.
Sitka, AK 99835

To the editor:

I am appealing to you to get this message out to all the people that make their living fishing ocean-going salmon of all species, also sports fishermen. This mariculture bill before both branches of our Legislature is the biggest threat to our way of life that we have faced since Alaska became a state. For the past five years, we have had a 15 to 20 percent drop in our price structure because of the flood of immature pen-raised Atlantic salmon exported from Norway to compete with our product on world markets.

Gourmet fish-eaters the world over would not touch this tasteless immature salmon with a 10-foot pole, and call it sanitary garbage that has a low oil content and is not even fit for pet food.

Hundreds of tons of this inferior junk has been palmed off on the American public and through unethical advertising has been labeled chinook (or king) salmon. Our system of enhancing our wild salmon stocks through aquaculture associations has succeeded more than we dared hope. So make your feelings known by writing to your state legislators.

Sincerely,
Al Brookman Sr.

Renegade Norwegian farm salmon polluting wild runs

FISHERMEN'S NEWS 1/85

"Renegade" salmon from Norway's
farms are destroying important
aracteristics and genetic
ferences between farm and river
lmon, says Professor Harald
jervold, following the discovery
s autumn that up to 57 percent
the salmon stocks in some
rwegian rivers are of the farm
ciety.

f the genetic pollution continues
its present rate, the hereditary
iations among some of the river
cies will be halved within seven
ars. Nature takes tens of
usands of years to fit the
mon to its special environment,
l in the light of this fact, the
sent developments are
rming, says Skjervold.

he head of the Directorate for
ture Management, Helge Vikan,
o finds the latest findings
quieting and stresses the vital
portance of preserving the most
uable of the salmon species in
genes bank now being built up
Trondheim, incidentally the first
ts kind in the world.

perm from 47 species of
rwegian river salmon were
red in the bank last year, and
s number will be **doubled** by the
of 1987. Vikan blames the
ensive genetic pollution in
rs on the import of smolt. This import is not only responsible for spreading disease, it is also a major hazard for river salmon, says Vikan. He intends proposing to the Ministry of Environment that the Directorate be involved in the assessment of smolt import licenses.

Farm fish diseases killing the wild stocks in Norway

The Atlantic Salmon Trust has warned Norway's neighbours that diseases from fish farms may spread to wild stocks in their countries.

But Canadian officials say farmed fish won't infect wild stocks in Canada because of strict regulations controlling fish management and the importation of eggs.

In letters to the agriculture ministers for England, Scotland and Wales, the trust warns of the "dire threat to wild salmon from a disease now sweeping Norway."

The letter, written by the trust's director Rear Admiral John Mackenzie, states: "Insufficient attention is being paid to the dangers of the spread of disease and parasites from fish farms to wild stocks. With the explosion of salmon farming in the British Isles, I consider it essential, that everyone concerned with the well-being of wild salmon should be aware of what continues to happen in Norway."

The parasite in question is Gyrodactylus Salaris, and it has wiped out about 300 tons of salmon in Norway's commercial and river fishing catches, according to an article in the England based *Shooting Times*.

In Canada, DFO's head of aquaculture Ron Ginetz dismissed any suggestion that farmed fish could have the same impact on wild stocks here as they have in Norway.

"My personal opinion is that I am not overly concerned with a threat to wild stocks from diseases indigenous to this coast," he said. "I am concerned about the importation of exotic diseases from other parts of the world.

"The Norwegians have not paid much attention to wild fish stocks and the protection of them," he said. "Canada has the most stringent fish protection (regulations) anywhere in the world."

After an initial round of Atlantic salmon egg imports several years ago, the industry is now limited to 300,000 at at time. Because of the stringent environmental considerations, this restricts the import of Atlantic eggs to a few operators.

These eggs come from only one farm in Scotland where the farm meets government standards.

Eggs are also allowed from Washington or Alaska, but the regulations are so tough, it is almost impossible to bring in the eggs.

"We sent a message to the industry that permission would be difficult to obtain," he said.

Already some Atlantic salmon have escaped from the pens and are mixing with the wild stocks. Ginetz confirmed fishermen's reports that the fish escaped in the Johnstone Strait area, but he said the DFO was not concerned about the impact of the fish on the wild stocks.

Meanwhile, the UFAWU is organizing a major tour of Norway to investigate the fish farm industry and see what are the impacts on the wild stocks have been.

As well, the group will look at the Norwegian government's regulation over the farms and how successful they have been in controlling the problems.

NORWEGIAN "Renegade Salmon" are mingling with wild stocks. Salmon that were released or escaped Norway's fish farms are returning as spawning adults and creating "genetic pollution." If the run-away rate continues, scientists predict variations among some of Norway's wild stocks will be halved within seven years. The Norwegian Directorate for Nature Management reports that genes from wild salmon found in 47 different rivers were stored in a sperm bank in 1986 and that twice that number will be stored in 1987. The sperm bank is reportedly the first of its kind in the world. Fears about disease interaction from farmed fish to wild stocks continue as well. The UK-based Atlantic Salmon Trust reports that the parasite Gyrodactylus salaris is destroying stocks of wild salmon in Norwegian rivers. The parasite has reportedly killed 300 tons of wild salmon. Officials believe too little attention is being paid to the danger of spreading disease and parasites from fish farms to wild stocks.

Ocean ranching: Valdez hatchery contributes to the success of the industry

Aquaculture, or the cultivation of seafood, is a controversial concept in fisheries that could change the way Alaskan fishermen make their livings. This is the second installment of a four-part series prepared by free-lance writer Christopher Batin.

By CHRISTOPHER BATIN
Correspondent

VALDEZ—Strolling down the wooden planks at noon, Jason Wells doesn't quite resemble the gun toting rancher of the Wild West. He doesn't wear a stetson, nor does he dress in rawhide and chaps. Instead, he's casually dressed in a blue shirt and dark slacks. But Wells is a rancher—a rancher of the future. He's responsible for overseeing the management of nearly 153 million head from his two-story office. Upon receipt of a call, he hops into his boat to view his stock on the range, the largest in the world. Wells is a salmon rancher and his range is the Pacific Ocean.

"Ocean ranching has come of age the last few years," said Wells, executive director of Valdez Fisheries Development Corp., which owns the Solomon Gulch Hatchery in Valdez. "We just get them started, and Mother Nature does the rest."

Ocean ranching entails taking eggs and milt from mature salmon, artificially spawning the two, rearing the fry in hatcheries, releasing them into rivers or estuaries, and recapturing them as returning adults.

According to biologists, ocean ranching has been one of Alaska's unheralded success stories.

Seeing the decline in salmon stocks, the Legislature enacted the 200-mile limit that kept foreign fleets away from prime salmon grounds off Alaska's coast. It also created the Fisheries Rehabilitation and Enhancement Division (FRED) to plan programs that would increase production of the state's fisheries. One of those was to administer the Private Nonprofit Hatchery Program and coordinate the development of regional aquaculture associations and programs.

In 1976 and 1978 voters overwhelmingly supported bond issues totaling $56.17 million to finance the construction and operation of hatcheries in each region of the state. Money also went toward the enhancement of rearing habitat, fish stock introduction and lake fertilization, all of which greatly increased the freshwater survival of salmon eggs, fry and smolt.

In 1985, about 17.1 million salmon returned statewide from releases made in previous years. The statewide commercial catch of natural plus hatchery stocks that year was a record-breaking 144.6 million fish. This is a far cry from the dismal harvests of the early 70s, when catches numbered less than 25 million fish, according to Wells.

Solomon Gulch is a private nonprofit hatchery and helped contribute to the success with large returns of salmon.

"The natural stocks of coho salmon returning to spawn in the Valdez area number about 4,000 fish," said Wells. "With enhancements from our hatchery, we harvested about 8,000 cohos for sale to fish processors and for brood stock. Sport fishermen caught about 4,000. That's a significant increase over past years.

"Our efforts will take a substantial jump in 1989, when we're expecting about 30,000 coho salmon returning to the hatchery. Remember, these are in addition to natural runs of fish."

Pink salmon are the most numerous of Alaska's salmon. The species follows an even-odd year cycle. Large runs in southcentral Alaska take place in odd numbered years, while even numbered years see less fish returning. However, Wells said ocean ranching has made it possible for large runs to occur every year.

"We had about 5.5 to 6 million pinks in 1987. We're expecting 3 million pinks returning to the hatchery in 1988."

The permitted capacity for the Solomon Gulch hatchery as authorized by the Fish and Game Department is 136 million pinks, 18 million chums, one million coho and 300,000 chinook.

In 1986, hatcheries in Prince William Sound contributed about 60 percent of the fish caught in Prince William Sound. According to Wells, these figures are exptected to climb.

But commercial fishermen are not the only ones to benefit from private nonprofit hatcheries. The goal of Alaska's salmon ranching program is to provide catchable fish for the common property fishery.

"Although we provide fish for all user groups—sport fishermen, commercial fishermen and subsistence, the hatchery is involved in two types of harvests to satisfy its own interests—sale of fish to the processing plant, and eggs and milt for brood stock," said Wells.

"Fish are put out for bid on a daily basis," he said. "Last year we had as many as seven active bidders during the couple of weeks we sold fish."

Processors had more than they could handle in 1985, when the pink salmon catch was 100 million fish.

"The number of fish did affect the marketplace," he said. "Product development wasn't fully in place in 1985 to absorb that many fish."

However, he said production standards are now up to par to handle the increase in fish catches. The growing use of seafood in the United States has helped processors to update their technology and marketing efforts.

"They're making pink salmon into salmon burgers," he said, "and it's having good success in the Seattle area. One of the prerequisites for successful development of a salmon product, whether it be salmon burgers or fresh fish, is producing fish on an annual basis in large quantities. Prince William Sound hatcheries will be geared up to produce large volumes of fish consistently within the next two years."

However lucrative they may seem, nonprofit hatcheries are not without financial risk. Wells gave numerous reasons as to why hatcheries fail.

Improper site selection can be one main reason, he said. "Water flow needs to be maintained constantly and measures taken to ensure it doesn't freeze up. Hatchery fish require care 365 days a year. They are released and allowed to fend for themselves in the ocean, which is a high-risk area. And don't forget the interceptions by foreign fleets, and predation.

"The risk factor in such an endeavor is quite high," he said. "There's no guarantee with a common property fisheries that you'll receive back all the fish you raised," he added.

And, he said, the run can still be wiped out if Fish and Game extends a commercial season or allows more boats to fish.

In 1986, he said, the Valdez Fisheries Development Corp. pleaded a case of overfished hatchery stocks to the Board of Fisheries. As a result, a directive was issued to Fish and Game to manage enhanced runs so that the hatchery would receive brood stock and economic escapement.

"As a result of that decision, we did very well in in 1987," he said.

According to Wells, the Valdez Fisheries Development Corp. is repaying state loans of $3.9 million for capital construction and operational costs.

The association also borrowed about $300,000 from the city of Valdez for operational costs from 1979 to 1981. The city also co-signed a loan for a hatchery water pipe, and paid a consultant $285,000 to conduct a feasibility study on the viability of the hatchery. Wells said these costs have already been repaid.

Independent studies show a typical hatchery takes about two years to start, operating totally on state or commercial loans, before a single egg is incubated. It takes anywhere from four to 12 years, depending on species, before enough revenues are generated from the sale of fish carcasses, eggs or surplus fish to repay those loans.

The total value of fish harvested and sold from the Solomon Gulch Hatchery was $8 million in 1987.

Wells said, "We had the potential to pay off the state loan in one year. And this was operating at only one-third capacity."

Wells said research in expediting the growth of salmon smolt can make hatcheries more profitable by reducing rearing time.

"We've experimented with what is called 'zero-age' coho salmon," he said. "We raise juvenile salmon in warmer water than they'd experience normally in the wild, and accelerate their feeding schedule."

He said although smolt mortality is greater, the fish are more economical to raise, allowing the hatchery to produce up to four times more zero-age silver smolt than yearling smolt.

Wells said fish farming is not a big issue with commerical seine fishermen in Prince William Sound.

"Fishermen and hatcheries deal specifically with pink salmon, and coho and king salmon are the species raised by fish farms," he said. "PNP (private nonprofit) hatcheries are not a threat to any one user group, because we provide fish for all groups.

"The Valdez Fishery Development Board oversees the fisheries corporation," Wells said. "A variety of people serve, from commercial and sport fishermen, to businessmen. They ensure what's taking place at the hatchery follows state guidelines. All of them serve on a volunteer basis."

Wells said the majority of the members on the boards of PNP hatcheries are commercial fishermen.

HATCHERY REARED—Solomon Gulch Hatchery Manager Paul McCollom dips a sampling of pink salmon fry from a holding pond. The private nonprofit hatchery has contributed to the success of Alaska's ocean ranching industry. *News-Miner library*

Prepared by Senator Eliason's staff

SECTIONAL ANALYSIS

CSSB 482 (Res) - "An Act relating to the farming of aquatic plants and aquatic animals; prohibiting aquatic farming of finfish in saltwater; and providing for an effective date."

Section 1 AS 16.40 is amended by adding new sections to read:

16.40.100 - A person may not operate or construct an aquatic farm or hatchery (for the purpose of supplying aquatic plants or animals to an aquatic farm) without a permit from the Commissioner of Fish and Game. Conditions that are necessary to protect the public health or natural stock may be attached to the permit.

The Commissioner of Fish and Game may not issue a permit for the farming of, or hatchery operations involving, finfish in saltwater.

16.40.105 - The Commissioner of Fish and Game shall issue the aquatic farm or hatchery permits on the basis of the following -

- the biological and environmental suitability of the site

- the ability of applicant to establish the site without adversely affecting the Department of Fish and Game's management of the stock, without requiring substantial alterations in traditional fisheries, or without adversely affecting the wild stocks

16.40.110 - An applicant for an aquatic farm or hatchery permit must submit a development and operation plan to the Commissioner of Fish and Game.

An application for renewal or transfer must be accompanied by a fee determined by the Commissioner of Fish and Game, a report of the disease history, and a report by the applicant on how the site was developed.

The Department of Fish and Game may conduct a health inspection of the farm or hatchery as a condition of renewal.

A transferred permit maybe used only for the purposes for which the permit was authorized,

subject to the same conditions and limitations.

16.40.120 - An aquatic farm stock acquisition permit is required from the Commissioner of Fish and Game before a person may acquire aquatic plants or animals from wild stock for the purpose of supplying stock to an aquatic farm or hatchery.

The Commissioner of Fish and Game shall specify the expiration date of the acquisition permit and may attach conditions relating to the time, place, and manner of harvest. The commissioner shall issue or deny a permit within 30 days after receiving an application.

The Commissioner of Fish and Game shall deny an acquisition permit if the proposed harvest will impair sustained yield of the species. The Commissioner may deny a permit if the proposed harvest will disrupt established uses of the resources by commercial, sport, personal use or subsistence users.

The Board of Fisheries will act on requests for an acquisition permit involving species that are subject to limited entry. The Board of Fisheries will consider any requests for an acquisition permit denied by the Commissioner of Fish and Game. The Board may adopt regulations.

Except for the reasons stated above for denial, the Commissioner of Fish and Game shall issue an acquisition permit if -

- wild stock is necessary to meet the initial needs of an aquatic farm or hatchery,

- there are technological limitations on the propagation of cultured stock,

- wild stock sought is not fully utilized, or

- wild stock is need to maintain the gene pool

Stock acquired under an acquisition permit becomes the property of the permit holder.

16.40.130 - An aquatic plant or animal may not be imported into the state unless authorized by the Board of Fisheries.

16.40.140 - A private hatchery permitted under AS 16.40.100 may sell or transfer stock only to an aquatic farm or hatchery. Stock may not be transferred

without notifying the Commissioner of Fish and Game at least 30 days before the proposed date of transfer.

A notice of transfer must be accompanied by a report of a health inspection of the stock. The Department of Fish and Game may restrict or disapprove a transfer if the Department finds that the transfer would present a substantial risk of spreading disease.

16.40.150 - An aquatic farm or hatchery permit holder shall notify the Department of Fish and Game of an outbreak or incidence of disease among the stock. The Department shall order the quarantine or the destruction of stock when necessary to protect the wild stock.

The holder of an aquatic farm or hatchery permit shall allow the Department of Fish and Game to inspect the farm or hatchery. The cost of this inspection shall paid by the Department.

The Department of Fish and Game shall develop a disease management and control program for aquatic farms and hatcheries. The Department can contract with a state or federal agency or a private state-certified provider to conduct the health inspections.

16.40.160 - The Commissioner of Fish and Game may adopt regulations necessary to implement this statutes.

16.40.170 - A person who violates these statutes is guilty of a class B misdemeanor.

16.40.199 - The following terms are defined: aquatic farm, aquatic farm product, aquatic plant, aquatic animal, commissioner, hatchery, positive control, shellfish, and stock.

Section 2 AS 03.05.011(a) is amended to read:

The Commissioner of Environmental Conservation may adopt regulations regarding the standards and conditions of operating an aquatic farm or hatchery including the restrictions on the use of chemicals and the requirements necessary to protect the public from contaminants that pose a risk to health.

Section 3 AS 03.05.020(a) is amended to read:

The Commissioner of Environmental Conservation

shall adopt regulations regarding the labeling of aquatic farm products as aquatic farm products and shall monitor aquatic farms to ensure compliance with the requirements of the national shellfish sanitation program manual.

Section 4 AS 03.05.040(a) is amended to read:

The Commissioner of Environmental Conservation may inspect an aquatic farm or hatchery.

Section 5 AS 03.05.100 is amended to read:

The definition of an aquatic farm and aquatic farm product have the meanings given in AS 16.40.199.

Section 6 AS 16.05.050 is amended by adding a new paragraph to read:

The Commissioner of Fish and Game has the authority to permit and regulate aquatic farming in the state.

Section 7 AS 16.05.251 is amended by adding a new subsection to read:

Except for taking action on acquisition permits regarding species subject to limited entry and regulating the importation of an aquatic plant or animal for the purpose of supplying stock to an aquatic farm or hatchery, the Board of Fisheries may not adopt regulations regarding an aquatic farm permit or an aquatic farm acquisition permit.

The regulations adopted by the Board of Fisheries under AS 16.05.251 do not apply to a harvest under an acquisition permit.

Section 8 AS 16.05.330(a) is amended to read:

The reference to farming of fish is removed from existing statutes.

Section 9 AS 10.05.930 is amended by adding a new subsection to read:

The statutes regarding licensing of sport fishing and hunting and the licensing of commercial fishing crewmembers and vessels do not apply to an activity authorized by an aquatic farm permit or an aquatic farm stock acquisition permit.

Section 10 - AS 16.05.940(14) is amended to read:

The reference to fish farming is deleted from the definition section of this chapter.

Section 11 - AS 16.10 is amended by adding a new section to read:

16.10.269 - The statutes regarding purchase of fish from permit holders and possession of permit and identification by seller do not apply to the purchase or sale of aquatic farm products from a holder of an aquatic farm permit or an aquatic farm stock acquisition permit.

Section 12 - AS 16.10.400 is amended by adding a new subsection to read:

The statutes regarding existing salmon hatcheries do not apply to the construction or operation of a private hatchery that has an aquatic farm permit.

Section 13 - AS 16.43.140 is amended by adding a new subsection to read:

The statutes regarding entry permit systems does not apply to activities authorized under an aquatic farm permit or an aquatic farm stock acquisition permit.

Section 14 - AS 16.51.180(5) is amended to read:

The definition of "seafood" in the Alaska Seafood Marketing Institute chapter is amended as not to include aquatic farm products.

Section 15 - AS 38.05 is amended by adding a new section to read:

38.05.083 - The Commissioner of Natural Resources may offer for lease a site that has been developed for aquatic farming or hatchery operations. Before offering the site to the public, the Commissioner shall offer the site to the permittee.

The site shall be leased for not less than the appraised fair market value of the lease. The value of the lease shall be reappraised every five years.

The lease may be assigned, but if the assignee changes the use of the site the lease reverts to the state.

The lessee shall post a performance bond or provide other security to cover the costs to the Department of Natural Resources of restoring the leased site in the event the lessee abandons the site.

Section 16 - AS 38.05 is amended by adding a new section to read:

38.05.856 - The Commissioner of Natural Resources may issue a tideland or land use permit for the establishment and operation of an aquatic farm or hatchery for not less than the appraised fair market value of the site. The value shall be reappraised every five years.

A tideland or land use permit issued for an aquatic farm or hatchery is valid for five years and the permit may not be transferred.

The Commissioner of Natural Resources shall provide a copy of the application to the media for a public service announcement or shall provide paid notice of the application to the newspaper or radio once each week for three successive weeks. The Commissioner of Natural Resources shall hold hearings to take testimony before issuing or renewing a tideland or land use permit.

Based on the testimony or other good cause, the Commissioner of Natural Resources may deny the application for issuance or renewal.

The permittee shall post a performance bond or provide other security to cover the costs to the Department of Natural Resources of restoring the permitted site in the event the permittee abandons the site.

The Commissioner of Natural Resources shall adopt regulations establishing criteria for the approval or denial of permits and for limiting the number of sites to protect the environment and natural resources of the area.

Section 17 - AS 16.05.340(a)(14) is repealed.

The current fish farming biennial license of $200 is repealed.

Section 18 - Except for the grandfather clause in Section 20, the Commissioner of Fish and Game may not issue an aquatic farm permit or an aquatic farm stock

acquisition permit under regulations have been adopted.

Section 19 - Except for the grandfather clause in Section 20, the Commissioner of Natural Resources may not issue a lease, a tideland, or land use permit for an aquatic farm or hatchery until regulations necessary for the implementation of the program has been adopted.

Section 20 - A person who is lawfully operating an aquatic farm or hatchery may obtain an initial lease or permit under AS 38.05.083 or 38.05.856, but as a condition of obtaining the lease or permit the person must agree that during the term of the lease or permit the person will not expand operations beyond the scope allowed under the existing permit.

Section 21 - This Act takes effect immediately.

STATE OF ALASKA
THE LEGISLATURE

LEGISLATIVE AFFAIRS AGENCY

POUCH Y - STATE CAPITOL
JUNEAU, ALASKA 99811
907 465 3800

MEMORANDUM April 13, 1988

SUBJECT: Amendments to mariculture bill (CSSB 482(Res))

TO: Senator Jack Coghill
Chairman, Senate Resources Committee

FROM: Edward H. Hein EHH
Legislative Counsel

Enclosed is a draft CS requested by your assistant, Elizabeth Ziegler. Please note that the addition of paragraphs (2) and (3) at page 4, lines 9 - 10, appear to require a change in the bill title. These two paragraphs would allow an aquisition permit holder to acquire wild aquatic plants or aquatic animals for supplying the Department of Fish and Game or "sources" outside of the state, without any requirement that the acquisition or supplying have anything to do with aquatic farming. In addition, it is not clear what "sources" are. I note that one does not normally "supply" sources. A "source" is usually thought of as a place from which one might receive something.

If you have any questions about this matter, feel free to contact me at your convenience.

Enclosure

EHH:bb
b4/129

SECTIONAL ANALYSIS

CSSB 482 (Res) (3/28/88 5-1806N version) - "An Act relating to the farming of aquatic plants and aquatic animals; prohibiting aquatic farming of Pacific salmon in saltwater; and providing for an effective date."

Section 1 FINDINGS AND POLICY are listed

Section 2 AS 16.40 is amended by adding new sections to read:

16.40.100 - A person may not operate or construct an aquatic farm or hatchery (for the purpose of supplying aquatic plants or animals to an aquatic farm) without a permit from the Commissioner of Fish and Game. A hatchery may sell shellfish spat to an aquatic farm or related hatchery outside of the state.

Conditions that are necessary to protect the natural stock may be attached to the permit.

The Commissioner of Fish and Game may not issue a permit for the farming of, or hatchery operations involving, Pacific or Atlantic salmon in saltwater. A permit may be issued for freshwater farming of, or hatchery operations involving, finfish other that Atlantic salmon in a privately owned freshwater body that has no outlet to a state-owned body of water.

16.40.105 - The Commissioner of Fish and Game shall issue the aquatic farm or hatchery permits on the basis of the following -

- the physical and biological characteristics of the location

- the farm may not unreasonably affect the management of natural stocks

- the farm may not adversely affect fisheries, wildlife or their habitats

- farm plans must demonstrate technical and operational feasibility

16.40.110 - An applicant for an aquatic farm or hatchery permit must submit a development and operation plan to the Commissioner of Fish and Game.

An application for renewal or transfer must be accompanied by a fee determined by the Commissioner of Fish and Game, a report of the disease history, and a report by the applicant on how the site was developed.

The Department of Fish and Game may conduct a health inspection of the farm or hatchery as a condition of renewal.

A transferred permit may be used only for the purposes for which the permit was authorized, subject to the same conditions and limitations.

16.40.120 - An aquatic farm stock acquisition permit is required from the Commissioner of Fish and Game before a person may acquire aquatic plants or animals from wild stock for the purpose of supplying stock to an aquatic farm or hatchery.

The Commissioner shall specify the expiration date of the acquisition permit and may attach conditions relating to the time, place, and manner of harvest. The commissioner shall issue or deny a permit within 30 days after receiving an application.

The Commissioner shall deny an acquisition permit if the proposed harvest will impair sustained yield of the species. The Commissioner may deny a permit if the proposed harvest will disrupt established uses of the resources by commercial, sport, personal use or subsistence users.

The Board of Fisheries will act on requests for an acquisition permit involving species that are subject to limited entry. The Board of Fisheries will consider any requests for an acquisition permit denied by the Commissioner of Fish and Game. The Board may adopt regulations.

Except for the reasons stated above for denial, the Commissioner shall issue an acquisition permit if -

- wild stock is necessary to meet the initial needs of an aquatic farm or hatchery,

- there are technological limitations on the propagation of cultured stock,

- wild stock sought is not fully utilized, or

- wild stock is need to maintain the gene pool

Stock acquired under an acquisition permit becomes the property of the permit holder.

16.40.130 - An aquatic plant or animal may not be imported into the state unless authorized by the Board of Fisheries.

16.40.140 - A private hatchery permitted under AS 16.40.100 may sell or transfer stock only to an aquatic farm or hatchery. Stock may not be transferred without notifying the Commissioner of Fish and Game at least 30 days before the proposed date of transfer.

A notice of transfer must be accompanied by a report of a health inspection of the stock. The Department of Fish and Game may restrict or disapprove a transfer if the Department finds that the transfer would present a substantial risk of spreading disease.

16.40.150 - An aquatic farm or hatchery permit holder shall notify the Department of Fish and Game within 48 hours after the discovery of an outbreak or incidence of disease among the stock. The Department shall order the quarantine or the destruction of stock when necessary to protect the wild stock.

The holder of an aquatic farm or hatchery permit shall allow the Department to inspect the farm or hatchery. The cost of this inspection shall paid by the Department.

The Department shall develop a disease management and control program for aquatic farms and hatcheries. The Department can contract with a state or federal agency or a private state-certified provider to conduct the health inspections.

16.40.160 - The Commissioner of Fish and Game may adopt regulations necessary to implement this statutes.

16.40.170 - A person who violates these statutes is guilty of a class B misdemeanor.

16.40.199 - The following terms are defined: aquatic farm, aquatic farm product, aquatic plant, aquatic animal, commissioner, hatchery positive control, shellfish, and stock.

Section 3 AS 03.05.011(a) is amended to read:

The Commissioner of Environmental Conservation may adopt regulations regarding the standards and conditions for the operation and siting of an aquatic farm or hatchery including the restrictions on the use of chemicals and the requirements necessary to protect the public from contaminants that pose a risk to health. The Commissioner shall monitor aquatic farms to ensure compliance with the requirements of the national shellfish sanitation program manual.

Section 4 AS 03.05.020(a) is amended to read:

The Commissioner of Environmental Conservation shall adopt regulations regarding the labeling of aquatic farm products as aquatic farm products.

Section 5 AS 03.05.040(a) is amended to read:

The Commissioner of Environmental Conservation may inspect aquatic farm product or aquatic farm sites.

Section 6 AS 03.05.100 is amended to read:

The definition of an aquatic farm and aquatic farm product have the meanings given in AS 16.40.199.

Section 7 AS 16.05.050 is amended by adding a new paragraph to read:

The Commissioner of Fish and Game has the authority to permit and regulate aquatic farming in the state.

Section 8 AS 16.05.251 is amended by adding a new subsection to read:

Except for taking action on acquisition permits regarding species subject to limited entry and regulating the importation of an aquatic plant or animal for the purpose of supplying stock to an aquatic farm or hatchery, the Board of Fisheries may not adopt regulations regarding an aquatic farm permit or an aquatic farm acquisition permit.

The regulations adopted by the Board of Fisheries under this section do not apply to a harvest under an acquisition permit.

Section 9 AS 16.05.330(a) is amended to read:

The reference to farming of fish is removed from existing statutes.

Section 10 AS 10.05.930 is amended by adding a new subsection to read:

The statutes regarding licensing of sport fishing and hunting and the licensing of commercial fishing crewmembers and vessels do not apply to an activity authorized by an aquatic farm permit or an aquatic farm stock acquisition permit.

Section 11 - AS 16.05.940(14) is amended to read:

The reference to fish farming is deleted from the definition section of this chapter.

Section 12 - AS 16.10 is amended by adding a new section to read:

16.10.269 - The statutes regarding purchase of fish from permit holders and possession of permit and identification by seller do not apply to the purchase or sale of aquatic farm products from a holder of an aquatic farm permit or an aquatic farm stock acquisition permit.

Section 13 - AS 16.10.400 is amended by adding a new subsection to read:

The statutes regarding existing salmon hatcheries do not apply to the construction or operation of a private hatchery that has an aquatic farm permit.

Section 14 - AS 16.43.140 is amended by adding a new subsection to read:

The statutes regarding entry permit systems does not apply to activities authorized under an aquatic farm permit or an aquatic farm stock acquisition permit.

Section 15 - AS 16.51.180(5) is amended to read:

The definition of "seafood" in the Alaska Seafood Marketing Institute chapter is amended as not to include aquatic farm products.

Section 16 - AS 38.05 is amended by adding a new section to read:

38.05.083 - The Commissioner of Natural Resources may offer for lease a site that has been developed for aquatic farming or hatchery operations. Before offering the site to the public, the Commissioner shall offer the site to the permittee.

The site shall be leased for not less than the appraised fair market value of the lease. The value of the lease shall be reappraised every five years.

The lease may be assigned, but if the assignee changes the use of the site the lease reverts to the state.

The lessee shall post a performance bond or provide other security to cover the costs to the Department of Natural Resources of restoring the leased site in the event the lessee abandons the site.

Section 17 - AS 38.05 is amended by adding new sections to read:

38.05.855 - The Commissioner of Natural Resources shall identify districts within which sites for aquatic farms or hatcheries may be selected. A 60-day period shall be scheduled in which a person may submit an application for a permit.

After consulting with the commissioners of Fish and Game and Environmental Conservation, the Commissioner of Natural Resources shall make a preliminary decision regarding the site applications.

After public notice is given and a hearing is held, the Commissioner shall issue a final finding.

38.05.856 - The Commissioner of Natural Resources may issue a tideland or land use permit for the establishment and operation of an aquatic farm or hatchery. The permit is valid for three years and may not be transferred.

The Commissioner may not issue a permit for tideland or land that borders a federal designated wilderness area that was designated before the effective date of this bill.

Before renewing a permit, interested persons shall be allowed to submit testimony concerning

the renewal to the Commissioner within 30 days after the notice.

The Commissioner shall consider all relevant testimony and may deny the application for issuance or renewal for good cause.

The permittee shall post a performance bond or provide other security to cover the costs to the Department of Natural Resources of restoring the permitted site in the event the permittee abandons the site.

The Commissioner of Natural Resources shall adopt regulations establishing criteria for the approval or denial of permits and for limiting the number of sites to protect the environment and natural resources of the area. The regulations shall provide for the consideration of upland management policies and whether the proposed use of a site is compatible with the traditional and existing uses of the area in which the site is located.

Section 18 - AS 38.05.945 (a) is amended to read:

The notice requirements of this section apply to the preliminary finding and the subsequent public hearing held concerning a tideland permit for an aquatic farm or related hatchery.

Section 19 - AS 38.05.945 is amended by adding a new subsection to read:

Regional fish and game councils and coastal resource service areas are to be notified at least 30 days before the preliminary finding and the subsequent public hearing occurs.

Section 20 - AS 38.05.946 is amended by adding a new subsection to read:

The Commissioner shall hold a public hearing within 30 days after reaching a preliminary decision concerning sites for aquatic farms or related hatcheries.

Section 21 - AS 16.05.340(a)(14) is repealed.

The current fish farming biennial license of $200 is repealed.

Section 22 - Except for the grandfather clause in Section 24, the Commissioner of Fish and Game may not issue an aquatic farm permit or an aquatic farm stock

acquisition permit under regulations have been adopted.

Section 23 - Except for the grandfather clause in Section 24, the Commissioner of Natural Resources may not issue a lease, a tideland, or land use permit for an aquatic farm or hatchery until regulations necessary for the implementation of the program has been adopted.

Section 24 - A person who is lawfully operating an aquatic farm or hatchery may obtain an initial lease or permit under AS 38.05.083 or 38.05.856, but as a condition of obtaining the lease or permit the person must agree that during the term of the lease or permit the person will not expand operations beyond the scope allowed under the existing permit.

Section 25 - This Act takes effect immediately.

5-1806N
Hein
3/28/88

Original sponsor: Resources Committee

IN THE SENATE BY THE RESOURCES COMMITTEE

CS FOR SENATE BILL NO. 482 (Resources)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FIFTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act relating to the farming of aquatic plants and aquatic animals; prohibiting the aquatic farming of Pacific salmon in saltwater; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. FINDINGS AND POLICY. (a) The legislature finds that

(1) aquatic farming in the state would

(A) provide a consistent source of quality food;

(B) provide new jobs;

(C) increase state exports;

(D) create new business opportunities; and

(E) increase the stability and diversity of the state's economy; and

(2) development of aquatic farming in the state would increase the availability of fresh seafood to Alaskans and would strengthen the competitiveness of Alaska seafood in the world marketplace by broadening the diversity of products and providing year-round supplies of premium quality seafood.

(b) It is the policy of the state

(1) to encourage the establishment and responsible growth of an aquatic farming industry in the state; and

(2) that allocation of aquatic farming sites must be compatible with established and ongoing activities in an area.

* Sec. 2. AS 16.40 is amended by adding new sections to read:

ARTICLE 2. AQUATIC FARMING.

Sec. 16.40.100. AQUATIC FARM AND HATCHERY PERMITS. (a) A person may not, without a permit from the commissioner, construct or operate

(1) an aquatic farm; or

(2) a hatchery for the purpose of supplying aquatic plants or aquatic animals to an aquatic farm.

(b) A permit issued under this section authorizes the permittee, subject to the conditions of AS 03.05 and AS 16.40.100 - 16.40.199, to acquire, purchase, offer to purchase, transfer, possess, sell, and offer to sell stock and aquatic farm products that are used or reared at the hatchery or aquatic farm. A hatchery that holds a permit under this section may sell or offer to sell bivalve shellfish spat to an aquatic farm or related hatchery outside of the state.

(c) The commissioner may attach conditions to a permit issued under this section that are necessary to protect the natural stock.

(d) Notwithstanding other provisions of law, the commissioner may not issue a permit under this section for the farming of, or hatchery operations involving, Pacific salmon in saltwater or Atlantic salmon.

(e) The commissioner may issue a permit under this section for the freshwater farming of, or freshwater hatchery operations involving, finfish other than Atlantic salmon only in a privately owned freshwater body that has no outlet to a state-owned body of water.

Sec. 16.40.105. CRITERIA FOR ISSUANCE OF PERMITS. The commissioner shall issue permits under AS 16.40.100 on the basis of the following criteria:

(1) the physical and biological characteristics of the proposed farm or hatchery location must be suitable for the farming of the aquatic animal or aquatic plant proposed;

(2) the proposed farm may not unreasonably or adversely affect management of natural stocks, and must not require alterations in traditional fisheries or other existing uses of fish and wildlife resources;

(3) the proposed farm may not affect fisheries, wildlife, or their habitats in an adverse manner; and

(4) the proposed farm plans and staffing plans must demonstrate technical and operational feasibility.

Sec. 16.40.110. PERMIT APPLICATION, RENEWAL, AND TRANSFER. (a) An applicant for an aquatic farming or hatchery permit required under AS 16.40.100 shall apply on a form prescribed by the commissioner. An application for a permit must include a plan for the development and operation of the aquatic farm or hatchery, which must be approved by the commissioner before the permit is issued.

(b) An application for renewal or transfer of a permit must be accompanied by fees required by the commissioner, a report of the disease history of the farm or hatchery covered by the permit, and evidence that satisfies the commissioner that the applicant has complied with the development plan required under (a) of this section. The commissioner may require a health inspection of the farm or hatchery as a condition of renewal. The department may conduct the inspection or contract with a disease diagnostician to conduct the inspection.

(c) A person to whom a permit is transferred may use the permit only for the purposes for which the permit was authorized to be used by the transferor, and subject to the same conditions and limitations.

WORK DRAFT

Sec. 16.40.120. AQUATIC FARM STOCK ACQUISITION PERMITS. (a) A person may not acquire aquatic plants or aquatic animals from wild stock in the state for the purpose of supplying stock to an aquatic farm or hatchery required to have a permit under AS 16.40.100 unless the person holds an acquisition permit from the commissioner.

(b) An acquisition permit authorizes the permit holder to acquire the species and quantities of wild stock in the state specified in the permit for the purpose of supplying stock to an aquatic farm or hatchery required to have a permit under AS 16.40.100.

(c) The commissioner shall specify the expiration date of an acquisition permit and may attach conditions to an acquisition permit, including conditions relating to the time, place, and manner of harvest. Size, gear, place, time, licensing, and other limitations applicable to sport, commercial, or subsistence harvest of aquatic plants and aquatic animals do not apply to a harvest with a permit issued under this section. The commissioner of fish and game shall issue or deny a permit within 30 days after receiving an application.

(d) The commissioner shall deny or restrict a permit under this section upon finding that the proposed harvest will impair sustained yield of the species. The commissioner may deny or restrict a permit under this section upon finding that the proposed harvest will disrupt established uses of the resources by commercial, sport, personal use, or subsistence users. The commissioner shall forward to the Board of Fisheries for action permit applications for species that support commercial fisheries subject to limited entry under AS 16.43. A denial of the permit by the commissioner must contain the factual basis for the findings.

(e) The Board of Fisheries may adopt regulations for the conservation, maintenance, and management of species for which an

acquisition permit is required.

(f) Except as provided in (d) of this section, the commissioner shall issue a permit if

(1) wild stock is necessary to meet the initial needs of farm or hatchery stock;

(2) there are technological limitations on the propagation of cultured stock for the species sought;

(3) wild stock sought is not fully utilized by commercial, sport, personal use, or subsistence fisheries; or

(4) wild stock is needed to maintain the gene pool of a hatchery or aquatic farm.

(g) Aquatic plants and aquatic animals acquired under a permit issued under this section become the property of the permit holder and are no longer a public or common resource.

Sec. 16.40.130. IMPORTATION OF AQUATIC PLANTS OR AQUATIC ANIMALS FOR STOCK. A person may not import into the state an aquatic plant or aquatic animal for the purpose of supplying stock to an aquatic farm or hatchery unless authorized by a regulation of the Board of Fisheries.

Sec. 16.40.140. LIMITATION ON SALE, TRANSFER OF STOCK, AND PRODUCTS. (a) A private hatchery required to have a permit under AS 16.40.100 may sell or transfer stock from the hatchery only to an aquatic farm or other hatchery that has a permit issued under AS 16.40.100, except in value-added form to be sold outside of state

(b) Stock may not be transferred to or from an aquatic farm or hatchery required to have a permit under AS 16.40.100 without prior notice of the transfer to the commissioner. A notice of transfer shall be submitted at least 45 days before the proposed date of transfer.

(c) A notice of transfer must be accompanied by a report of a health inspection of the stock. The department shall conduct the inspection or contract with a disease diagnostician to conduct the inspection. The cost of inspection shall be borne by the department.

(d) The department may restrict or disapprove a transfer of stock if it finds that the transfer would present a risk of spreading disease.

(e) A person may not sell, transfer, or offer to sell or transfer, or knowingly purchase or receive, an aquatic farm product grown or propagated in the state unless the product was grown or propagated on a farm with a permit issued under AS 16.40.100. The permit must be in effect at the time of the sale, transfer, purchase, receipt, or offer.

Sec. 16.40.150. DISEASE CONTROL AND INSPECTION. (a) The department shall order the quarantine or the destruction and disposal of diseased hatchery stock or of aquatic farm products when necessary to protect wild stock. A holder of a permit issued under AS 16.40.100 shall report to the department an outbreak or incidence of disease among stock or aquatic farm products of the permit holder within 48 hours after discovering the outbreak or incidence.

(b) A holder of a permit issued under AS 16.40.100 shall allow the department to inspect the permit holder's farm or hatchery during operating hours and upon reasonable notice. The cost of inspection shall be borne by the department.

(c) The department shall develop a disease management and control program for aquatic farms and hatcheries.

(d) The department may enter into an agreement with a state or federal agency or a private, state-certified provider to provide services under (b) and (c) of this section, or inspections under

AS 16.40.110(b).

Sec. 16.40.160. REGULATIONS. The commissioner may adopt regulations necessary to implement AS 16.40.100 - 16.40.199.

Sec. 16.40.170. PENALTY. A person who violates a provision of AS 16.40.100 - 16.40.199, a regulation adopted under AS 16.40.100 - 16.40.199, or a term or condition of a permit issued under AS 16.40.-100 - 16.40.199, is guilty of a class B misdemeanor.

Sec. 16.40.199. DEFINITIONS. In AS 16.40.100 - 16.40.199

(1) "aquatic animal" means shellfish or finfish;

(2) "aquatic farm" means a facility that grows, farms, or cultivates aquatic farm products in captivity or under positive control;

(3) "aquatic farm product" means an aquatic plant or aquatic animal, or part of an aquatic plant or aquatic animal, that is propagated, farmed, or cultivated in an aquatic farm and sold or offered for sale;

(4) "aquatic plant" means a plant indigenous to state water or that is authorized to be imported into the state under a permit issued by the commissioner;

(5) "commissioner" means the commissioner of fish and game;

(6) "hatchery" means a facility for the artificial propagation of stock, including rearing of juvenile aquatic plants or aquatic animals;

(7) "positive control" means, for mobile species, enclosed within a natural or artificial escape-proof barrier; for species with limited or no mobility, such as a bivalve or an aquatic plant, "positive control" also includes managed cultivation in unenclosed water;

(8) "shellfish" means a species of crustacean, mollusk, or other invertebrate, in any stage of its life cycle, that is indigenous

to state water or that is authorized to be imported into the state under a permit issued by the commissioner;

(9) "stock" means live aquatic plants or aquatic animals acquired, collected, possessed, or intended for use by a hatchery or aquatic farm for the purpose of further growth or propagation.

* Sec. 3. AS 03.05.011(a) is amended to read:

(a) To carry out the requirements of this title, the commissioner of environmental conservation may issue orders, regulations, permits, quarantines, and embargoes relating to

(1) examination and inspection of premises containing products, articles, and commodities carrying pests;

(2) establishment of quarantines for eradication of pests;

(3) establishment of standards and labeling requirements pertaining to the sale of meat, fish, and poultry;

(4) tests and analyses which may be made and hearings which may be held to determine whether the commissioner will issue a stop order or quarantine;

(5) cooperation with federal and other state agencies;

(6) regulation of fur farming; for purposes of this paragraph, "fur farming" means the raising of and caring for animals for the purpose of marketing their fur, or animals themselves for breeding stock;

(7) examination and inspection of meat, fish, and poultry advertised for sale or sold to the public;

(8) enforcement of quality assurance plans developed in cooperation with appropriate industry representatives;

(9) establishment of standards and conditions for the operation and siting of aquatic farms and related hatcheries, including

(A) restrictions on the use of chemicals; and

(B) requirements to protect the public from contaminated aquatic farm products that pose a risk to health;

(10) monitoring aquatic farms and aquatic farm products to ensure compliance with this chapter and with the requirements of the national shellfish sanitation program manual of operations published by the Food and Drug Administration.

* Sec. 4. AS 03.05.020(a) is amended to read:

(a) The commissioner shall

(1) require routine inspection of food animals, fish, poultry and derivative food products, to protect the public against fraud, disease and spoilage, and in this connection adopt uniform regulations establishing standards of identity and composition of these food products and minimum standards of sanitation and handling methods as to all phases of slaughtering, processing, storing, transporting, displaying and selling of these food products;

(2) issue orders or cause the orders to be issued by an authorized veterinarian prohibiting transportation and sale of food products intended for human consumption which do not meet the minimum requirements established under (1) of this subsection, and limiting their use and disposal in conformity with protection of the public;

(3) adopt a schedule of fees or charges, and credit provisions, for services rendered by state veterinarians to farmers and others at their request in caring for livestock and poultry, and all the fees shall be transmitted to the commissioner for deposit in the state treasury;

(4) designate points of entry for admission of livestock or poultry into the state, and arrange inspection at those points with or without collaboration and assistance of the federal government, and

bar entry of stock or poultry not shipped under a valid permit or not free from contagious or infectious disease;

(5) adopt, repeal, and amend regulations consistent with existing law for

(A) the labeling and grading of milk and milk products and standards of cleanliness and sanitation, to at least the minimum of current recommendations of the United States Public Health Service, for the operation of dairies selling, or offering for sale, milk or milk products;

(B) the production and sale of ice cream and allied frozen desserts;

(C) the production and sale of imitation milk and imitation milk products;

(D) the labeling of aquatic farm products as aquatic farm products.

* Sec. 5. AS 03.05.040(a) is amended to read:

(a) On any business day during the usual hours of business the commissioner or an authorized inspector may, for the purpose of inspecting agricultural, [OR] fisheries, or aquatic farm products or aquatic farm sites subject to regulation, enter a storehouse, warehouse, cold storage plant, packing house, slaughterhouse, retail store or other building or place where those products are kept, stored, processed or sold.

* Sec. 6. AS 03.05.100 is amended to read:

Sec. 03.05.100. DEFINITIONS. In this chapter,

(1) "agricultural products" does not include fish or fisheries products;

(2) "aquatic farm" and "aquatic farm product" have the meanings given in AS 16.40.199;