

HB

108

(FILE 2)

REPRESENTATIVE
SAM COTTEN
DISTRICT 15



P.O. BOX 296, EAGLE RIVER, AK 99577
P.O. BOX V, JUNEAU, AK 99811

ALASKA STATE LEGISLATURE
HOUSE OF REPRESENTATIVES

TO: Resources Committee members
FROM: Rep. Sam Cotten, Co-Chair
SUBJECT: Tidelands leasing for mariculture (HB 108)
DATE: May 5, 1987

One of the most controversial issues in the Committee's hearings on the mariculture bill (HB 108) has been the leasing of state tidelands for mariculture sites.

My staff prepared draft tidelands leasing language that attempts to take into account most of the suggestions and concerns of committee members and the public. Of course this is only a very preliminary draft intended to focus discussion and provide a vehicle for future committee action, if appropriate. The draft is supplied for your consideration.

In a first review by some interested legislators, interest groups, and DNR, the following questions arose about the draft:

Does the legislation need to be so comprehensive?
Does it put things into statute that belong in regulation?

Should there be a distinct tidelands leasing procedure for aquatic farms, or should existing procedures be employed?

Are the proposed terms of the statute unfair?
(Proposed rentals, depth of planning and financing requirements)

I look forward to working on the bill with the committee and will appreciate any comments on this draft.

attachment

DRAFT fish farm/tidelands leasing language

May 6, 1987

* Section 1. AS 38.05.070(a) is amended to read:

(a) Land, including tide, submerged or shoreland, to which the state holds title or to which it may become entitled, may be leased, except for the extraction of natural resources, in the manner provided in AS 38.05.070-38.05.105. Leasing of land for aquatic farming sites may occur under AS 38.05.400-38.05.412.

* Sec. 2. AS 38.05 is amended by adding a new article to read:

Article __. Leasing of State Lands for Aquatic Farming.

Section

- 400. Generally
- 402. Application for a lease
- 404. Application processing
- 406. Review of applications
- 408. Leasing procedures and decisions
- 410. Lease terms
- 412. Regulations

AS 38.05.400. Generally. Under AS 38.05.400-AS 38.05.412, the commissioner may negotiate leases for land, including tide, submerged, and shoreland and adjacent uplands, for aquatic farm sites.

AS 38.05.402. Application for a lease. (a) An Alaska resident holding an Alaska business license who

is interested in obtaining a lease for aquatic farming operations must, by October 1 of the year, submit an application for a lease on forms issued by the commissioner. The commissioner shall require submittal of relevant information including at a minimum:

(1) a map at the most detailed scale generally available showing the proposed site;

(2) a farm operation plan, providing detailed information and drawings of the proposed operation, including

(A) the farm development schedule;

(B) biological and physical capabilities of the site;

(C) needs and sources for power, fresh water, fuel, and feed;

(D) waste disposal, including farm product wastes;

(E) production strategies and target levels;

(F) product processing and markets;

(G) cost estimates and financing; and

(H) special measures to mitigate environmental impact;

(3) an application fee of \$100;

(4) evidence that the applicant is fit, willing, and able to conduct the operation;

(5) photographs of the site.

(b) On receipt of an application for an aquatic farming lease, the commissioner shall evaluate the application for completeness and request more information, if necessary, within 15 days. If the commissioner does not request more information within 15 days, the application shall be considered complete, although the commissioner may request more information as the application is processed under AS 38.05.404-38.05.406.

AS 38.05.404. Application processing. (a) The commissioner shall begin to process an aquatic farm lease application after the application is complete.

(b) Between November 1 and December 31 of the year, the commissioner shall publish notice, in accordance with AS 38.05.945, of all aquatic farm site lease applications submitted by October 1 and completed before November 1 of the year. If warranted by public response to an aquatic farm application, the commissioner shall hold public hearings at a place and time to be announced at least fourteen days in advance.

(c) The commissioner shall issue final decisions on all aquatic farm lease applications submitted during the previous year by March 1.

AS 38.05.406. Review of applications. (a) Before issuing an aquatic farming lease under AS 38.05.400-38.05.412, the commissioner shall

(1) assure that the proposed use will conform with applicable land use plans adopted by the commissioner under AS 38.04.065 and land classifications under AS 38.05.300, with coastal management plans under AS 46.40.100, and with local planning and zoning in the municipalities;

(2) consider other land uses that exist or can reasonably be expected on the same site;

(3) assess and consider the cumulative impacts of aquatic farms already leased or proposed in the area;

(4) assure that adequate navigation and access can be maintained, including access to public and private uplands and to public waters;

(5) identify special operating conditions and mitigating measures that may be required of the applicant; and

(6) provide at least 30 days for public review of draft decisions and interest findings required by (c) of this section.

(b) In considering the aquatic farm application, the commissioner shall consult with local governments, local fish and game advisory committees, and other agencies, including the Department of Fish and Game.

With the cooperation of other departments, the commissioner may establish and coordinate regional review teams, composed of agency representatives, to work on aquatic farm applications in each region of the state.

(c) By January 15 of the year, the commissioner shall prepare and issue preliminary decisions, including draft lease terms and operating conditions, on all complete aquatic farm leasing applications received during the previous year. Notice of the preliminary decisions shall be provided in accordance with AS 38.05.945. The preliminary decision must include a draft finding of state's interests in accordance with AS 38.05.408(b).

AS 38.05.408. Leasing procedures and decisions.

(a) The commissioner may negotiate and issue an aquatic farm lease to a prequalified applicant under regulations adopted in accordance with AS 38.05.400-38.05.412.

(b) After determining that an aquatic farm lease application accords with AS 38.05.406(a), the commissioner shall consider the state's interests in the proposed lease of state lands, and may not issue any lease unless the commissioner determines that

issuance of the lease serves the best interests of the state.

AS 38.05.410. Lease terms. (a) An aquatic farm lease for tide, submerged, and shoreland and adjacent uplands may be issued for up to thirty years, at the discretion of the commissioner in consideration of the useful life of the improvements to be constructed.

(b) As a rental fee for the lease the commissioner shall provide for return of a portion of the gross receipts from the lease to be deposited in the general fund of the state. For an operation grossing less than \$500,000 per year, the commissioner shall require the return of two per cent of gross receipts. For an operation grossing between \$500,000 and \$1,000,000 per year, the commissioner shall require the return of three per cent of gross receipts. For an operation grossing over \$1,000,000 per year, the commissioner shall require the return of between three per cent and five per cent of gross receipts.

(c) A lease shall contain terms that

(1) prevent nonconforming uses of the leased property;

(2) provide for restoration of the site after termination of the lease;

(3) require investment and development on a specified schedule;

(4) allow transfer to another owner only with the commissioner's approval;

(5) permit regular inspection of the facilities and operations; and

(6) identify measures necessary to mitigate environmental impact.

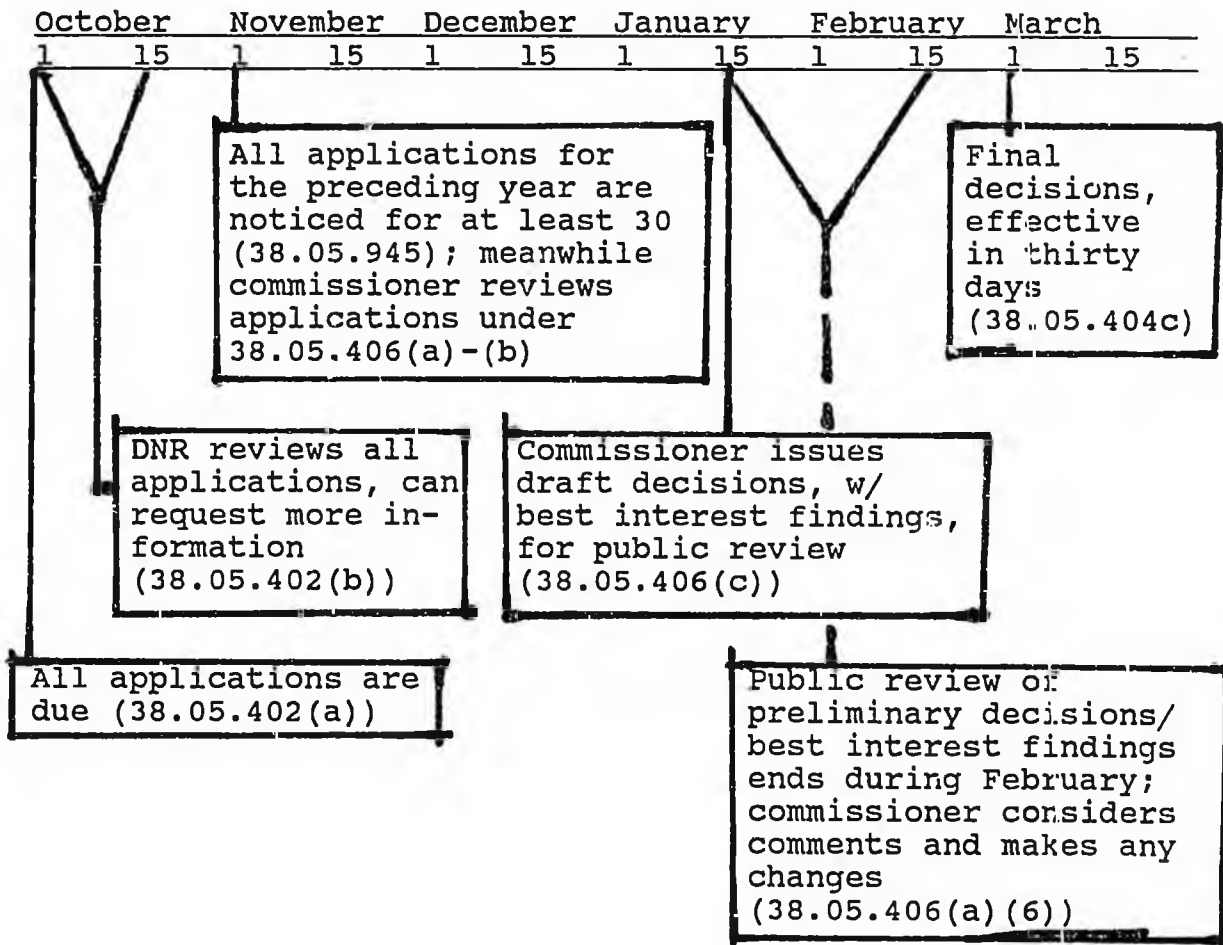
(d) The commissioner may require survey of the lease site at the applicant's expense prior to issuance of a lease or during the term of the lease.

(e) The commissioner may include other reasonable terms and conditions in the lease.

(f) The commissioner may not approve the transfer of any lease unless the commissioner determines that there has been substantial development and compliance with the terms of the lease.

AS 38.05.412. Regulations. The commissioner shall adopt regulations to implement AS 38.05.400-38.05.410.

This is a schedule for the annual applications and public review process for aquatic farm sites under proposed AS 38.05.400-412.



MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES

Southeast Regional Office

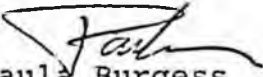
Div. of Land & Water Mgt.

DATE: March 16, 1987

TO: Brent Paine
Assistant to Representative Rieger

FILE NO:

TELEPHONE NO: 465-3400

FROM: 
Paula Burgess
Regional Manager

SUBJECT: Aquatic Farming
Statutes

Following our meeting yesterday in Representative Ellis' office I felt a mixed sense of relief and concern: relief that the rough drafting of aquaculture guidelines would be in good hands, and concern because developing the aquaculture program is a complicated task that will require a delicate balance to be successful. The means of achieving that delicate balance is not yet clear in my mind. Nevertheless, I thought I would jot down some ideas that may be useful to you as you think about the guidelines. My apologies if they are somewhat disjointed.

Most of us recognize that the statutes need to set up and authorize a mariculture program, but they cannot be so specific that the program will lack flexibility. When drafting guidelines, you may want to be specific initially, and then go back through and pull out the appropriate lines or sections that should appear in the statutes. The remainder we can consider either for administrative regulations, or as policy and procedures. The obvious advantages to policy and procedures (DNR has a Policy and Procedures Manual, fondly referred to as the PPM) is that changes can be made as necessary without going outside of the department, yet it is an open process, available to the public for review and comment. Regulations require a public hearing process prior to adoption and alteration.

As an example, existing statutes are quite specific for lease procedures (beginning with AS 38.05.070), yet are almost silent on permitting. This is probably appropriate, since permits give little land tenure (they can be revoked in thirty days without cause). As another example, the statutes need to give the appropriate commissioners the authority to set reasonable fees, but the fees should not be in statute.

You may not wish to tackle this separation into various levels of bureaucracy. If not, sometime I will ask you to identify the areas where you think flexibility will be needed the most.

March 16, 1987

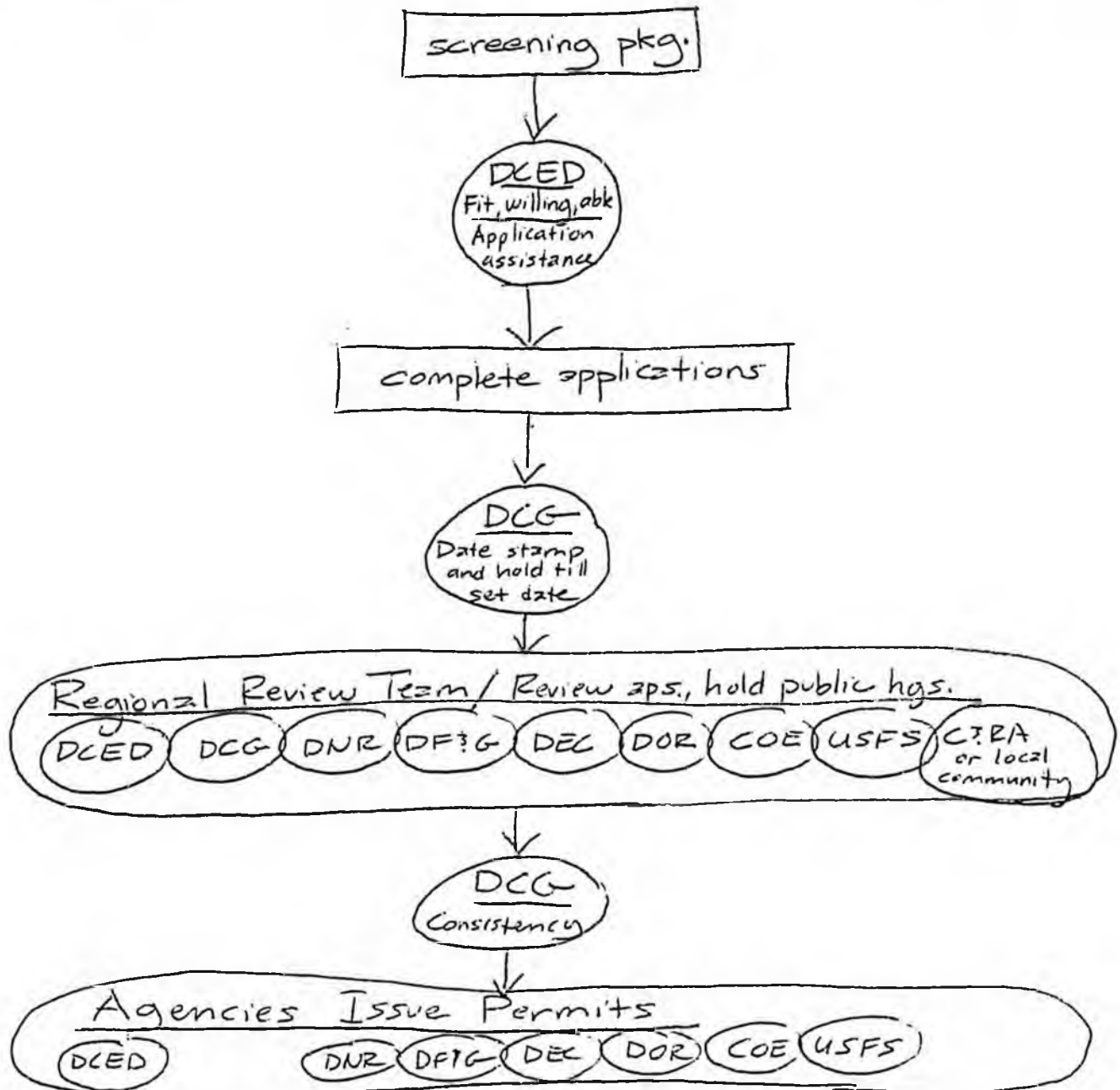
I have attached a discussion of some of mariculture issues quite eloquently outlined by David Benton (a rough draft). It is not yet ready for public review (so I hope you will treat it accordingly), but it will give you a feeling for some of our concerns. Off-hand, two issues appear to me to be missing: the problem of public awareness and review of selected sites, and the need to address upland facilities along with all other permit applications. As we discussed briefly at the meeting, I think the problem of public notice can be taken care of by reviewing, at one time, all applications that have accumulated throughout the year. Regarding the use of uplands, I think we need to bring the U.S. Forest Service more tightly into our permitting process for mariculture operations.

While on the subject of permits, let me digress for a moment and set the stage for the guidelines that you are working on. As I count them, most mariculture operations will require at least nine permits (I may have missed a few, and I have not attempted to list the required certifications...):

- DCED - (the lead agency as proposed in the new statutes) Fish Farm Permit
- DOR - Fish Farming License
- DF&G - Transport/Import Permit
Hatchery Permit
- DEC - Water Quality Permit
Fish Processing Permit
- DNR - Land Use Permit, or Lease
Water Use Permit
- COE - Corps Permit
- USFS - Permit for use of the uplands

It may be that the most expedient way to review applications will be by means of a Regional Review Team, with representatives from each of the permitting agencies, as well as C&RA or a representative from the nearby community. This body could evaluate the applications and listen to public concerns. This forum would avoid the problem we occasionally encounter, where one agency issues a permit while another does not, leaving the applicant confused and unhappy.

While this has not been formally discussed, and may in fact change considerably, I see the permit process shaping up something like this:



If you want to discuss lease and permit possibilities, or anything else, let me know. I wish you the best!

Attachment

cc: David Benton
Diane Mayer
Larry Ostrovsky
Bob Palmer

Mariculture
Issues Discussion Paper
March 4, 1987

1. Issue: Can the state legally give Alaskans either exclusive or preferential access to mariculture permits? Can legislation have provisions to give priority to Alaskan residents or Alaska-owned businesses or corporations?

Option: a) Have the Department of Law analyze our options, including:

1) Restricting mariculture leases to Alaskan residents or corporations.

2) Give priority for aquatic farm and broodstock permits to Alaska residents or businesses.

2. Issue: Should the state recover all or part of the administrative and other state costs associated with managing a mariculture program and get fair return for use of state resources (i.e. tidelands)?

Options: a) User fees charged as part of the permitting process to cover administrative costs, the cost of inspections, etc.

b) Fees or "rents" for use of state tidelands and water resources to ensure fair return to the state.

3. Issue: There needs to be a vehicle to focus the permitting process for mariculture operations. There will be a wide variety of mariculture ventures. Most will require multiple permits and multi-agency review. We need to prevent a piecemeal approach to the approval process, and promote efficient review of each operation. In addition, we need a way to gauge the commitment the applicant is willing to make to seriously develop the project.

Option: Require the applicant to submit a mariculture plan of operations and prospectus. This plan would be prepared by the applicant and used by the agencies in the permit process. It would be the document used to make an initial fit, willing, and able determination to screen out speculators. The plan would describe the measures used to ensure compliance with water quality standards, disease control measures, etc. Specific elements in the plan could include the location, type of operation, species involved, size and scale of the operation, a financial plan, and a project development schedule to provide milestones to measure the project's progress as part of any "prove-up" requirements.

4. Issue: There is concern that there needs to be an initial screening of applicants to prevent rampant speculation and to encourage serious mariculture operations. At the same time there is a concern that this "test" not present an insurmountable barrier to small-scale, mom and pop ventures.

Options: a) Perform a "Fit, Willing, and Able" test.

This would be an initial determination that the operator is "fit, willing, and able" to successfully conduct operations as described in the mariculture plan of operations and prospects. By tying the fit, willing, and able determination to the operations described in the plan, there should be latitude to allow for "mom and pop" operations as well as larger corporate ventures. The Department of Commerce and Economic Development would make the determination in consultation with other state agencies, and specific criteria would be developed through regulation. General standards should, however, be in the legislation. Such standards could include consideration of financial resources; level of expertise, presence or absence of full-time personnel, etc.

b) Require a bond from the applicant for the purposes of covering any site clean-up or other costs should the operation fail. Posting an bond could be viewed as a signal of the applicant's commitment.

5. Issue: As part of the attempt to discourage speculation and encourage serious mariculture ventures, there needs to be on-going review of these projects. Once they receive the initial permit the state needs to ensure that they are actually making a serious effort to develop their project.

Options: a) Have a "prove-up requirement which would entail a periodic review of the project. The project development schedule could provide milestones to gauge the progress the operator has made. The "prove-up" determination could then be used to ensure that a serious effort was being made to follow the plan and develop a successful mariculture facility.

b) Divide the permit/lease into a two stage process. Grant an initial permit/tidelands lease for a period of 5 years for development purposes. At the end of that time review the status of the

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project. If it is a viable operation then grant a 25-year operational permit/lease.

6. Issue: Tidelands leases could be locked up by individuals or businesses which are not actively operating their facilities.

Options: a) Ensure that tidelands leases are non-transferable from one company or individual to another.

b) Ensure that there are provisions for revocation of the permit and tidelands lease in the event an operator is not making a serious attempt to develop the project.

7. Issue: There needs to be criteria for resolving space-use conflicts. Many excellent sites for mariculture facilities are also highly prized for other uses including log storage, commercial fishing, anchorages, subsistence, and recreation.

Options: a) Use coastal zone management program to resolve conflicts. Unfortunately, ACMP standards do not address the issue of resolving conflicts between competing water-dependent uses, and there

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are no local CZM plans for most of the areas where mariculture might occur.

b) Use DNR tidelands planning process to resolve space-use conflicts. Land-use plans could address many of these issues, but DNR budgets may need to be adjusted accordingly.

c) Develop standards in the legislation which would provide general guidance to the agencies when reviewing these projects. These criteria would include provisions so that mariculture facilities will be sited to minimize land use conflicts; provide environmental safeguards; maintain navigation and access channels; and reduce visual and aesthetic impacts.

8. Issue: Considerable speculation is already occurring. Individuals are presently "staking" potential mariculture sites in order to get the jump on the market.

Option: Place a retroactive moratorium on mariculture site applications until the regulatory mechanisms have been established. Already-existing operations would have to be grandfathered in.

Miscellaneous Notes

Possible changes in DNR statutes/regs/policies

lease preference to permittee (right of first refusal)
lease not by auction, but to project in the state's best interest
highest and best use
reasonable fee charged (leases and permits)
lease fee based on minimum royalty their gross receipts
(encourage small operators, allow industry to get going)
lease preference to Alaskans (if constitutional) (One year
residency?)
lease clean-up bond
lease commitment bond (also ^{permit} ~~perm?~~) (to avoid speculation)
show economic viability (to avoid speculation)
require development schedule (to avoid speculation)
require adequate site monitoring and reporting (to avoid
speculation)
require demarcation of lease area
renewal based on performance
don't require classification outside of area plan
no survey in remote areas/paper plat acceptable

Siting criteria

aquatic farms will be sited so as to:

- * minimize land use conflicts
- * provide environmental safeguards
- * maintain navigation and access channels
- * reduce visual and aesthetic impacts

Brent - Roger and Robin Larsson were in today talking about fees etc. I recommend you folks set it up just the way you think it ought to be, and let us ~~not~~ respond to the proposal. I agree with Roger that the Fisheries Business Tax doesn't make sense, but gross receipts do.

Tina Ortman
P.O. Box 442
Talkeetna, AK 99676
(907) 733-2565

April 15, 1987

Sam Cotten
P.O. Box V
Juneau, AK 99811

Dear Mr. Cotten,

I am writing to voice my approval of Aquaculture. It is surprising to me that anyone would oppose developing our marine resources to their fullest. It's like having a fertile, tilled garden plot but not planting any seeds. An analogy I read from a struggle between Oregon fishermen and hatcheries said, "It's like the dinosaurs picketing the emergence of mammals." Aquaculture is the future, let's get started on it now. Thank-you for your attention.

Kind regards,

Tina Ortman

Tina Ortman

Waterfour Industries Ltd.
P.R. 1 Site 5 Comp. 4
Denman Island, B.C. V0A 1T0

March 26, 1987

House Resource Committee

Madam Chairman and House Resource Committee members:

Due to the particular topics scheduled on March 24th much of the results of my experiences in salmon farming went unsaid. I would like to make the following statements in hopes of assisting Alaska to begin developing of what many of us believe to be one of the best economic opportunities Alaska has -- aquaculture. The following opinions are that of the General Manager of a salmon farming venture that is in the process of developing 10 sites with annual sales of US\$25 million within five years, relative to some B.C. ventures, not a particularly aggressive plan.

1. Salmon industry evolution. Salmon farming has become an important part of world salmon marketing. It will not cease to exist. If Alaska chooses not to become part of it, other nations will applaud. Along with their salmon farmers, other countries processing plant workers will work year around, as will their draggers, net, feed and equipment makers, marketers and many others.

2. Farm size: Aquaculture is a very competitive economic endeavor, Alaska has to come from way behind over a dozen other nations in technical, financial and in infrastructure matters. Aquaculture cannot be expected to have much of a chance if made to bear, however well intended, legislated inefficiencies -- such as farm size restrictions. (Two sizes appear to be the most viable -- small, perhaps family based, operated by someone who already lives on or near a site, who combines with other small farmers in purchasing and sales, and larger, corporate based clusters of five-ten farms. Big corporations have not, thus far, done well in aquaculture.)

The result of making the same mistake Norway has made in limiting the volume of net pens allowed is too high of fish density. The result of that is increased costs due to disease resulting from stress, increased point source organic loads, and overall much greater financial risk.

3. Markets: What harm that has been done to Alaskan salmon fishers, for the near term has already been done. (Norway alone produces more farmed Atlantic salmon than the total U.S. catch of coho and chinook combined, all states, all gear types.) In regards to salmon farming, what Alaska does or does not do will not matter for many years in international farmed salmon markets. If no discernible difference exists, and if a net increase in jobs are to be realized, then we should have it. Additionally a consistent supply of fish, commercially harvested in the summer and commercially farmed in winter will result in year around jobs -- the best way to "Alaskanize" the fishing industry that I know of.

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4. Supply of domesticated smolts. Each small farm will need about 10,000 smolts, large farms, 100,000-plus. It is suggested that strong urging be given to ADF&G-FRED Division to at least supply eggs, and that provisions for converting local PNP corporations to private-profit hatcheries (with loan payback as a condition) be provided for. (The IRS status of PNP hatchery corporations must be carefully considered.)

It is also suggested that domesticated broodstock be prudently allowed into Alaska, in small numbers, for a restricted period of time while we are testing and selecting local stocks. Without fish stocks long held in captivity, Alaska will have a difficult time catching up. (See the latest Canadian regulations for a guideline -- enclosed.)

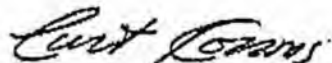
5. Ongoing research and development/training. No new species of aquatic organism has recently been brought into cultivation without extensive R&D efforts. The model that appears to work best is typically university-based, with a state providing the facility and the researchers finding the actual research project funds. Combined with community college efforts, workers can also be trained at the facility.

6. Unnecessary/duplicated controls. There already exists a plethora of studies in which no major problems have been found -- at least none that compare with the question "What is the effect of commercial or intensive recreational fishing?". Many agencies already have a myriad of laws and regulations, just ask someone who has been through the maze already. Pollution (salmon are a pristine water organism so that problem is self-correcting), shipping lanes and safe harbors, traditional fishing grounds and other land use conflicts and a number of other potential problem areas already have a number of concerned agencies. As you know all too well, these times of decreasing budgets. Imposing additional demands upon state agencies, when existing statutes and regulations already protect the public interest due to vague concerns, serves no one.

7. Financing. Salmon farming is capital intensive due to the two-three year period at start-up with no revenues. To start even a small farm can easily require \$50,000 or more. A moderate-sized farm can require \$2 million. Banks do not readily loan monies for new ventures in start-up industries. The only source of financing that I know of from financial institutions comes from countries already well established in salmon farming. (The best source is Norway.)

You do not have an easy task ahead of you, but Alaskans need the work.

Thank you for your time,



Curt Kerns, General Manager

Federal-Provincial Policy for the Importation of Live Salmonids into British Columbia

In recognition of the commercial and recreational value of wild and cultured native salmonid stocks in British Columbia and the Yukon Territory, it is essential to protect their genetic integrity and freedom from exotic diseases.

Therefore, no importations of fish belonging to the family Salmonidae will be authorized by Federal or Provincial fisheries management agencies which are not in compliance with this policy, effective on date of signing.

General:

1. Approved importation of live salmonids must comply with the Canadian Fish Health Protection Regulations (CFHPR).
2. Only surface-disinfected, fertilized eggs will be imported. No live fish or unfertilized eggs or milt will be allowed.
3. Only Atlantic salmon (Salmo salar) and non-anadromous rainbow trout (Salmo gairdneri) will be considered for importation.
4. Importation of rainbow trout will be considered only from brood stock that was hatched and reared in Canada and continental U.S.A.

Atlantic Salmon:

5. As of April 1, 1987, egg imports will be limited to 100,000 eggs/year/licence and allowed only from brood stock that has been held at the source facility (hatchery and sea pen), separate from other stocks, for one full generation. This means that consideration could be given to F₂ Atlantic salmon from Canada and the U.S.
6. No direct importation of Atlantic salmon eggs will be permitted from continental Europe, from the southern hemisphere, or from countries in which viral hemorrhagic septicemia (VHS) is known or suspected to occur. Importation will be considered only from sites that (i) a Canadian Local Fish Health Officer has approved after a site inspection; (ii) can demonstrate a thorough record of disease history to the satisfaction of a Canadian Local Fish Health Officer; (iii) can document and demonstrate disease-free water supply system; and (iv) can document and demonstrate the capability of the physical plant to isolate stocks and prevent disease transfer between stocks.

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7. Importation of Atlantic salmon eggs will be for the purpose of developing aquaculture brood stocks in British Columbia. Importers must propose a number or percent of fish to be held to maturity for reproduction and collection of sex products and demonstrate progress and intent to establish brood stocks.
8. Consideration for import will be given particularly to stocks that are demonstrably adapted for commercial aquaculture pen rearing, assuming that all other conditions are met.
9. After March 31, 1989, no further shipments of Atlantic salmon will be permitted.
10. All Atlantic salmon must be held under strict quarantine (as outlined below).

All Live Salmonids:

11. Notwithstanding sections 2,3,5,6 and 8, exceptions may be permitted for limited numbers of eggs or small volumes of milt for such activities as research or brood stock development and improvement when work is to be conducted under strict supervision of government fisheries agencies. Approval for exceptions must be obtained from the Director General, Pacific Region, Department of Fisheries and Oceans and the Director, Fisheries Branch, British Columbia Ministry of Environment and Parks.

Atlantic Salmon Quarantine Conditions:

12. Prior to the arrival of any eggs, a quarantine facility must be inspected and approved by designated government personnel according to the following conditions as judged by the designated Fish Health Officer. The quarantine facility must:
 - a) be an adequately enclosed area, physically separated from any other hatchery operation;
 - b) have restricted access;
 - c) have approved facilities for disinfection of effluent.
13. All eggs and resultant fish must be held in quarantine for a minimum of 12 months after arrival.
14. All stocks in the initial year and thereafter all stock kept for brood stock must be inspected and sampled according to the CFHPR Manual of Compliance. Fish must be sampled 3 times in their quarantine year and once just after transfer to salt water. Brood stock must be sampled at maturity.
15. Diseased stocks:
 - a) shall be destroyed if VHS, IPN, or whirling disease is detected, and
 - b) may be ordered destroyed or treated if any disease listed in Schedule II of the CFHPR is detected.Also, detection of any other disease designated by Federal and Provincial fisheries management agencies may lead to the same requirement for stock destruction or to further quarantine of the stock.

...3

- 3 -

16. Failure to comply with importation or quarantine conditions will result in suspension of the Commercial Fish Farm Licence of the facility.

Marine Rearing of Atlantic Salmon:

17. All movements of Atlantic salmon from hatchery to salt water will be by Federal-Provincial Transplant Committee approval only.

The precautions taken in 1 to 17 above are designed to minimize the risk of introducing exotic fish diseases and to maximize the chances for detection of any exotic fish diseases that may be carried by introduced stock.

Procedures:

18. All requests for permission to import live salmonids are to be addressed to the Canada-British Columbia Transplant Committee, c/o Local Fish Health Officer, Pacific Biological Station, Hammond Bay Road, Nanaimo, British Columbia, V9R 5K6.
19. In recognition of the importance of managing fish disease upon the orderly development of aquaculture in British Columbia, and recognizing the lead role of the Ministry of Agriculture and Fisheries in aquaculture; the Department of Fisheries and Oceans and the Ministry of Environment and Parks will confer with the Ministry of Agriculture and Fisheries:
- a) prior to any decision being made by the parties regarding item 11 requests;
 - b) prior to any amendments to the policy under item 20;
 - c) at least semi-annually regarding the nature and status of requests to the Canada-British Columbia Transplant Committee to import live salmonids to British Columbia.

Amendment:

20. This policy may be amended by mutual consent of the signatories.

APPROVED:

Peter Heyboom, Deputy Minister
Department of Fisheries & Oceans

B. E. Marr, Deputy Minister
B.C. Ministry of Environment and Parks

Date

Date

November 17, 1986

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES

Southeast Regional Office

Div. of Land & Water Mgt.

DATE: September 19, 1986

TO: Distribution List

FILE NO:

Thru: Paula Burgess *Paula Burgess*
Regional Manager

TELEPHONE NO: 465-3400

FROM: *Bill 4/27/86*
Bob Palmer *BP*
Retained Lands Officer

SUBJECT: DNR Tideland Permit
for Shellfish Culture

We welcome your comments on the proposed permitting process for oyster farms. Because of the recent increase in oyster farm applications, and because oyster applications are the first of many types of aquaculture applications we expect to receive, DNR must be prepared to evaluate the permits in a fair and systematic manner.

During a recent meeting on the oyster culture permit process, it was found that of the 20 permitted oyster sites in Southeast only four or five are actually being used to grow oysters. The U.S. Forest Service and the public is concerned that some of these sites are only proposed so that the permittee can obtain a cabin site under the guise of an aquaculture facility. Other agencies and individuals voiced the opinion that these permittees were obtaining the best sites in an attempt to block other users or to speculate on a possible land rush when the net pen rearing of salmon becomes viable. In any case, we propose the following program to monitor the progress of each facility and to ensure that the permitting system is not abused.

The program is based on a series of three year land use permits. Three years is also the term of the permit issued by the Corps of Engineers. In order to implement the three year permit, a revision in our land use permit policy is required. Currently we can only issue a land use permit for up to one year (PPM 5122, Sect 01, 2.3).

At the end of each three year permit, the applicant will have to prove that they are actively developing the site into a viable business. We propose to require the permittee to have the rafts in place and have the spat purchased or in place on the rafts within the first three years. If this is accomplished, a second three year permit will be issued. At the end of the second permit, the permittee must show that they have had a Department of Environmental Conservation inspection and are certified to sell their product. If this step is met, they may either obtain a lease or may continue with three year permits. At no time will a lease be issued until the facility is shown to be operational. If a permittee fails to meet the

Permit for Shellfish Culture
September 22, 1986
Page 2

requirements, they must submit a letter to the Regional Manager explaining why they were unable to comply with the requirements. The Regional Manager will then decide whether or not to permit the site for an additional three years.

The three year permits will not be transferrable and can be revoked immediately with cause and after 30 days notice without cause. The user fees for all three years will be collected the first year and may be refunded on a yearly basis if the permit is revoked or relinquished. The fees are currently \$50.00 per acre per year, with a \$100.00 minimum. This fee is low for exclusive use of an acre of prime tideland. All permit fees are currently under review and changes may result.

The program that is proposed here is specifically for oyster culture permits. It would be preferable to implement a program that would work for all types of shell fish culture. Please comment on the oyster program as proposed, and also offer suggestions that would make the program applicable to other types of shellfish farming.

Distribution List:

Tom Hawkins, Director
Meg Hayes, South Central Region
Jerry Brossia, Northern Region
Brian Paust, Marine Advisory Program
Robin Larsson, Alaska Shellfish Growers Association
Diane Mayer, OMB
Mike Ostasz, DEC^W
John Harmening, USFS
Gary Gustafson, DLWM, Anchorage
Tom Kron, FKED
Bill Paulick, DKED
James Hemming

MEMORANDUM

State of Alaska

TO: Stanley A. Moberly
Director
F.R.E.D. Division
Juneau

DATE: June 25, 1986

FILE NO:

TELEPHONE NO:

FROM: Roger Blackett *RFB*
Area Biologist
F.R.E.D. Division
Kodiak

SUBJECT: Comments on DNR Mariculture
Permit Requirement Options

I have reviewed the three lease options (temporary permit for floats, 5-yr tideland and 10-yr negotiated tideland lease [upland owner]). The options are not realistic nor do they meet the long-term needs of culturists. Mariculturists require: 1) exclusive use of submerged tidelands for their operation - other uses and activities that would cause waves, disturbance of collection and growout gear, and risk of pollution in the area are unacceptable, 2) a guarantee that after initial years of labor and capital investment, the culturist would be given the sole right of a long term lease (55 yr) of a site without risk of another higher bidder getting the site, 3) recognition that mariculture may be one of the most beneficial and productive uses of Alaska tide lands compared to other uses, and 4) a waiver of survey and appraisal costs and annual rental payments for tidelands.

DNR is trying to include mariculture under existing policy and permitting procedures. Realistically, what is needed is new policy and permitting methods specifically for mariculture. As a new and developing industry, with potential for considerable economic benefit, I believe the State (including DNR) should be doing everything possible to encourage mariculture operations, especially in the early development stages. Therefore, I believe the approach DNR should be taking is to tailor new policy and a new permit system specifically for mariculture. A waiver of annual rental payments, registered survey fees, and appraisal costs would provide encouragement for mariculture. Most of the smaller (Mom-and-Pop operations) can not afford the lease costs in addition to initial capital and operation costs. Yet, they still need a guarantee of exclusive use of a tide land site for mariculture without risk of losing their investments.

I can understand DNR's reluctance to issue a long-term (55 yr) exclusive tideland lease for a mariculture operation that has not been proven feasible. However, I also recognize the reluctance of a mariculturist to invest time and money into a site for development of a feasible operation without a guarantee that the site will be available for exclusive long-term use. I believe this problem can be resolved by an interim use permit for 5-10 yrs of feasibility and development with first right for a long-term (50 yr+) mariculture permit once the site was proven feasible. Another option would be the issuance of a long-term lease with a reversion clause that if the site proves to be unusable for mariculture after the first 5-10 yrs; the site would revert back to the State.

(continued)

In the Kodiak area, there are many potential mariculture sites where the upland owner would be the Federal Government (Refuge), State of Alaska, Borough, or Native Corporation. A preference to the upland owner for a tideland lease could inhibit development of mariculture in those instances where the mariculturist has no possibility of being an upland owner. However, the Kodiak Island Borough is considering leasing land (including tidelands) for the specific purpose of mariculture. The Refuges (Kodiak and Maritime [includes all of Afognak Island]) have no set policy, to my knowledge, on mariculture operations at this time, but as the upland and tideland manager, the Refuge system could strongly influence future mariculture development in the Kodiak area.

Perhaps the best approach at this time would be a 2-3 day work session between mariculture representatives, the permitting agencies (including OMB), Economic Development, and FRED Division to draft new policies and permitting procedures for mariculture. I believe all the problems and implications need to be laid out on the table before an acceptable permitting system for mariculture can be established.

cc: Tom Kron
Dave Daisy
Bob Burkett
Lance Trasky
Mike Kaill
Kim Sundberg

ALASKA MARICULTURE ASSOCIATION

P.O. Box 020704

Juneau, AK 99802-0704

(907) 586-2032

October 14, 1986

Ms. Paula Burgess
Southeast Regional Manager
Division of Land & Water Management
Department of Natural Resources
P.O. Box MA
Juneau, Alaska 99811

Dear Ms. Burgess:

Thank you for providing a copy of the memorandum concerning potential changes in the Department of Natural Resources' tideland permitting program for shellfish culturing. The memorandum was discussed during a recent conference call of the Alaska Mariculture Association's (AMA) board of directors.

While AMA agrees with the goal of controlling speculative lock-ups of tidelands, we have serious reservations about the approach suggested by Mr. Palmer. We request that you put a hold on any changes in the permitting system until after the tidelands useage issue is addressed by the Mariculture Technical Work Group. (See attached letter.)

AMA directors believe the three-year permits proposed by Mr. Palmer would seriously hamper the development of a mariculture industry in Alaska. This is particularly the case while the State of Alaska grapples with the issue of an overall mariculture development policy.

The three-year permitting approach is very problematic from a financing standpoint since it would be very difficult to obtain investment capital under such a system. A clause allowing revocation without cause alone is enough to scare away any potential investors.

The AMA board also was very concerned about the proposal to make the three-year permits non-transferrable. While AMA is determined to avoid the pitfalls of our current limited entry fishing program, non-transferrable permits would kill most financing options.

The suggestion about increasing permit fees also troubled AMA's board of directors who thought it was particularly ill-timed considering the embryonic stage of mariculture development. In fact, if I were to sum up AMA's response to the suggestions contained in the memorandum it would be that the proposals are simply premature.

Our greatest concern is that the proposed changes would cause serious problems for smaller-scale farmers. We believe that well-financed applicants may be able to comply with many of the restrictions, but it would be impossible for most family-sized farming operations. This would be particularly unfortunate since many of the local residents likely to enter mariculture are considering cottage industry approaches to sea farming.

Ms. Paula Burgess
Page Two

AMA does agree with DNR's concern about speculators tying up tidelands and individuals interested in obtaining recreational cabin sites under the guise of sea farming. The "gold rush" approach to salmon farming in British Columbia suggests there is reason for concern. AMA would like to work closely with DNR to develop a workable approach for dealing with these concerns, but we believe the suggestions made in the September 19 memorandum pose major problems.

The attached June 25 memorandum from Alaska Department of Fish and Game biologist Roger Blackett in Kodiak contains some useful suggestions. I would like to discuss these ideas with you in the future.

Thank you for the opportunity to comment. I look forward to your response and participation in the Mariculture Technical Work Group.

Sincerely,

Rodger Painter

BILL SHEFFIELD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

**SOUTHEAST REGIONAL OFFICE
DIVISION OF LAND AND WATER MANAGEMENT**

400 WILLOUGHBY AVENUE
SUITE 400
JUNEAU, ALASKA 99801
PHONE (907) 465-3400

October 22, 1986

Roger Painter
Alaska Mariculture Association
P. O. Box 020704
Juneau, Alaska 99802-0704

Dear Roger:

I am responding to your letter of October 14, 1986 in which you describe the AMA board of director's reaction to proposed changes in the DNR permit process. The proposed changes were intended for review by those who are familiar with the current permit and lease procedures, including industry representatives. It is clear that I should have provided more background information to you in order for the board to evaluate the proposed changes.

Let me briefly describe the two existing vehicles that DNR has for allowing the use of state tidelands.

A Permit

The cheapest and easiest authorization that DNR can provide is through a land use permit. A permit is intended for the temporary use of state tidelands. It is currently granted for up to one year, is revocable immediately with cause and in 30 days without cause, and is non-transferrable. Clearly the permit does not offer the permit holder much stability. It was not intended for long-term development. The total price for two acres of tidelands for one year (application and use fee) is \$150.00. (See the attached guidelines for permits and leases for more detailed information.)

A Lease

If a person is interested in short-term use of state tidelands with greater protection of his/her investments, or in long-term use of state tidelands, then a lease is the proper vehicle. A lease can be issued for up to 55 years. Leases over five years in length currently require survey and appraisal (which may be credited against the rental fee), although the survey requirement can be waived by the Director. (DNR is proposing a change in statute which would allow a "paper plat" (as opposed to a full survey) in remote areas for a lease of up to ten years.) The cost of a lease in today's market is in the neighborhood of 12

percent of the appraised fair market value of the tidelands. (Again, see the attached guidelines for permits and leases for more detailed information.)

The reason that we have proposed a longer term permit is to allow the permittee time to find out if a site is viable, at a reasonable fee. A permit that requires annual reapplication does not provide sufficient time to test a site. A three year permit, while it is not something to take to the bank, will at least give the permittee assurance for three years that he will not have to compete with others for the site. In addition, the shellfish farmer may not want to spend the money required for a lease until the site has been tested.

We recognize that our approach at this point is one of tailoring existing procedures to allow shellfish culture to proceed, rather than creating an entirely new process for the budding mariculture industry. Our approach is intentionally cautious. We have not received any policy direction from this administration on mariculture. Roger Blackett of the FRED Division states in his memo of June 25, 1986 (which you attached to your response) that "...DNR should be doing everything possible to encourage mariculture operations...." While I can appreciate Blackett's eagerness, DNR cannot do "everything possible to encourage mariculture" until we have the endorsement of the administration. Furthermore, many policy questions need to be answered: Do we want to encourage small farms or large farms? Do we want to set aside districts for farming? Can we (or would we want to) limit mariculture to Alaska residents?

In our attempt to tailor the existing permit system, we have not proposed any changes that create new policy on mariculture. Again, we are only rearranging the existing vehicles to accommodate the growing demand for sites. Creation of a new system must await policy direction from the administration.

We will be happy to participate in the Mariculture Technical Work Group, and we can discuss the proposed changes further in that forum.

Sincerely,



Paula Burgess
Regional Manager

Attachment: Guidelines for Permits and Leases
Memo from Burgess to Baker of January 4, 1985

cc: Tom Hawkins, Director, DL&WM

Guidelines for Land Use Permits and Tidelands Leases

Land Use Permits

A land use permit is authorization for the temporary use of state land or state tide and submerged land. (Tide and submerged land begins at the mean high water line and extends seaward 3 miles).

A land use permit conveys no right in the land and is essentially a guarantee that so long as the activity is conducted under the terms of the permit the holder is immune from prosecution for trespass. All permits are revocable immediately with cause and revocable without cause upon completion of a 30 day notice. Permits are not transferable. It is division policy that a permit may not exceed one year in length. A permit may not be renewed but it may be reissued after a new application has been submitted. Permanent structures are prohibited, therefore, any structure placed on the permit area must be readily removable.

A permit may be obtained by submitting a completed land use permit application, the \$50.00 filing, a sketch showing the development and its location and a completed coastal zone project questionnaire to the regional office of the Division of Land & Water Management. Normally the processing takes 30-45 days. This allows time for review of the application by other state agencies, the adjacent land owners and for determination of consistency with coastal zone management. There are no user fees for non-exclusive permits, however, there is an annual user fee of \$50 per acre with a minimum of \$100 for exclusive and commercial permits.

We encourage a prospective applicant to contact adjacent land owners and government agencies prior to submitting an application. These contacts may save the applicant time and money during the site selection process.

Short Term Lease

The short term lease allows for use of state land or tide and submerged land for up to 5 years. The lease is transferable and is revocable only with cause.

A short term lease may be obtained by submitting a completed lease application, \$50.00 filing fee, a sketch showing the development and its location and a completed coastal zone project questionnaire. Normally the processing takes about 1 year to complete. In addition to agency and adjacent owner review there must be public notices published in the newspaper. A lease diagram that meets department standards is required, and the value of the land must be determined by an appraisal conducted by a qualified appraiser. The cost of the public notices, lease diagram and appraisal will be paid for by the applicant.

A short term lease can be negotiated if the applicant is the upland owner or lessee or the annual rental fee of the lease is less than \$5000 and there is no competitive interest in the lease. In all other cases the lease will be offered at a public auction and awarded to the highest bidder.

The annual rental fee is a percentage of the fair market value of the land.

Long Term Lease

A long term lease allows for use of state land or tide and submerged lands for up to 55 years. The lease is transferable and is revocable only with cause.

A long term lease may be obtained by submitting a completed lease application, \$50 filing fee, sketch showing the development plan and its location and a completed coastal zone project questionnaire. Normally the processing takes over 1 year to complete. The processing is the same as a short term lease but an Alaska Tidelands Survey is required instead of a lease diagram. Again the costs of the public notice, Alaska Tidelands Survey and appraisal will be paid by the applicant.

A long term lease can be negotiated if the applicant is the upland owner or lessee, or if the lease term does not exceed 10 years the lease value is not greater than \$5000 and there is no competitive interest. In all other cases the lease will be offered at a public auction and awarded to the highest bidder.

Additional information may be obtained from the local office of the Division of Land and Water Management, Department of Natural Resources.

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Juneau, Alaska 99801

TELECOPY COVER SHEET

TO: Rep Cotton
KETCHIKAN LIO (225-9675)

TO: Rep. Herrmann CH. Resources PHONE _____

FROM: Keith Johnson PHONE _____

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Thank you

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SENT BY: ~~2 (two)~~ Bonnie (KTA LIO)

S.S.R.A.A.

TESTIMONY ON HOUSE BILL 108

Keith A. Johnson
Operations Manager

Keith A. Johnson
1621 TONGASS
KETCHIKAN AK 99901

The Southern Southeast Regional Aquaculture Association (SSRAA) has taken a position opposed to the inclusion of salmon in the mariculture legislation - House bill 108.

This is based upon the perception of market competition with products of existing salmon fisheries, competition for sites, and a lack of recognition between salmon farming and ocean ranching. The nonprofit format for salmon ocean ranching is to provide benefits for commercial fishermen and all the other users of this common property resource.

Technical issues which have not been adequately addressed.

1. Exotic Species or Non-indigenous Stocks.

Current statutes prohibit the importation of exotic species and non-indigenous stocks. This is a good idea and it is imperative that it continues for the protection of wild stock salmon populations. The enforcement of this will require frequent site visitations and this carries a cost which has not been addressed.

2. Broodstocks

Alaskan chinook and coho stocks are basically wild fish and the genetics policy of ADF&G provides for the periodic infusion of wild gametes every three generations. Our coho and chinook stocks have not been genetically selected for growth in net pens, delayed sexual maturity, fecundity, and other characteristics suited for captive rearing.

Norway has a very active broodstock development program which began in the late 1960's and is now into its fifth generation. This program specifically selects for traits beneficial for netpen culture. The system is so sophisticated that smolts of these stocks command different prices depending on the experience of the grower.

Domsea Farms in Puget Sound has had a selection program for its coho salmon for about the same length of time.

I think it is naive to use the economics of these culture systems to model the growth of an industry in Alaska using stocks that are wild. There is a large lag time to attain culture efficiency. I don't see that this form of a broodstock development program will be funded with state dollars through the ADF&G genetics laboratory.

3. TBT Treatments

Previous teleconferences on House Bill 138 have dealt with the TBT treatments for aquaculture nets. The study commissioned by Sealaska on salmon farming specifically identified the need for an antifouling net treatment. However, we no longer have this available and no replacement is in sight.

Madam Chairwoman, I wanted to bring these technical issues before the House Resources Committee and thank the committee for their attention.



University of Alaska

Statewide System of Higher Education

OFFICE FOR FISHERIES

ALASKA SEA GRANT COLLEGE PROGRAM

April 17, 1987

Senator Fred Zharoff
Senator Richard Eliason
Representative Adelheid Herrmann
Alaska State Legislature
P.O. Box V (MS 3100)
Juneau, AK 99811

RE: Aquaculture

Dear Legislators:

Following the opportunity to sit in on the aquaculture hearing in Dillingham last week, and after hearing the discussion about the concerns for the interplay of traditional fisheries with culture fisheries, I obtained from the State of Maine copies of their statute on aquaculture and more importantly the regulations used by the Commissioner of Marine Resources for approving or disapproving culture leases. I enclose a copy for your information and reference.

Having been involved in research on both traditional and culture fisheries in Maine for the period 1975 - 1985, and having observed the changes and developments of both types of fisheries in Maine over that period, it is my impression that for the most part, both types of fisheries have been good neighbors. I believe that the sound regulatory basis found in these attachments has done much to accommodate the mutual growth of these fisheries. Over the same ten-year period that Maine fishermen have increased their share of the total commercial take in the Gulf of Maine, they have also become by far the most successful aquaculturists in the Northeast. The newest cultured product in the Northeast is salmon. It is under the regulatory process contained in these attachments that Maine has within this year approved 17 pen-rearing sites for salmon, and for which an additional 90 are being considered.

There are traditional conflicts between gear types in all fisheries, and those exist in Maine as well as in Alaska. However, compared to other uses of coastal Maine waters and shoreside facilities, e.g., industrial development, recreation and tourism, housing/commercial development at dockside, etc., aquaculture has been an ally of the fishery more often than an enemy or competitor. Both traditional and culture fisheries have a tremendous stake in shoreside access and environmental/water quality issues. As we look to the future of Alaska, I predict that these two segments of the fishery will become good neighbors by compari-

Senator Fred Zharoff
Senator Richard Eliason
Representative Adelheid Herrmann
April 17, 1987
Page two

son to others who will be joining the future development of this state. Just as we are all concerned with protecting the investment of our traditional fishermen now, I encourage us to find a harmonious way for aquaculture to develop so that when other pressures come to our coast later, we will have a sound legal and investment basis to protect the quality of our coast in the future.

I very much enjoyed the opportunity to meet all of you in Dillingham and look forward to working with you on a variety of fisheries issues. I hope the enclosed materials contain information which will be helpful to you in your deliberations.

Cordially,



R. K. Dearborn
Director

RKD:lbd
Enclosure

Alaska Mariculture Association

file

P.O. Box 020704
Juneau, AK 99802-0704
(907) 586-2032-
463-3600

Alaska Mariculture and Seafood Markets

Development of mariculture in Alaska could 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, sea farming will help Alaska take better advantage of the growing appetites of consumers for fish and shellfish.

Seafood consumption in the U.S. grew by 609 million pounds or 21.5 percent during the past four years for which statistics are available (1982-85), but nearly all of that growth came from increased imports of foreign products. In fact, imports of foreign fish and shellfish increased by 14 percent in 1985 alone. The U.S. fisheries trade deficit amounted to a staggering \$5.6 billion that year.

The growing consumer demand for seafood in the U.S. and throughout the world is being filled by aquatic farm products. Global aquaculture production in 1983 was 22 billion pounds and accounted for about 12.2 percent of the total world supply of edible fish and shellfish. Experts say aquatic farming production will reach 48 billion pounds by 2000.

At the same time, commercial fishing production in the U.S. is declining slowly and world fisheries landings have stabilized. World aquaculture production is expected to grow by 5.5 percent annually over the next 25 years, while fisheries landings are anticipated to increase by .5 percent annually.

Development of oyster, mussel and scallop farms would bolster Alaska's ability to offer a variety of high quality fresh seafood, while salmon farming could allow seafood distributors to offer year-round supplies of fresh Alaska salmon. A long-term strategy of supplementing commercial fisheries landings with supplies of cultured seafood is Alaska's best hope of remaining a major force in world markets.

Another important market consideration for Alaska in mariculture development is the potential impact of farmed salmon production in the state upon commercial fishermen. A close look at the discrete markets for Alaska's diverse salmon industry reveals that farmed salmon competes with a very small segment of our wild salmon production.

(more)

Farmed salmon sales in the United States are directed at buyers willing to pay a premium for year-round supplies of high quality fresh seafood. Canned salmon and lower-value fresh and frozen products (pinks and chums) do not compete with farmed salmon. The deep red flesh and stronger flavor of sockeye salmon provides a secure market niche for Alaska's most valuable salmon species.

The premium quality U.S. markets being penetrated by foreign farmed salmon are important to only a small portion of Alaska's salmon production. Alaska's troll salmon production which supplies the bulk of premium quality salmon marketed in the "white tablecloth" restaurant trade accounted for less than 4 percent of the total value of Alaska's 1985 salmon production.

While farmed salmon has had a dramatic impact on European markets for Alaska's premium quality chinook and coho catches, the effect in the United States is very unclear. A 1986 survey of U.S. seafood buyers by the Marine Advisory Program showed that distributors and brokers, by a three-to-one margin, do not regard farmed salmon as a substitute for frozen Pacific salmon. This is significant since the Alaska Seafood Marketing Institute estimates that only three percent of Alaska's salmon production is sold on fresh markets.

Also important to keep in mind is that demand in the U.S. for seafood is rising so rapidly the market appears to be prepared to handle tremendous new volumes of product. And, foreign production of farmed salmon will be streaming into the U.S. from the 13 other countries now involved in salmon farming, regardless of what happens in Alaska.

A Scottish marketing research report said farmed salmon provided slightly more than six percent of the world salmon supply in 1985 and is expected to increase its total world market share to about 14 percent by 1990. The Alaska House Research Agency in a 1987 report to the legislature said, "By 1990, total farmed (salmon) production is expected to dominate world trading in both fresh and frozen premium products."

The additional amount of farmed salmon an Alaska industry is likely to produce will have an insignificant influence on any market competition between world supplies of pen-reared salmon and Alaska's wild catch. If the premium quality markets for Alaska's commercial fishing salmon production is to be affected, then these impacts will occur whether or not Alaskans are involved.

The House Research report on salmon farming summed up the situation like this: "...the question of whether or not pen rearing of salmon should be allowed in Alaska misses the crux of the issue. Rather, the basic question is whether or not Alaska will use its comparative advantages as a producer of farmed salmon to compete in growing domestic markets."

Alaska Mariculture Association

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STRAIGHT TALK ABOUT MARICULTURE DEVELOPMENT IN ALASKA

- Q. I've been hearing a lot about mariculture development in Alaska. What is it all about anyway?
- A. Mariculture--or sea farming--is a rapidly growing industry throughout the world that produces food, pharmaceutical and industrial products. Interest in Alaska focuses on the cultivation of high value fresh products to supply growing premium quality seafood markets. The productive, unpolluted waters of Alaska's many sheltered bays and fjords are considered some of the best mariculture sites in the United States. These sea-farming operations offer tremendous opportunities in coastal Alaska to develop year-round jobs. This is particularly important in rural communities where there are few other realistic, stable sources of new local employment. Literally thousands of non-petroleum dependent jobs could be created.
- Q. What kind of jobs and how many will be created? Are we talking about another industry that will employ many non-residents and provide few local benefits?
- A. One of the most attractive features of mariculture is that it will offer year-round jobs which are likely to be filled with local residents. Many mariculture operations, particularly shellfish culturing, are ideally suited for family enterprises. Finfish farming is more likely to involve a range of businesses from family operations to medium sized farms employing up to ten people. These businesses also will create new opportunities for local processing plants, light industrial manufacturing of equipment such as nets and pens, and new markets for fish and fish wastes to be used in production of fish food. The increased exports of fresh seafood products also could help lower transportation costs for all Alaskans. The number of new jobs that could be achieved under development of the full potential of sea farming in Alaska is difficult to estimate. A 1987 study for the legislature projected "a total employment effect of about 1,920 jobs and a payroll of \$48.8 million" for salmon farming alone. This would provide more resident jobs than the present Alaska logging industry and nearly double the resident payroll.

Q. Isn't mariculture something new and untested?

A. Fish farming probably originated in China about 600 B.C. and oyster culturing thrived in ancient Rome and Gaul. Recent advances have led to an aquaculture explosion around the world. The federal government estimated the 1983 world production of aquaculture seafood at about 27 billion pounds; this is expected to increase to 48 billion pounds by the turn of the century. Commercial fishing landings are expected to remain relatively stable during the same period. This production from aquatic farms will become increasingly important to keep pace with projections for increased consumption of seafood.

Q. How do we know it will work in Alaska?

A. Alaska already has nearly a dozen sea farms producing oysters, one producing mussel farm, and a recently concluded agreement between the State of Alaska and Japan calls for the development of seven scallop sites on Kodiak Island to test the feasibility of scallop farming in Alaska. The agreement also covers a feasibility study of giant kelp (Macrocystis) farming in Sitka. Experiments conducted in Southeast by the state and federal governments have proven the feasibility of pen-rearing king salmon to marketable size in a competitive period of time.

Q. I'm concerned about salmon farming. Can you tell me more about it?

A. There currently are about 15 countries currently producing pen-reared salmon. Worldwide production of farmed salmon increased from 27 million pounds in 1981 to 97 million pounds in 1985. This is expected to grow to 314 million pounds by 1990. These dramatic increases are reacting to a strong and growing demand in the marketplace for fresh, high quality seafood. Seafood consumption is growing rapidly throughout the world, and no where faster than in the U.S. Americans ate 609 million more pounds of fish in shellfish in 1985 than they did in 1982 which represents a 21.5 percent growth in only four years. Since domestic commercial fishing production declined over the same period nearly all of the increased sales were enjoyed by foreign producers. In fact, America's seafood trade deficit increased by 14 percent in 1985 alone to climb to a staggering \$5.6 billion.

Q. Even though the market is growing, the increases in farmed salmon production sound like they might hurt our salmon fishermen.

Sales of farmed salmon in the U.S. are directed at markets for premium quality fresh seafood; the Alaska Seafood Marketing Institute estimates that only three percent of Alaska's salmon catch is sold on fresh markets. A 1986 survey of major U.S. seafood distributors conducted by the Alaska Sea Grant Program and the University of Alaska reveals that few buyers consider

farmed salmon to be a legitimate substitute for frozen wild salmon. Markets for Alaska's great volume of lower value salmon species (pinks and chums) and virtually all canned production clearly are unaffected by the high value farmed salmon. Likewise, existing markets for frozen sockeye salmon appear to be unthreatened. The only area of market impact on Alaska fishermen from farmed salmon is the "white tablecloth" restaurant trade which is primarily filled by troll salmon. Trollers accounted for about four percent of the value of the 1985 salmon catch. The relatively minor impact of farmed salmon on prices for wild salmon is underscored by recent figures from the Alaska Department of Fish and Game. The 1986 Alaska salmon catch of 123.5 million fish was worth \$385 million to fishermen or \$15 million more than value of the previous year's harvest of 144.6 million salmon.

Q. This information appears to suggest that farmed salmon is having little impact on markets for wild salmon, and there is a growing demand for premium quality salmon. How can we take advantage of this opportunity?

A. To take full advantage of the growing markets for premium salmon Alaska should move forward on two fronts. First, we need to more aggressively promote our premium quality salmon products, both fresh and frozen. A pilot project for a Premium Quality Seal Program was tested in 1986 by the Alaska Seafood Marketing Institute and Department of Environmental Conservation using frozen troll-caught salmon. If successful, this project could forge the way for the needed promotional effort. Secondly, Alaska should move forward with the pen-rearing of salmon so we don't miss out on this important opportunity for growth. Millions of dollars have been pumped into the Norwegian economy from 740 salmon farms and 250 hatcheries. This fact has not gone unnoticed by Alaska's neighbors--British Columbia and Washington State--who are aggressively promoting salmon farming. The market opportunities will be filled by others if Alaska fails to act.

Q. Have salmon fishermen in other countries become involved in salmon farming?

A. Yes. More than half (55 percent) of the applicants for Norwegian salmon farming permits between 1973 and 1978 came from a fishing background. The Prince Rupert Fishermen's Cooperative in British Columbia provides an excellent example of how fishermen can take advantage of fishing and farming. Groups of six to eight fishermen are forming partnerships with local entrepreneurs to finance and operate salmon farms. Cooperative members have 10-20 farms under development. The Prince Rupert Cooperative operates hatcheries and a feed mill to service farms of members and to sell surplus production to others. The cooperative processes and markets the wild and farmed production of its members. These fishermen also are experimenting with oyster and mussel farming.

Q. How about impacts on our wild stocks? Won't exotic diseases be introduced, and what about the potential for sea-farmed fish and shellfish to escape and intermingle with wild stocks?

A. The State of Alaska already has recognized the need to ensure that cultured fish and shellfish do not pose a health risk to wild stocks. The state has implemented the most stringent cultured fish health standards in the nation. These regulations apply to the existing private nonprofit salmon ocean ranching program and to mariculture operations. The impressive track record of Alaska's ocean ranching program demonstrates that salmon, other finfish and shellfish can be cultivated in public waters without risk to wild stocks. These proven regulations are a model for health management systems at mariculture facilities. Mariculturists are very concerned and careful about the prevention of disease because it is critical to the profitability of sea farms that production losses be very minimal. State government will play major regulatory and extension agent roles in ensuring that mariculture operators have adequate health management systems to maintain the health of the cultured species while protecting wild stocks. A 1986 study by the University of Washington concluded that disease from farmed fish "does not appear to be transmitted to the wild population." The study went on to say, "The potential consequences of the interbreeding of escaped and wild organisms, if any at all, are unclear. However, for salmonids at least, the potential magnitude of the problem would seem minimal" when compared to the impacts of present ocean ranching programs.

Q. Mariculture operations obviously require continual sources of brood stock. Where will it come from? Will it impact existing fisheries and enhancement programs?

A. Sea farms will require dependable sources of disease-free brood stock. During initial development of a salmon farming industry, brood stock will be acquired through purchases of surplus eggs from private or public hatcheries. This can be replaced by private hatcheries developed by salmon farmers. Some shellfish farms--mussels and scallops--will require the collection of brood stock from wild sources. Brood stock taken from these common property sources--hatcheries or gathering from the wild--will occur only if a surplus exists.

Q. I'm concerned about pollution. Will sea farms create accumulations of waste that will pollute our waters?

A. Clean water is a primary concern of mariculture operators as most cultured species are very susceptible to pollution. One of the reasons Alaska is so attractive as a mariculture center is its clean and pure waters. A recently completed study by the University of Washington of salmon farms and shellfish operations in Puget Sound said there appears to be little risk of adverse environmental impacts from mariculture. Only farms located in

areas of very poor circulation pose any danger of accumulations of organic rich debris threatening sea life.

Q. If mariculture is such a natural for Alaska and could be so beneficial why are there so few sea farms?

A. Alaska has lagged behind other areas primarily because of the strength of its natural fisheries resources; mariculture development has been pioneered in countries where the natural stocks have been depleted. The strong market demand for cultured seafood has sparked considerable interest in Alaska in recent years. Individuals and companies interested in mariculture in Alaska have encountered the normal problems facing the development of any new industry. In this case, those problems have been exacerbated by the lack of a state policy on mariculture development and the resulting void in direction to regulatory agencies. The many Alaskans interested in mariculture have found that permitting processes presently exist only for oyster farming.

Q. Does this mean Alaska needs to develop a new layer of regulations and bureaucracy to deal with mariculture?

A. No. Existing permitting processes can easily be adapted for mariculture licensing, and the industry will require little in the way of new government services. Mariculture supporters are primarily interested in getting the state to provide a regulatory climate conducive to development of stable, profitable businesses.

Q. Who will be able to participate in mariculture anyway?

A. Mariculture is open to everyone. No limited entry system or other artificial legal barriers have been erected. As mentioned earlier, there is great opportunity for many small-scale businesses, many of which will primarily require sweat equity investments.

Q. You've convinced me. How do I find out more about mariculture and get involved in this wonderful opportunity?

A. The Alaska Mariculture Association has been formed to advocate policies leading to the development of a stable, year-round mariculture industry, and to assist businesses develop into profitable operations. The AMA will provide members with information pertaining to the permitting and regulatory system, markets, sources of investment capital, quality assurance practices, research, suppliers and other issues of concern. Memberships start at only \$25 per year.

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Issues Raised by Commercial Fishermen

Disease

Some commercial fishermen contend that salmon farming would pose a threat to wild stocks by the transmission of disease. An examination of the impressive track record of Alaska's hatchery programs demonstrates that salmon, other finfish and shellfish can be raised in public waters without risk to wild stocks. The State of Alaska has implemented the most stringent cultured fish health standards in the nation. These regulations would apply to salmon farming operations.

The Alaska Mariculture Technical Work Group concluded in its December 1986 report that "mariculture would produce no further risk to wild stocks than the current ocean ranching program, provided state disease and genetic policies are followed."

An August 1986 study for the University of Washington (UW) made this observation: "While fish held in culture are likely to show more frequent appearance of disease than wild fish, disease does not appear to be transmitted to the wild populations."

Pollution

Studies of salmon farming and other mariculture operations has demonstrated that properly sited facilities pose little threat to the marine environment. In fact, divers under the world's largest salmon farm located in Puget Sound found that after ten years the impact on the ocean floor was no greater than if a dock had been located over the area.

"Field studies have typically observed little or no changes in water quality outside the culture structure in well-flushed areas," the UW study said. "Adverse effects would be anticipated only in areas of extremely limited flushing or very intensive culturing activity." The study also noted that sedimentation from salmon farms affect only the area immediately under the net pens.

The comments were supported by the Mariculture Technical Work Group: "Concerns that water quality would be degraded beyond the immediate vicinity of mariculture operations are generally unwarranted."

Genetics

Concern has been voiced that escapes of cultured organisms could cause genetic alterations to wild stocks. Considering the magnitude of ocean ranching programs in Alaska which release millions of fry to intermingle with wild stocks the danger posed by the few salmon that escape from farms pales in comparison.

The UW report addressed the concern like this: "The potential consequences of the interbreeding of escaped and wild organisms, if any at all, are unclear. However, for salmonids at least, the potential magnitude of the problem would seem minimal. For decades, fisheries management agencies have routinely been transferring hatchery-reared salmonids between river systems to improve commercial and recreational fisheries. The number of fish which might escape from mariculture is negligible in comparison."

TBT and Antibiotics

Fishermen also have raised the issue of the use of antifoulants such as tributyltin (TBT) and antibiotics in mariculture operations. The State of Alaska currently is not certifying permits for fish culturing operations utilizing TBT. The Alaska Mariculture Association supports this prohibition as well legislation recently introduced which would ban the use of TBT in mariculture operations.

AMA also believes that antibiotics should be administered by mariculturists only after gaining prior state approval and following well established state standards for use and quarantine of treated stocks.

Brood Stocks for Salmon Farms

Fears also have been voiced that the brood stocks needs of a developing salmon farming industry could detract from Alaska's existing salmon enhancement programs. House Bill 106 and Senate Bill 108 are designed to allow farmers to buy only surplus brood stock from public and private hatcheries. The sale of these surpluses could provide important operating revenue for the hatcheries. (See House Research Agency Report 87-B, "Aquaculture in Alaska.")

Discussions with state, federal and private hatchery operators indicate significant surpluses of eggs now exist. In a report to the Mariculture Technical Work Group, Bill Heard of the National Marine Fisheries Service Auke Bay Laboratory said, "Present performance and estimates of survival rates and other factors suggest that these hatchery programs could provide large enough surpluses of chinook and coho eggs to satisfy the initial needs of a salmon farming industry in Alaska."

Funding

Some fishermen also are concerned that the funding of governmental programs to support mariculture development would hurt existing programs serving the fishing industry. In this era of reduced oil revenues and massive deficits, many Alaskans are concerned about which government programs get funded.

While it is true that mariculture development will require the expenditure of state funds for processing permits and protecting public health and the environment, it also is true that economic diversification is one of Alaska's most important goals. The legislature must balance the need to continue important existing government services with the goal of creating new jobs and attracting new venture capital.

Use Competition

Another concern raised is that mariculture facilities could be located on traditional fishing grounds, important anchorages and in other areas where site competition or navigational problems would arise. Under HB 108 and SB 106, mariculture operators will go through the same process as anyone else for use of public tidelands.

The existing tidelands permitting process generally takes six months to one year to complete and involves securing approval from at least the Alaska Departments of Natural Resources, Environmental Conservation and Fish and Game, U.S. Army Corps of Engineers, and the Environmental Protection Agency. Planned operations must be found to be "consistent" with coastal zone management plans and are subject to local planning and zoning authorities. Tremendous efforts are exerted to gather public comment.

These and other processes are well established to deal with land use, or in this case tidelands, conflicts. Mariculture operators will take pain to avoid locating where site competition would arise as this creates an unstable business and investment climate. Mariculture poses no greater land use conflicts than other economic activities that might occur in public waters such as log transfer facilities, docks, marinas, marine-related tourism operations, oil and gas exploration and other forms of economic development.

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Alaska Mariculture and Seafood Markets

Development of mariculture in Alaska could 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, sea farming will help Alaska take better advantage of the growing appetites of consumers for fish and shellfish.

Seafood consumption in the U.S. grew by 609 million pounds or 21.5 percent during the past four years for which statistics are available (1982-85), but nearly all of that growth came from increased imports of foreign products. In fact, imports of foreign fish and shellfish increased by 14 percent in 1985 alone. The U.S. fisheries trade deficit amounted to a staggering \$5.6 billion that year.

The growing consumer demand for seafood in the U.S. and throughout the world is being filled by aquatic farm products. Global aquaculture production in 1983 was 22 billion pounds and accounted for about 12.2 percent of the total world supply of edible fish and shellfish. Experts say aquatic farming production will reach 48 billion pounds by 2000.

At the same time, commercial fishing production in the U.S. is declining slowly and world fisheries landings have stabilized. World aquaculture production is expected to grow by 5.5 percent annually over the next 25 years, while fisheries landings are anticipated to increase by .5 percent annually.

Development of oyster, mussel and scallop farms would bolster Alaska's ability to offer a variety of high quality fresh seafood, while salmon farming could allow seafood distributors to offer year-round supplies of fresh Alaska salmon. A long-term strategy of supplementing commercial fisheries landings with supplies of cultured seafood is Alaska's best hope of remaining a major force in world markets.

Another important market consideration for Alaska in mariculture development is the potential impact of farmed salmon production in the state upon commercial fishermen. A close look at the discrete markets for Alaska's diverse salmon industry reveals that farmed salmon competes with a very small segment of our wild salmon production.

(more)

Farmed salmon sales in the United States are directed at buyers willing to pay a premium for year-round supplies of high quality fresh seafood. Canned salmon and lower-value fresh and frozen products (pinks and chums) do not compete with farmed salmon. The deep red flesh and stronger flavor of sockeye salmon provides a secure market niche for Alaska's most valuable salmon species.

The premium quality U.S. markets being penetrated by foreign farmed salmon are important to only a small portion of Alaska's salmon production. Alaska's troll salmon production which supplies the bulk of premium quality salmon marketed in the "white tablecloth" restaurant trade accounted for less than 4 percent of the total value of Alaska's 1985 salmon production.

While farmed salmon has had a dramatic impact on European markets for Alaska's premium quality chinook and coho catches, the effect in the United States is very unclear. A 1986 survey of U.S. seafood buyers by the Marine Advisory Program showed that distributors and brokers, by a three-to-one margin, do not regard farmed salmon as a substitute for frozen Pacific salmon. This is significant since the Alaska Seafood Marketing Institute estimates that only three percent of Alaska's salmon production is sold on fresh markets.

Also important to keep in mind is that demand in the U.S. for seafood is rising so rapidly the market appears to be prepared to handle tremendous new volumes of product. And, foreign production of farmed salmon will be streaming into the U.S. from the 13 other countries now involved in salmon farming, regardless of what happens in Alaska.

A Scottish marketing research report said farmed salmon provided slightly more than six percent of the world salmon supply in 1985 and is expected to increase its total world market share to about 14 percent by 1990. The Alaska House Research Agency in a 1987 report to the legislature said, "By 1990, total farmed (salmon) production is expected to dominate world trading in both fresh and frozen premium products."

The additional amount of farmed salmon an Alaska industry is likely to produce will have an insignificant influence on any market competition between world supplies of pen-reared salmon and Alaska's wild catch. If the premium quality markets for Alaska's commercial fishing salmon production is to be affected, then these impacts will occur whether or not Alaskans are involved.

The House Research report on salmon farming summed up the situation like this: "...the question of whether or not pen rearing of salmon should be allowed in Alaska misses the crux of the issue. Rather, the basic question is whether or not Alaska will use its comparative advantages as a producer of farmed salmon to compete in growing domestic markets."

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Costs of Entering Salmon Farming vs. Fishing

One of the issues raised during discussions of mariculture development is the high cost of entering salmon farming. The Alaska Mariculture Association (AMA) believes the costs of establishing a salmon farm are comparable to many fishing operations in Alaska.

An economic feasibility study of salmon farming prepared for an Alaska corporation estimated the initial capital and operating costs of establishing a small (110,000 pounds annual production) at \$243,000. The study estimated the initial cost of a larger farm (440,000) at \$896,000.

According to the fisheries consulting firm of Garner and Williams, following are typical initial costs of entering the Bristol Bay salmon fishery, including the purchase of a new vessel and permit.

Estimated Costs of Entering the Bristol Bay Drift Salmon Fishery

Vessel, electronics, gear	\$120,000-200,000
Permit	130,000
Insurance (4% of vessel cost)	4,800-8,000
Groceries	2,000
Fuel	2,000
Transportation/miscellaneous	5,000
TOTAL	<u>\$263,800-347,000</u>

The cost of entering the Bristol Bay salmon fishery should be considered a mid-range fishing investment. The following examples of capital costs taken from the classified ads show a wider range on entry costs. The vessel costs are for used boats.

Vessel/Gear/Permit Costs for Some Alaska Fisheries

Power troller (44' wooden) with permit	\$87,000
Prince William Sound gillnet (28') w/permit	110,000
Cook Inlet salmon seine (36' fiberglass) w/permit	157,500
Steel seine vessel w/SE salmon permit	289,500
w/SE salmon & herring permits	589,500
w/False Pass salmon permit	500,000
AK Peninsula drift/longline (46') w/salmon permit	550,000
66' steel crabber/longliner w/refrigeration	350,000
53' steel seiner/crabber	400,000
108' steel joint venture dragger	1,950,000

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Mariculture Development and Alaska Processors

Alaska has some of the world's largest seafood processing capacities, but most of these plants remain idle or under-utilized for much of the year. Mariculture offers the opportunity to utilize these plants on a year-round basis, lowering overhead costs, providing more stable work forces and allowing Alaska companies to be more competitive in markets seeking continual supplies of fresh seafood.

Cultivation of shellfish--oysters, mussels, scallops--offer the opportunity for Alaska processors to diversify product lines, while salmon farming can provide a flow of fresh product during the off-season for commercial fishing. The year-round nature of mariculture also will help improve transportation services and lower the cost of moving product to the marketplace.

Mariculture also will provide a good market for fish food made from the waste generated at processing plants.

The complementary nature of mariculture to commercial seafood production is apparent in British Columbia where processors report an increasing flow of farmed salmon into existing processing facilities. A recent report prepared for the B.C. government said the B.C. Fisheries Council which represent major fish processors in the province "reported that a trend was beginning whereby many processing companies were joint venturing with fish farms to market their product, thereby using the excess capacity of existing plants. Government sources indicated that over 50 percent of farm salmon had recently been contracted for processing by the major unionized companies."

A recent article in the magazine Canadian Aquaculture points to a growing interest among processors in fish farming. "I think salmon farming could be the biggest thing in the seafood industry," said Harry Guenther of J.S. McMillan Fisheries. Guenther said the company plans to develop hatcheries to supply salmon farms, pick up grown fish from the farm sites, and provide processing and marketing services.

"Right now we all have underutilized production capacity," Guenther said. "Fish farming means these assets can be operated 12 months a year."

(over)

B.C. Packers, the largest processor in the province, also is processing and marketing farmed salmon. Explains company officer Vance Lipovsky: "B.C. Packers is in the business of selling fish. It's not important whether it comes off a boat or from a farm as long as it's of high quality."

Another example of the compatibility of fish farming and seafood processing comes from the east coast of Canada where Connors Brothers Limited has expanded into salmon farming. "We've taken an idle fish plant and turned it into a hatchery and feed plant," said a Connor Brothers spokesman. "Aquaculture allows us to keep employees we might otherwise have to lay off and provides additional employment opportunities as well."

The Prince Rupert Fishermen's Cooperative, B.C.'s second largest processing company, provides a clear example of the opportunities for both processors and fishermen. The House Research Agency reports that groups of six to eight fishermen are forming partnerships with local entrepreneurs to finance and operate salmon farms. Cooperative members have 10-20 farms under development. The coop operates hatcheries and a feed mill to service farms of members and to sell surplus production to others. The cooperative processes and markets the wild and farmed production of its members. These fishermen also are experimenting with oyster and mussel farming.

In explaining his support for mariculture development, one Southeast Alaska processor recently told the Alaska Mariculture Association that he wants to operate his plant, retain his local work force and supply customers seeking fresh fish on a year-round basis. Despite his efforts to buy all the troll salmon available during the winter fishery, he was able to purchase only 500 pounds of product the previous week. Naturally, the workers were sent home, the plant sat idle and the customers bought fish elsewhere.



CORDOVA DISTRICT FISHERMEN UNITED

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February 23, 1987

Rep. Dave Donley, Chairman
Labor and Commerce Committee
P.O. Box V
Juneau, AK 99811

Dear Rep. Donley:

Cordova District Fishermen United (CDFU) supports the orderly controlled development of shellfish and plant mariculture. Before mariculture is introduced into Alaska, however, a socio-economic study should be done. The study was requested by the United Fishermen of Alaska (UFA), CDFU, Prince William Sound Aquaculture Corporation (PWSAC) and recommended by the fisheries mini cabinet.

The development of salmon farming without the state studies, coastal community input and the recent land grab for fish farm sites in Canada have raised many eyebrows in Alaska. The people of Alaska have entrusted millions of dollars to enhance wild stocks. In 1975, the fishermen of Prince William Sound formed PWSAC and started the most successful hatchery and enhancement program in North America. Enhancement of wild stocks and ocean ranching is the best investment the State of Alaska has ever made. This tremendous investment is now paying for the state and the fishermen. As wild stocks are on the decline, hatchery production is kicking into gear.

PWSAC is one of seven private non-profit regional associations in Alaska and was created by the fishermen and the legislature to enhance salmon production. Prince William Sound fishermen passed a 2% salmon enhancement tax to financially support the salmon enhancement program of PWSAC. The 2% salmon enhancement tax received by PWSAC will amount to \$750,000 annually and will, in turn, partially support the program that will provide \$25 million annually to the commercial fisheries by the year 1995, at which time PWSAC will be providing over half of the commercial fishery revenues in Prince William Sound.

Page Two
Rep. Dave Donley, Chairman
Labor and Commerce Committee
February 23, 1987

It makes no sense to the CDFU Board of Directors to cut funding for state hatcheries, management of the commercial fishery and the enforcement division to start a new industry which will require millions of dollars to get started.

We are harvesting 130 million salmon per year and continuing to build our future salmon runs to obtain greater harvests. We are the fish farmers of Alaska and have made a big commitment to the State of Alaska by building new hatcheries, paying assessments, upgrading fishing vessels and putting out a better quality of salmon all the time. CDFU is concerned that the coastline, wild stocks, traditional fishing grounds and enhancement programs are protected before a fish farming bill is passed.

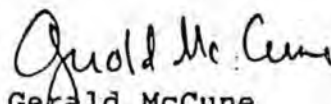
Ocean ranching is the biggest investment in the State of Alaska and the State should keep funding the enhancement programs. Commercial fishing has and always will be a major employer in Alaska, where fish farming will only employ a few.

Foreign companies in some cases are prevented from expanding in their own countries because of legislation protecting local communities. We have made our choice to protect the wild stocks and enhance the salmon runs in the State of Alaska. In five years, the State of Alaska could have five new hatcheries operating and generating revenues before the first pen-raised salmon ever hit the market. We need to keep investing our money to compete on the world market by freezing, labeling and storing our fish products in the State to be distributed all year round.

We urge you to take no action on legislation and development of fish farming mariculture until all concerned groups and communities have had a chance to respond to the impacts of fish farming.

Sincerely,

CORDOVA DISTRICT FISHERMEN UNITED


Gerald McCune
Vice President

GM/mb1

cc: Members of House Labor and Commerce Committee

CORDOVA DISTRICT FISHERMEN UNITED
RECOMMENDATIONS

1. Strict controls to prevent foreign corporations and banks from taking over fish farming in Alaska. This industry should be kept in the hands of U.S. corporations and citizens if Alaska wants the full benefits of fish farming to stay in Alaska.

2. A complete study of the environmental effects of salmon farming on wild stocks and coastline communities.

3. No use of fish farming as a trade off for wild stock fishery habitat lost.

4. Control development of fish farming sites.

5. Alaska keeps control of any aquaculture development.

6. Clearcutting at sites have quality control standards.

7. Limits on proximity of fish farms to other sites and density controls of fish in farms.

8. Regulations covering location of fish farms.

9. Studies of tidal flush out at fish farms.

10. Environmental impacts with respect to wild fish stocks.

11. Concerns of commercial fishing, sport fishing, recreation groups and coastal communities should be addressed.

12. Studies of Norway and Scotland controlled development of fish farming.

13. Continued state funding of PNP and FRED hatcheries to enhance the wild stocks and enhance salmon production by ocean ranching. This means leave the funding in Commerce for the state and PNP to advance our enhancement programs.

14. No importation of Atlantic salmon eggs into Alaska.

15. Research, health inspection and testing of facilities be set up to address concerns of the use of hormones and antibiotics, impacts of toxicants, disposal of dead fish and human waste, predator control and efficient feed practices. Studies have been done implicating the toxicant Tributyltin (TBT) as a human health risk and has recently been found in imported farm salmon. A ban of TBT in the State of Alaska should be made into law.

CDFU CONCERNS

1. Reallocation of State funds and services to fish farming.
2. A rush on salmon farm sites in Alaska without proper guidelines. Loss of traditional fishing grounds.
3. Predator control for fish farms be reviewed and identification of appropriate predator control methods.
4. Impact on water quality and marine environment.
5. Excess feed falling through netpens.
6. Good tidal flush-out sites.
7. Separation of fish farms and shellfish farms.
8. Navigational obstruction of fish farms and safe anchorages lost to the commercial vessels.
9. Conflicts with fish farmers and commercial fishing vessels.

Alaska troll sector fights farmed salmon impact

Fearful that farmed salmon will destroy prices and markets for Pacific troll-caught salmon, Alaska fishermen and processors are launching a campaign to promote the virtues of wild fish.

But the man heading up the campaign admits his efforts are largely a defensive effort designed to retain the market share that still exists for troll salmon.

"We've seen our market share for troll fish from Alaska and B.C. get smaller and smaller over the last five years," says Barry Lester, of the Alaska Troll Salmon Processors Association. "We've seen it reflected in prices.

From our own point of view as processors our goal is to maintain the markets we have and not see any decline. If we succeed, we should try to expand."

Lester's organization was formed during the spring in response to growing concern in the American troll industry about the impact of farmed fish.

Lester said in an interview Aug. 7 that farmed salmon has invaded traditional troll salmon markets in the European and New York smoked salmon industries. Second grade farmed salmon not suitable for restaurant sale is going into the smoker market as volumes of production rise.

Lester said the processors decided to take a positive approach. "We don't want to say it swims in its own waste and is filled with chemicals against disease. We're trying to talk about the virtues of wild salmon."

The program involves promotions with buyers in European

and New York markets as well as improved grading and quality standards on the grounds and in the plants.

Earl Krygier, spokesman for the Alaska Trollers Association, said his organization is pledged to support the campaign. "We've seen prices soften quite a bit, especially because our troll coho go to European markets. The Norwegians are definitely making inroads."

Krygier said Alaskan fishermen are solidly behind the moratorium imposed on salmon farm-

ing in Alaska and are reaping the benefits of their non-profit hatchery system. "It would be a real mistake to bring farms in here."

So far the processors have financed the campaign internally, but Lester hopes support will come from other quarters.

Continued erosion of the troll fishery could have "a devastating effect on the economy of Alaska," he said. "We're talking about a way of life. This goes beyond the economic situation to the very existence of fishermen."

B.C. production adds to farmed salmon glut

As trollers see coho and chinook prices tumble under the assault of farmed salmon, experts in Norway are predicting Atlantic salmon production there could soar to 150,000 metric tonnes by 1990.

Even B.C.'s farmed salmon production is shooting up, with harvests this year likely to hit 2,000 tonnes up from only 250 tonnes in 1985.

The forecast Norwegian production is a staggering leap from about 30,000 tonnes last year and double recent forecasts of 50,000 metric tonnes. The 1986 harvest should be between 63,000 and 68,000 tonnes.

Canadian federal and provincial fisheries departments have just begun to assess the impact of the farmed production on existing salmon sales from B.C.

Jim Fralic, aquaculture co-ordinator for the provincial agriculture department says B.C. farmed salmon production should jump to 2,000 tons this year, up from 250 in 1985.

He said declining prices may have an impact on the viability of B.C. salmon farms, which normally forecast their economic position based on the strong prices of the past two years. "We've always been of the opinion that prices for farmed fish would come down," he said.

"We hoped to reduce the cost of production at the same time by reducing the rate of natural mortality. There are indications this is happening as people get more experienced."

Troll prices dive to \$2.25

Trollers found fairly good fishing as the season opened June 20 but needed the volume to partly compensate for a major price cut.

Opening prices posted by B.C. Packers for spring salmon were \$2.20 for large, \$1.65 for medium and \$1.20 for small.

That was a 17 percent cut from last year's July 1 opening prices of \$2.65, \$2.10 and \$1.50. By June 23 this year the prices had moved up to \$2.25, \$1.70 and \$1.35, still far below the July 8, 1985, range of \$2.75, \$2.25 and \$1.70.

Without the protection of a minimum price agreement, troll fishermen are at the mercy of price-cutting processors, who are blaming Norwegian farmed salmon in European markets for the depressed prices.

By July 10, B.C. Packers had raised its prices to \$2.35, \$1.80 and \$1.40.

Coho prices were more stable, opening at \$1.30, \$1.20 and 85 cents this year, compared with \$5 cents, \$1.25 and \$1.40 in 1985.

Initial troll spring landings on the west coast of Vancouver Island were good, apparently more because of abundance than increased effort.

Spring returns to the Skeena were double the 10-year average for the first week in July, according to fisheries northern director Paul Sprout. That was in stark contrast to the sharp decline in sockeye returns

By July 10, the fisheries department could report total chinook catches of 25,567 in the northern area up to July 5 and warned that catch controls could be necessary if current catch rates continue.

Northern coho catches totaled 336,537 including 126,036 taken in the week of July 5 alone.

Chinook catches on the west coast of Vancouver Island also were running ahead of forecast. On July 7 the department closed the Big Bank to slow the harvest rate. By the end of the week ending July 5 the troll catch had hit 145,000, a figure that fisheries salmon coordinator Eric Kremer said could reflect both increased effort and increased abundance.

Coho catches to the same date were 614,800, also close to the 696,000 mark at which conservation measures could be imposed. Kremer said the department was very close to curbing the fishery.

Troll chum catches to July 5 were 64,100 and the Gulf troll catch had hit 36,250.

Sockeye non-retention regulations remain in effect.

Warnings of new difficulties in chinook markets were issued June 13 in Friday, the publication of the Pacific Coast Federation of Fishermen's Associations. Even before the season opened, some purchasers refused to sign market contracts.

According to the PCFFA, the California, Oregon and Washington fleet had to return to port in the second week of the season to negotiate a lower price. The prices were slashed from U.S. \$2.65, \$2.15 and \$2.05 to \$2.30, \$2 and \$1.75.

Sales were good until the first week of June when rumors of Norwegian farmed salmon being dumped on the market slowed sales. The story was false but the PCFFA quoted reliable reports indicating that Norwegian sellers dropped prices 50 to 75 cents a pound to obtain a market share after the fresh salmon season began.

Toxic chemical detected in farm salmon

A spokesman for B.C.'s ministry of the environment confirmed Nov. 7 that there are no controls in this province on the use of a toxic anti-fouling agent that has been detected in farmed salmon.

The substance is called tributyltin, or TBT, and is one of the most toxic substances known to man. Popular as an anti-fouling paint for boat bottoms, it has been banned in a number of European countries because of the damage it inflicts on the environment.

Now TBT has been detected in pen-reared salmon sold in U.S. seafood markets. According to *Fishing*, the publication of the Pacific Coast Federation of Fishermen's Associations, aquaculture products from Puget Sound and Norway purchased in public markets contained concentrations of .78 to .9 micrograms per gram of TBT.

TBT, sometimes used to treat netting used in salmon pens, can be toxic in levels as low as five parts per trillion. Two scientists working for the National Marine Fisheries Service found the substance in baby coho sold in public markets.

"We have no controls on the use of anti-fouling agents," B.C. environment ministry spokesman Michael Coon told *The Fisherman* Nov. 7. "We're in the process of collecting samples. We're trying to assess the problem. It's something we don't know very much about."

Evidently the pan-sized fish are not exposed to the TBT for long enough to die from its effects. The chemical concentrates over time in certain parts of the body.

Coon said the toxic effects of anti-fouling agents are a concern. "It's in everyone's interest to make sure fish aren't contaminated."

UFAWU secretary-treasurer Bill Precoption said the threat of TBTs is another example of the chaos surrounding the D.C. fish-farming issue. "We'll need more than a 30 day review to establish regulations to prevent this kind of damage," he said.

The two American researchers also studied the effect of low concentrations of TBT on juvenile salmon, concluding that exposure to low doses may increase susceptibility to disease.

Norway's salmon farms face tight regulation

Is B.C.'s aquaculture industry as tightly regulated as Norway's?

A day-long seminar on Norwegian fish farming sponsored by the Norwegian Trade Commission June 2 provided the answer: a resounding no!

Among regulatory programs now in place in Norway but barely under consideration in Canada:

- a ban on the use of hormones;
- controls on the use of antibiotics;
- compulsory quarterly inspection for disease;

- limits on corporate concentration, the proximity of farms to each other and the density of fish;

- clearcut quality control standards;

- regulations to ensure safe construction and mooring of pens with environmental controls now being codified in Norway;

- regulation covering the location of farms.

During the 1970s the government actually slowed development and halted the issuance of licences to allow the Norwegian industry to consolidate.

National aquaculture policy claims to protect wild fish

Canada moved a step closer to national aquaculture policy April 28 with an agreement by provincial and federal fisheries ministers to establish interlocking aquaculture legislation.

In a meeting in Winnipeg fisheries minister Tom Siddon told his provincial counterparts that the agreement "is an important step in furthering the development of aquaculture's great potential in Canada."

Although B.C. has no fisheries

minister, the province has begun developing similar federal-provincial agreements as a result of a First Ministers' Conference in Halifax in 1985.

The first federal-provincial arrangement, signed between Ottawa and Nova Scotia in March, gives the province the sole licensing authority for aquaculture enterprises as long as federal requirements pertaining to fisheries and related matters are satisfied.

The Winnipeg meeting adopted a statement of national goals and principles for the development of commercial aquaculture. The seven goals include:

- to encourage the development of commercial aquaculture in Canada in a manner that is complementary to the continuing development of the wild fishery;

- to increase the economic returns from "intensified production and harvest of high value, marketable species of fin fish, shell fish and marine plants";

- to improve the quality and expand the variety of Canadian fish products; and

- to encourage long-range stability in the country's fish production through diversity and continuity of supply.

The agreement gives the lead to the private sector in aquaculture development, but pledges government support in economic development and research.

Farm fish to hit wild salmon market

Salmon farmers will be training their guns on traditional wild salmon markets by the end of the decade, say Norwegian experts, and dropping prices could move the date even closer.

Growing production of farmed salmon both in Norway and B.C. has sparked fears among commercial fishermen that existing markets will be undermined by the new production.

This year buyers are predicting a sharp decline in troll chinook prices because of a glut in European smoked markets caused by Norwegian production. The Norwegian product already competes effectively on restaurant tables in Seattle and Vancouver, the heartland of wild salmon production.

But Norwegian marketing expert Karl Johan Ringstad told a Vancouver fish farming seminar June 2 that farmed production of coho and chinook will outstrip wild fish catches by 1990.

Production of farmed Atlantic salmon has already hit 42,000 tonnes, well above the worldwide production of 27,000 tonnes of chinook in 1985 and 43,000 tonnes of coho.

Virtually all Norwegian pro-

duction is exported, 30 percent of it to the United States. By the end of the decade, Ringstad predicted, farmed production will dominate the quality "white table cloth market" and take 15 percent of the fresh market.

"The challenge is to get into other segments of the market," he said. "In the last few months a price drop has reduced profitability in Norway. As the price of farmed salmon decreases it will open new markets. It can be delivered year-round."

In 1975 the smoked salmon market was dominated by wild production, he noted, but now the tables have turned. In the future, farmed salmon may be marketed alongside fresh meat and poultry. "I leave it to you to speculate how many tonnes are required to supply retail outlets even in California alone."

How low will the price go? "I wish I knew," Ringstad said, "but look at the price of chicken."

Farmed salmon is going head to head with chinook already. A later speaker quoted prices in Seattle of \$4 to \$4.25 a pound for chinook between six and nine pounds. Atlantic salmon was being delivered for between \$3.57 and \$4.37.

Ireland freezes foreign fish farms

Ireland has slapped a ban on foreign ownership of salmon farm leases to head off what officials feared could be a take-over of the country's industry.

"We could fill every bay on the Irish coast with salmon cages within two years if we allow the Norwegians in without restriction," a local official told *Fish Farming International*. He later corrected himself and said "non-nationals" rather than Norwegians.

The Irish Fisheries Department has announced that no further licences will be issued for salmon-farming projects in which nationals of countries outside the European Economic Community have a major stake.

A policy review is under way.

By contrast, there is absolutely no curb on foreign investment or control in B.C.'s salmon farming industry, which has a

large Norwegian element. Norwegian investors are attracted to B.C. by much looser regulation than they face at home.

Opponents of outside investment in the Irish industry claim that Norwegians control 60 per cent of the fishing farming industry in Scotland and have starved locally-owned farms of smolts from Norwegian-controlled hatcheries.

Angry fishermen are reported to have rammed salmon cages in Scotland in frustration.

Fishermen in Ireland are concerned about the implications of a Scandinavian proposal to raise farmed salmon in converted oil tankers. Even other farmers are fearful of its impact on the environment and markets.

Smolts for the scheme would come for Iceland, posing the threat of importing kidney disease to Ireland.

DFO aquaculture subsidy hits \$3 million in '85

Fisheries Department expenditures in support of the aquaculture industry totalled \$3 million nationwide in 1984-1985, says fisheries minister Tom Siddon.

In reply to a query from Sierra NDP MP Jim Fulton, Siddon said June 2 that DFO has been the lead federal department in fostering the development of aquaculture in Canada, focussing particularly on research and experimental development, the protection of fish from communicable diseases and the transfer and application of research results to industry.

In the year ending March 1985 the department spent \$2.5 million on aquaculture research,

up from \$1.7 million salmonid enhancement spending was frozen. A further \$500,000 was spent to assist aquaculturists to use the latest methods in rearing and harvesting.

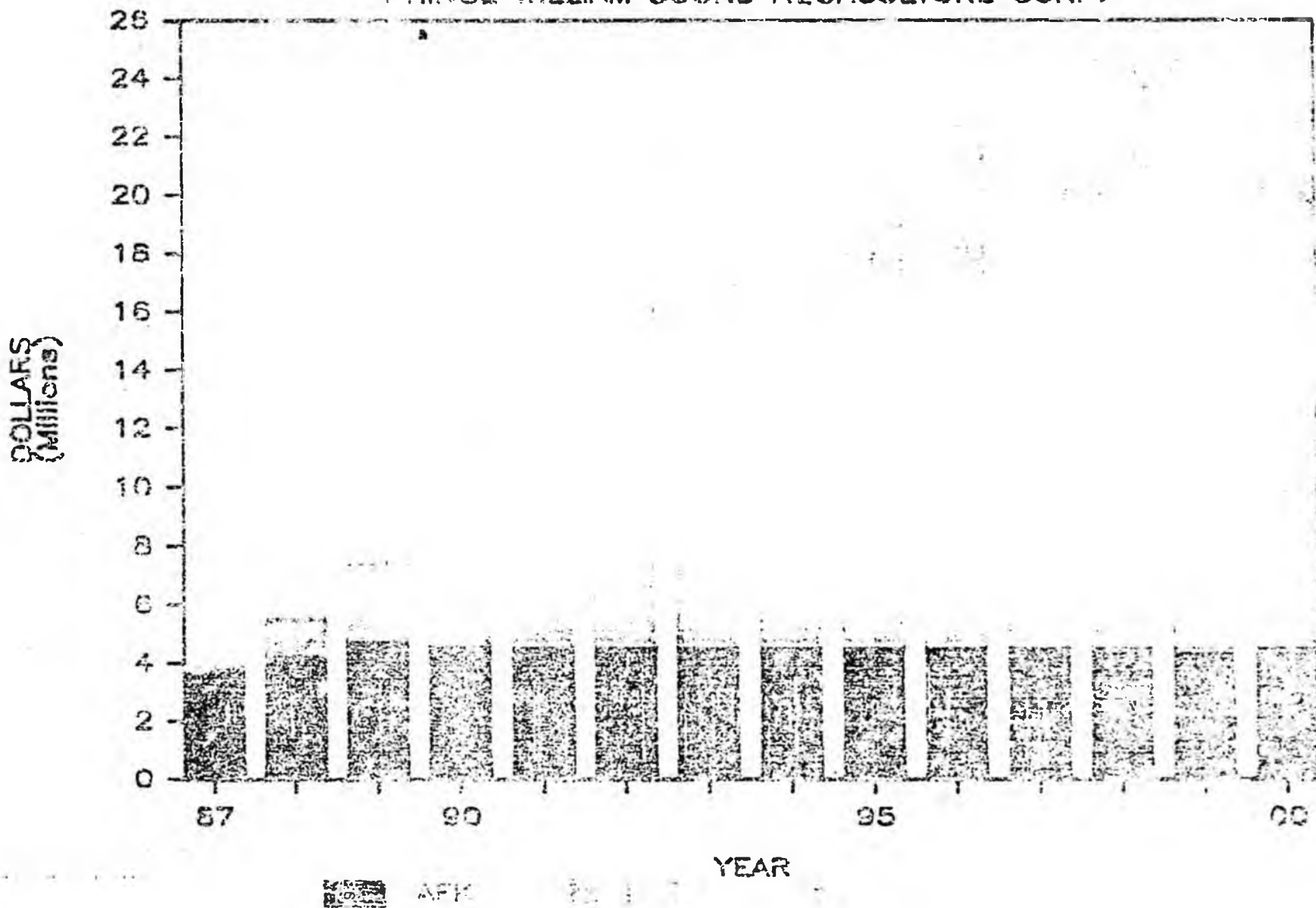
The amount spent on research has increased to \$2.5 million up to March 1985 from \$2.3 million during the previous year.

Siddon told Fulton that fish farmers are eligible for interest-free loans under the Canada B.C. Subsidary Agreement on Small Business Incentives. More than \$9 million of \$50 million loaned under the program went to fish farmers.

Siddon could not provide a breakdown on how much of the research money was spent on the Pacific coast.

TOTAL COMMERCIAL FISHING REVENUE

PRINCE WILLIAM SOUND AQUACULTURE CORP.



PRINCE WILLIAM SOUND SALMON HATCHERY PRODUCTION

HATCHERIES	1988 BROOD YEAR EGG NUMBER (millions)					FINAL EG CAPACITY (millions)				
	Pink	Chum	Coho	Chinook	Sockeye	Pink	Chum	Coho	Chinook	Sockeye
Armin F. Koernig	126	--	--	--	--	137	--	--	--	--
Gothen Island	76	40	1.0	0.12	0.9	211	111	1	4.0	30.0
Solomon Gulch	64	4	1.3	--	--	136	18	1	.3	--
Main Bay	3	85	--	--	--	25	100	--	--	--
Cannery Creek	39	--	--	--	--	111	--	--	--	--
Gulkana Springs	--	--	--	--	30.0	--	--	--	--	30.0
TOTAL	310	129	2.3	0.12	30.9	620	242	2	4.3	60.0

ARMIN F. KOERNIG HATCHERY
PRINCE WILLIAM SOUND, ALASKA
PINK SALMON PRODUCTION DATA

BROOD YEAR	FRY RELEASE	FISHERY HARVEST	HARVEST RATE	BROOD STOCK	HATCHERY HARVEST	TOTAL RETURN	TOTAL MARINE SURVIVAL
1975	1,000,000	1,000	10%	15,155	24,845	44,000	.4%
1976	11,010,577	--	--	40,432	114,188	154,620	1.4%
1977	16,950,784	275,000	50%	54,207	223,748	552,955	3.3%
1978	22,774,739	1,038,700	70%	108,061	346,728	1,493,489	6.6%
1979	21,500,000	1,358,937	60%	193,901	707,037	2,264,845	10.5%
1980	69,787,000	3,615,000	70%	164,545	1,054,732	5,134,363	7.4%
1981	70,118,000	2,820,220	80%	124,278	607,999	3,722,502	5.3%
1982	87,384,533	2,225,423	80%	186,431	387,146	2,300,000	3.2%
1983	76,746,000	3,772,962	75%	271,513	986,141	5,030,613	6.6%
1984	103,531,000	3,872,222	78%	277,706	814,072	4,964,000	4.8%
1985	112,527,515	--	--	--	--	--	--

SALMON FARMING POSITION PAPER

EXECUTIVE BOARD OF DIRECTORS
PRINCE WILLIAM SOUND AQUACULTURE CORPORATION
P. O. BOX 1110, CORDOVA, ALASKA 99574

Over the past twelve months the Executive Board of Directors of the Prince William Sound Aquaculture Corporation (PWSAC) had debated and discussed the pros and cons of establishing a salmon farming industry in Alaska. These discussions were prompted by the previous administration's apparent desire to explore the feasibility of developing the regulatory, administrative and legislative framework to implement a large scale salmon farming industry in Alaska. Considering the fact that legislation has been introduced to both the House and the Senate specifically for the purpose of legalizing the operation of salmon farms in Alaska, we feel that the time is appropriate to express our opinions and concerns to those individuals and agencies that will ultimately be responsible to formulate statewide policy on this issue. There are two major issues that we feel must be addressed and dealt with before the state takes any further steps towards legalizing the development of a salmon farming industry within state waters.

I. Long Term Social and Economic Impacts - Ocean Ranching vs. Salmon Farming

First of all, it is imperative that a long hard look be given to the relative benefit of ocean ranching vs. salmon farming in years to come. This should be done keeping in mind that success of an industry or undertaking be measured by the sum total of its contribution to the people, communities and industries of Alaska, both in terms of social and economic wealth.

The legislation that created both the private non profit hatchery program and the F.R.E.D. Division of AD&FG charged these programs with the responsibility of enhancing salmon runs statewide so that harvest levels in the common property fisheries would support and industry, meet the desires of sport fishermen, and satisfy the needs of subsistence fishermen. At first glance many people interpreted these programs as a "fish welfare subsidy" by which the state pays the bill and commercial, sport and subsistence fishermen thrive. In fact, after ten years of growing and developing, these programs are on the verge of becoming self-sustaining, cost efficient entities that will represent the backbone of Alaska's second largest industry.

The fishing industry is our largest employer and generates more dollars in ex-vessel value and final product marketing than any other industry in the state besides oil.

The ocean ranching programs in Alaska have undeniably stabilized salmon production in areas where unpredictable fluctuations in wild stock returns has kept the Alaska salmon industry from diversifying and growing due to the lack of a constant, ensured supply of product - a necessity in any resource related industry. Product diversification and progressive marketing strategies for pink and chum salmon have just begun to be explored. These avenues of development, aided by the consistent supply of wild and enhanced salmon we have realized in the early 1980's, have provided the salmon industry with its first long term, optimistic outlook in many years.

To try to express the value of Alaska's ocean ranching programs in terms of a cost benefit ratio is virtually impossible. The production of ocean ranched salmon provides fish to be harvested, jobs in the processing industry, product to be marketed and a consistent supply of product year to year. This assures lending institutions that investment in the industry is well-founded. As well as these direct benefits, there are the infinite number of multipliers of income generated to communities and support services throughout the state as the revenues associated with handling large volumes of salmon filter down.

This past year in Prince William Sound (PWS) the ADF&G estimated that 55% of the entire pink salmon harvest can be attributed to ocean-ranching production. The failure of wild stock returns to PWS was not predicted. Without the private non profit and F.R.E.D. Division enhancement programs, millions of dollars invested by fishermen and processors preparing for the coming season would have been lost. Raw fish tax revenues that supplement the city's operational and capital funding needs would have been greatly reduced. Ultimately the state would have had to deal with these losses in the form of subsidies or at least supplemental funding requests from the city. ^{By} 1992 PWSAC alone will generate better than \$20 million dollars in direct revenue to commercial fishermen. State investment and support of these programs to this point has been indispensable and demonstrates a great deal of foresight. To sell these programs short now would be a tragic mistake.

Specifically, it is the long term social and economic benefits that ocean ranching has provided that we feel are lacking within the proposed salmon farming industry. It is an undisputable fact that all ocean ranching production by the regional association and private non profit facilities is carried out on a zero budget level by the corporation involved. Incorporated under non-profit status as required by the enabling legislation and subsidized by commercial fishermen through a mandatory enhancement tax, the sole

purpose of this program is to produce fish for harvest in the common property fisheries. The only money retained by these corporations are used for operational funding and retirement of long term debt to the state's revolving hatchery loan fund.

In contrast, the salmon farming industry would operate as a strictly for-profit venture. According to the House Research Agency report "Aquaculture In Alaska" (H.R.A.-A.I.A.), most likely the major investment base in this industry would come from Scandinavian banks, similar to salmon farming development in British Columbia. Alaska has just begun to turn the tide of foreign investment in its fishing industry. If any one word stands out as a calling card to Alaska's fishing industry in the past five years, it is Americanization and what the implementation of the Magnuson Act has done toward that end. If the investment base in the salmon farming industry is for the most part other than domestic, it is safe to assume that the profits will be realized by other than domestic entities. If this is the case and it seems to be a worldwide trend in the salmon farming industry, why should Alaska invest it's resources (water and land) and it's money (resource agency monitoring and regulatory development) in salmon farming when it already has a program (ocean ranching) that it has funded that directly benefits its people and a thriving established industry.

Salmon farming is not a labor intensive undertaking. According to the House Research Agency Report Aquaculture In Alaska; Norway, the country that pioneered salmon farming directly employed only 2,000 individuals in 1984. This hardly represents an industry that could make a significant contribution to the job market in coastal Alaska. There are that many people employed directly by the salmon industry in the small town of Cordova in any given year.

The December 1986 issue of Fish Farming International reports in an article by the Irish Sea Fisheries Board (BIM):

"BIM's conclusion from this is that the imbalance of projected supply and demand by 1990 could cause reductions in prices and margins greater than farmers and traders presently envisage.

Lower margins will force the least efficient producers out of the industry and will deter potential small-scale new entrants.

The emphasis on greater efficiency will stimulate high standards of technology and training and a larger minimum-volume production unit.

Salmon farms based on integrated smolt and sea cage production are unlikely to be less than 500 tons a year capacity, notes the BIM report.

Investment needed for such a project would be around UK 22 million pounds and would be capable of earning 18 per cent internal rate of return.

But the investment is risky. A drop of ten per cent in real revenues through low prices would halve the rate of return. A stock loss say every five years (through disease or unusual weather conditions) would reduce this return to zero."

If this prediction by experts within the salmon farming industry proves true, it is clear that a developing industry in Alaska has little chance to establish a significant market share for a product that already shows signs of saturating the market for which it produces.

Further, the investment capital and the level of technology necessary to operate at the scale suggested in order to be competitive predicates an industry that holds very little hope for any vertical integration. This scenario is more likely to create high volume production salmon farms financed by large, multinational corporations that do nothing more than create a few local jobs and pass profits on to parent corporations.

Taking these facts into consideration is is hard to visualize this state government, confronted with extremely limited funding for existing programs, creating an industry (salmon farming) that will require extensive agency monitoring and regulatory development, while offering negligible long term social or economic benefits to the State of Alaska.

II. Salmon Farming: Funding and Operational Considerations

The House Research Agency report Aquaculture In Alaska suggests in its section on options for financing of salmon farms that repayment of capital construction loans from the private non profit aquaculture corporations to the revolving hatchery laon fund could be used to fund the development of salmon farming. On page 21 of the report the author states "The corners' ne of Alaska's aquaculture industry is the State's system of public (F.R.E.D. Division) and private non

profit (PNP) salmon hatcheries which are designed to augment the state's natural runs. As enumerated in Chapter One, by almost any economic measure (i.e., employment, income, total economic activity), aquaculture is probably the best renewable resource investment the state has made with it's oil wealth."

In the preceding paragraph the author speaks of the tremendous, wise investment the state has made in its ocean ranching program. Yet in the next chapter he suggests taking away the only available funding mechanism the PNP hatchery program has to continue investing in its own and the state's future.

This rationale remains a mystery to us. Perhaps the authors need to be reminded that large portions of those loan repayments are made with funds generated by commercial fishermen paying a mandatory enhancement tax. We suggest that if the House Research Agency had held public hearings as recommended by the Fisheries Mini Cabinet Aquaculture Advisory Committee, they would have been informed by the public that fishermen much prefer their enhancement tax funds be used to further the combined effort of the PNP program and the F.R.E.D. Division in traditional enhancement and ocean ranching endeavors rather than financing a fledgling salmon farming industry.

The Regional Planning Team concept, a combined effort of regional aquaculture corporations and the sport, commercial, subsistence and F.R.E.D. Divisions of ADF&G have produced Regional Salmon Plans throughout the state that define the enhancement needs of each individual region. These plans develop a list of priority projects that will help achieve the enhancement needs of their respective regions. The only mechanism for funding available to the private sector to achieve these goals is the revolving hatchery loan fund and it is imperative that it remains intact.

In the House Resource Agency report Aquaculture In Alaska the authors explain that if salmon farming were to become a reality both the genetics and disease control staff and lab facilities would need to be expanded. This represents only two of the many state programs in which both capital and operational funding would have to be expanded to support the salmon farming industry. From our point of view as a regional aquaculture association charged with responsible and beneficial enhancement development in PWS, this is where we find the greatest conflict between salmon farming and ocean ranching in Alaska.

Consider this fact: in 1987 the F.R.E.D. Division claims it will not operate its Cannery Creek hatchery in PWS. This facility cost the state \$4 million dollars in 1979. The hatchery can rear 111 million pink salmon eggs when filled to capacity. Because of a lack of \$180,000 in operational funding, the Cannery Creek facility will forego producing a return in 1989 of as many as 3.5 million adult pink salmon. It is very unlikely that there is any other situation in which the state could invest \$180,000 and produce direct revenues of \$3.5 million dollars, not to mention associated revenue to local communities through raw fish tax funds, local work force in the processing and shipping industry and support services region-wide that generate their income as large volumes of salmon are harvested in the region.

We are in a time that the state isn't even able to fund ongoing projects that for a relatively small investment can potentially produce significant economic gain. It seems irrational for the state to even consider the development of a new venture (salmon farming) that will not only require considerable state support but further, is most likely not even comparable to existing established programs in terms of its potential long term benefits.

In conclusion, we thank you for taking the time to consider our point of view on these issues. Most importantly, we hope you have gained a better understanding of how crucial the continued funding and development of our aquaculture programs are to Alaska's future.

Matthew Luck, on behalf of the
Executive Board of Directors
Prince William Sound
Aquaculture Corporation
February 24, 1987

CONSTANTINE - ALASKA IVORY TRADERS

GARRI R. CONSTANTINE

BOX 207

DOUGLAS, ALASKA

99824

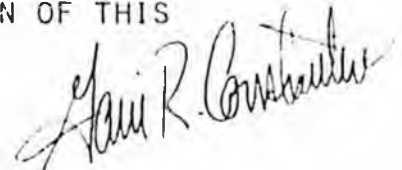
FEB 25 1987

CAPITOL 13
DEAR REP. DONLEY

CONCERNING HB 108 ADDRESSED BY YOUR BODY RELATING TO SEA FARMING, I, AND MY FELLOW FISHERMEN WHO ARE DISCOURAGED BY A STATE GOVERNMENT THEY FEEL IS PUTTING THEM OUT OF BUSINESS, STRONGLY URGE YOU LOOK VERY CLOSELY AT ANY LEGISLATION DESIGNED TO ENCOURAGE THE PRIVATE FARMING OF FISH, ESPECIALLY SALMON, ANYWHERE IN ALASKA.

IT IS NOT ALARMIST AT ALL FOR MYSELF, AS A POWER TROLL FISHERMAN, TO BE CONCERNED BY AN INDUSTRY WHICH UNDERSOLLS MY MARKETS WITH A CHEAPER, IF EVEN IN SOME OPINIONS, SUPERIOR PRODUCT, FLOODING AN ALREADY SEASONALLY SATURATED MARKET IN FRESH FISH. I DO NOT PROPOSE WE IGNORE THE SEA FARMING INDUSTRY ALTOGETHER, BUT THAT IT WOULD BE EXTREMELY UNWISE FOR THE STATE TO SANCTION A PRIVATE FOR PROFIT SALMON FARMING INDUSTRY WHICH WOULD UNDERCUT THE ALREADY DISTRESSED INCOMES OF A LARGE NUMBER OF ALASKA'S SALMON FISHERMEN.

TO CLOSE, I SUPPORT ALL PRIVATE NON-PROFIT HATCHERIES, AND ANY EFFORTS TO FARM SALMON FOR BROOD STOCK OR EGGS FOR THEM. I CANNOT SUPPORT ANY LEGISLATION DESIGNED TO COMPETE WITH ALASKA'S FISHERMEN OF FRESH, WILD FISH, AND HOPE IN YOUR DELIBERATIONS YOU WILL CONCUR. THANK YOU FOR YOUR CONSIDERATION OF THIS OPINION.



1024 WEST SIXTH AVENUE
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(907) 274-4031

ALASKA STATE HOUSE

OFFICE OF MAJORITY WHIP

CO-CHAIR
HEALTH, EDUCATION & SOCIAL SERVICES

LABOR & COMMERCE
SUBCOMMITTEE ON FOREIGN TRADE

WHILE IN SESSION
P.O. BOX V
JUNEAU, ALASKA 99811
(907) 485-3704



REPRESENTATIVE JOHNNY ELLIS

M E M O R A N D U M

TO: The Honorable Adelheid Herrmann and
✓The Honorable Sam Cotten, Co-Chairs
House Resources Committee

FROM: Representative Johnny Ellis *JE*

RE: HB 108: Further Hearings

DATE: April 8, 1987

I appreciate the amount of consideration you have given to HB 108 to date.

After hearing the concerns of the many user groups already involved in coastal activities, I have come up with a list of issues which the committee may wish to address in work sessions in the coming weeks.

Chief among the concerns expressed seems to be the need for a comprehensive permit and tide-land lease process. As far as I am able to determine, this is not a new concern. Applications for a permit or lease for any coastal activity must meet the standards of various agencies of the state and federal government. I am confident that mariculture operations can co-exist with many existing uses and are suitable for many areas of the coast. Statutory language can be developed which will provide direction to DNR for coping with the duration and renewal of tide-land leases for mariculture operations.

There also seems to be a lot of concern over the environmental effects of mariculture operations. I believe it would be helpful to bring Donald Weston, from Science Applications International Corporation before the committee via teleconference to discuss the environmental effects of mariculture on Puget Sound. He can be reached at (206) 442-0370 or (206) 543-5038. I believe our own Department of Environmental Conservation may also be able to provide some material on this topic.

Memorandum re: HB 108
April 8, 1987
Page Two

Many people voiced their concerns over the possibility of disease outbreaks within growing pens and the potential of a disease being transmitted to wild salmon stocks. This issue could be addressed by Bill Heard, a biologist from NOAA with considerable expertise in fish pathology.

Finally, the effect of Alaskan pen-reared salmon on the price of wild Alaskan salmon is a matter of considerable concern to Alaska's traditional fishermen. Economist Robert Logan from the University of Alaska, Fairbanks has created an economic model which addresses this issue and which he is willing to discuss with us at the committee's convenience.

I am eager to have these issues weighed, debated and resolved within the Resources Committee. Please let me know if I may assist the committee in any way.

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ALASKA STATE HOUSE

OFFICE OF MAJORITY WHIP



CO-CHAIR
HEALTH, EDUCATION & SOCIAL SERVICES

LABOR & COMMERCE
SUBCOMMITTEE ON FOREIGN TRADE

REPRESENTATIVE JOHNNY ELLIS

M E M O R A N D U M

TO: MEMBERS OF THE HOUSE
FROM: REPRESENTATIVE JOHNNY ELLIS *JE*
DATE: FEBRUARY 17, 1987
RE: HB 108

HB 108 is designed to remove the regulatory and legal impediments stifling the growth of a sea farming industry in Alaska. I believe this legislation will become one of the most important steps this Legislature can take to help create new jobs for Alaskans and stimulate non-petroleum dependent economic growth.

Mariculture--or aquatic farming as it is referred to in the legislation--is growing rapidly throughout the world. In 1983, cultured seafoods represented about 12 percent of the global production of fish and shellfish or about 22 billion pounds.

This phenomenal growth is keeping pace with increases in seafood consumption throughout the world. No where have those increases been more apparent than in the United States. Americans ate 609 million pounds more seafood in 1985 than they did in 1982. This amounts to a 21.5 percent increase in consumption in only four years.

Meanwhile, commercial fishing landings by U.S. fishermen declined over the same period of time. This situation has resulted in tremendous increases of imports of foreign products and a startling seafood trade deficit for the United States.

The unpolluted, productive waters of Alaska's many sheltered bays and fjords are considered ideal for mariculture development, and the potential for seafarming in Alaska is staggering. Unfortunately, the State of Alaska has failed to

adopt a policy favoring mariculture development. As a result, Alaskans interested in sea farming find it impossible to obtain permits for most mariculture activities.

House Bill 108 removes administrative barriers to mariculture development and will allow the industry to grow in an orderly fashion. Importantly, this legislation also provides strong protections for our vital wild stocks of fish, shellfish and aquatic plants. The bill provides sea farmers with no shortcuts in our existing environmental regulation process or priority over other users of the tidelands.

I have worked closely with the private sector to develop this legislation, and I am pleased to tell you that the bill asks for no state loans or subsidies. Sea farmers want mariculture to be industry driven so it responds to the marketplace and not the level of government spending.

Some of you wonder why a legislator from Downtown Anchorage is so interested in mariculture development when it is quite likely that the nearest sea farm is likely to be located many miles from my district. First, I believe it is vital to all Alaskans that we decrease our overall dependence upon a single source of revenue. Secondly, Anchorage's service-oriented economy will receive significant benefits from economic development in our coastal areas.

I look forward to working with you on this important piece of legislation, and invite all of you interested in becoming involved to join as co-sponsors of the legislation.

February 25, 1987

Mark Kandianis
P.O. Box 3366
Kodiak, AK 99615

The Honorable Dave Donley
Chairman
House Labor and Commerce Committee
P.O. Box U
Juneau, AK 99811

Dear Representative Donley:

I am writing in regard to the aquatic farming bill presently being considered by your committee. I have been fishing for scallops for the past 20 years - the last seven in Alaska as captain of a 100' scallop vessel. I have been observing the activities of the cooperative aquaculture project taking place in Kodiak and would appreciate the opportunity to make these observations.

In order for the work of the project to be useful, a permit system must be in place in Alaska. I fully support the development of an aquaculture industry here. It has the potential to be a profitable addition to my scallop fishing business and one in which I am familiar with the product and the markets. With no licensing system, the State is roadblocking an industry that has been very profitable in other areas of the world. Japanese farmraised scallops have been one of my prime competitors in the last two years; if I could offer my own along with wild scallops, I could recapture the market lost to that type of buyer and perhaps keep my price stabilized by keeping supply consistent. In any event, the production of scallops by aquaculture enables the producer to take advantage of favorable market conditions and personal financial needs.

I urge you to consider the aquaculture legislation favorably. If unprofitable, there will be no concern over allocation of bottom. If profitable, it is shortsighted to prevent its conception as an industry.

Thank you for the opportunity to comment.

Sincerely,

Mark P. Kandianis

Mark P. Kandianis

TESTIMONY ON AQUACULTURE
BY RICH DAVIS
HOUSE LABOR AND COMMERCE COMMITTEE
2/25/87

FEB 28 1987

I represent the deep concerns, and views of the individuals I have spoken with regarding fish farming in Alaska. Each of these people, some of them fishermen, some not, asked me to tell you of their opposition to fish farming in our State. They agree with your desire to promote mussel, shellfish, and aquatic plant farming. We see little chance of economic impact, and are all for it as long as no hazards are posed to our delicate coastal marine environment.

There is no blossom waiting to open the minute fish farming is turned loose in Alaska. If you lawmakers give this industry a green light, we can only guess at its chance of getting off the ground. Economic conditions are already stacking against fish farming in our State. You must consider: the cost of the fish, farming equipment, transportation cost, cost and availability of feed, Alaska's distance from the market, and the imminent overabundance of pen raised fish bound for market in 1990. No one can say the market will even accept the forecasted glut of pen raised fish headed toward the consumers. An overabundance of salmon spells lower prices for the entire salmon industry, fishermen included - don't forget this!

A flood of information is before you regarding fish farming. One piece states the the concerns of Alaska's commercial salmon fishermen "may be somewhat unwarranted"; there is no authority in this statement, only the author's opinion.

Some proponents of fish farming legislation have played down, and tried to cover up the imminent economic impact of farmed fish on our commercial salmon fisheries. They admit wild salmon prices could be affected by increased pen raised fish production. The salmon fishermen are sure that prices for their product will be reduced if fish farming is allowed and encouraged to take root here.

As elected Representatives, you have the responsibility to act on the concerns of the people you represent, not to make decisions that adversely impact them! If you encourage this new industry and it sinks, out the window goes money spent by our State for regulation, enforcement, licensing, and management - effort and lots of money that you lawmakers know we can't risk wasting.

This State spent years and millions of dollars building, managing, and promoting Alaska's wild, natural, and renewable salmon resource. Nearly 45,000 people worked in Alaska's \$414 million 1986 commercial salmon harvest. It's estimated better than half these people are Alaskan residents. Remember also their dependant families. You Legislators can't ignore the concerns and desires of that great segment of our population. If the fishermen of this State say they are facing crippling economic impact, then you had better do all you can to protect their industry.

There is a chance that our commercial salmon industry could be economically displaced with your vote on this legislation, and we're warning you not to take that risk. Don't take a gamble that may further reduce Alaska's struggling economy. You want no part in undermining our commercial salmon industry.

Stand up for Alaska's fishing industry! Prohibit fish farming until the predicted pen raised fish glut passes, and the economic and environmental consequences are facts, not suggestions and conjecture. You will be called dedicated leaders and be respected by us all.



COMMERCIAL SALMON FISHERMAN



UNITED FISHERMEN OF ALASKA

Jack Cadigan
Executive Director
907-586-2820
1-800-478-FISH

*Chuck Wagon
re suggested
amendments*

Mr. Chairman and Members of the Committee:

My name is Bob Blake and I am here to express some of the concerns the United Fishermen of Alaska and the Cordova District Fishermen United have with the CS for House Bill #108.

Our basic concerns are outlined in the United Fishermen of Alaska's Resolution 87-3, passed unanimously by the Board of Directors at their annual meeting the first week in February, which is:

Keeping in mind that Alaska has 90% of the U.S. salmon production and 43% of the world salmon production, excluding pen-reared salmon, you can understand our anxiety.

We raise the following issues:

1. (a) Disease related problems have the potential of affecting existing stocks of wild salmon which are fully utilized by sport, commercial and subsistence users, or are needed for PNP brood stock or spawning escapement.
(b) Potential of polluting the quality environment needed for continued production of wild stocks of salmon, sea run trout and other aquatic plants and animals by use of antibiotics in treating pen-reared disease problems, surplus fish food damaging the bottom dwellers around net pens, restriction of water current movement because of net pen placement, human waste and garbage contamination, etc.
(c) Genetic alterations are a potential concern; after several cycles of altering and domesticating, pen-reared salmon, upon escaping, could in turn effect the gene pool of wild stock.
(d) What are the impacts of hormones, toxicants (ie. TBT) antibiotics, etc., on the natural environment, animals and the human food chain?
2. Where do the smolt or eggs come from to start up a Mariculture industry?
 - (a) Certainly not from imported stocks - the history of importing smolts is laden with disease problems.
 - (b) Wild chinook in Southeast is still in the build-up stage to help fulfill the U.S./Canada Treaty obligations.

Southeast hatcheries are not up to maximum capacities to meet that obligation either, and even if they are close, what about the ever increasing needs of the sportfish, commercial and subsistence common property users? Chinook and coho stocks in Southeast are fully utilized under the existing fisheries and industry. The same goes for Cook Inlet and Prince William Sound, any surplus spawning escapement is currently utilized by FRIID and SFP hatcheries for supplementing existing user group fisheries. All the chinook and coho stocks West of Cook Inlet are also fully utilized by existing fisheries or escapement.

3. Funding problems that need to be addressed:

F.R.E.D. Division of the Alaska Department of Fish & Game would be required to bear inspection costs. They would have to develop a disease control and management program and provide all types of associated services. Where's the funding for these additional costs going to come from? The F.R.E.D. Division is faced by the proposed FY78 budget to close down four F.R.E.D. hatcheries and reduce its other programs, all of which are valuable to existing users.

D.M.C. will have to be involved with all the environmental research and monitoring. While that agency's budget isn't proposed to be cut this year, they simply don't have enough funding to monitor existing problems (even the Alyeska Pipeline Terminal).

D.N.R. is way behind on existing work loads of permitting, land use planning, etc. That agency's budget is being cut even further.

D.C.E.D. is set up in this legislation to be a lead-type agency. They are taking a 26% budget cut, I believe, for FY78.

None of the agencies involved are able to carry out their current legislative mandates and program needs for their existing respective user groups. Shouldn't their budgets be brought up to levels to meet the current needs of existing industries and user groups before the Legislature imposes more changes on them? I can appreciate the Legislature's desire to enhance the State's economy, but not at the expense of reducing the economic potential of existing industries.

4. Physical displacement of traditional users: Commercial fishermen fear disruption from traditional fishing grounds and anchorages, as well as the hazard to navigation salmon farms will pose. We have to assume that sport fishermen, recreational boaters and tourists will feel the same way. Waterfront property values could also diminish, depending on the siting of such farms. Tourism is a blooming industry in this State. People come to Alaska to find esthetic values, to photograph pristine environment, and to have the ultimate experience sportfishing and hunting, not to see salmon farms scattered all up and down the coast in all the favorite fishing spots and anchorages.

5. The PNP and State hatchery program has been stated as the best renewable resource investment the State has made with oil dollars. It's a shame that the State did not make more money available for this venture during times of plenty, because the program collectively has not come close to achieving its potential throughout the State. Our hatchery system supplements the wild stock resource for the common property fishery. Every person in this State has access to the hatchery-produced fish if they so desire, via commercial, sport or subsistence fishing. This venture in hatchery production has created many more jobs for State residents and helped maintain the economic viability of the commercial and sport fishing fleets in much of the State. In Prince William Sound, for instance, the commercial fishermen opted to increase the salmon resource rather than eliminate many of the fishing permits. We have done this through ocean ranching and it works. Our Prince William Sound hatcheries are also producing chinook and coho for sport fishermen and tourists. If the State is ever again going to invest in the salmon industry, it should invest in the proven commodity, and not in potential disaster. The existing industry provides many, many thousands of jobs.

6. Funding: As stated earlier, the State is not willing or able to fund the four agencies that will have to be involved with this Mariculture legislation to a level that will allow them to adequately manage their present obligations. This needs to be rectified first. Both the Enhancement and Commercial Fishing Loan programs have been mislabeled "revolving". The principle and the interest from both programs go directly into the General Fund upon repayment. Both loan funds are literally out of money unless the Legislature makes an appropriation to them. Some of the loans from these programs have been transferred to AIDA to help finance things like the Red Dog Mine. These loan repayments go directly to AIDA, not to the General Fund. It might be a consideration of this Committee to look into this "non-revolving" situation before there is no money left for reinvestment in the State's largest non-oil industry.

7. What are we trying to accomplish with pen-reared salmon? Are we trying to create a cottage industry, a "mom and pop" show up and down the coast, or are we trying to develop an environment for multi-national investors to exploit to the fullest by providing a few jobs and taking home the profits (if there are any) at the expense of several existing industries? If the State is desirous of maximum substantial benefit to the State itself, or its residents, it will have to make a tremendous financial investment in order to pull it off. Norway had to do it because its rural coastal communities were dying up from lack of fisheries resources to sustain their economy. Norway also had very little natural "salmon" resources to worry about or consider affecting. Alaska's present economic situation and flourishing salmon stocks do not mandate such a move. Besides, it does not appear that the limited size structure restricted by Norway to accomplish their goal will be economically viable in Alaska. Without the money to do it in-state, the only logical option would be to allow outside investors to come in, bring their expertise and equipment with them, and control an industry that will provide just a few local resident jobs while competing for General Fund dollars and services at our expense. In my "logical" scenario, it would be prudent for the state to carefully analyze the actual value gained for potential costs incurred. As commercial fishermen, we realize our direct impact of pen-reared salmon on Alaska wild salmon. While we don't feel that pen-reared will ever really replace our harvest, it is already having an impact and will continue to feel this year with or without Alaska being involved. If that Committee is intent on pursuing H.R. 5103 in the present form, then it should consider including in the legislation a time frame during which pen-reared salmon could be sold in order to not directly compete for market space during the wild salmon seasons.

Other suggestions are:

- Page 2, Line 20: Change <may> to "shall".
- Page 3, Line 18: Change <may> to "shall".
- Page 3, Line 29: Change <may> to "shall".
- Page 4, Line 2: Delete <substantially>.
- Page 4, Line 4: Delete <substantially>.
- Page 4, Line 9: Change <shall> to "may".
- Page 4, Lines 21 & 22: Delete both lines.
- Page 4, Line 27: Include after Board of Fish, "except that no finfish or eggs may be imported into the State of Alaska for the purpose of supplying stock to an aquatic farm or hatchery."
- Page 5, Line 13: Change <may> to "shall".
- Page 6, Line 11: Delete <and upon reasonable notice>.
- Page 8, Section 4, Lines 3 thru 10: We strongly recommend deletion of this Section and insert that the Board of Fisheries be involved with the permit process.
- Page 11, Line 7: Change <must> to "shall".

As the U.F.A. and the C.D.F.U. support the careful and controlled development of shellfish and plant mariculture, and we are not desirous of slowing down the process by which the existing shellfish farmers can continue, or new farmers becoming involved, we suggest that this Committee split the two issues into two separate bills, thus allowing shellfish legislation to proceed with little or no resistance.

We appreciate the opportunity to speak on this issue during its past hearing and will be providing more information and comments in the future. Thank you.



UNITED FISHERMEN OF ALASKA

Jack Cadigan
Executive Director
907-586-2820
1-800-478-FISH

UNITED FISHERMEN OF ALASKA

RESOLUTION 87-3

WHEREAS in 1985 the United Fishermen of Alaska requested the State of Alaska to perform a thorough study of the biological, economic and sociological problems and potentials of salmon pen rearing in Alaska, but this study has not yet been undertaken; and

WHEREAS the UFA supports the careful and controlled development of shellfish and plant mariculture; and

WHEREAS the development of the salmon farming concept of mariculture will adversely affect the fishermen and the most successful hatchery and enhancement program in North America by: (1) reallocating State funds and services; (2) competing with markets for wild salmon; (3) preventing water and land use of traditional fishing, hatchery, enhancement, and smolt rearing and release sites; (4) increasing the potential disease contamination of the wild stock; and

WHEREAS no realistic fiscal note has been produced to identify the cost to the state incurred by the management of the proposed activities;

NOW THEREFORE BE IT RESOLVED that the Board of Directors of the United Fishermen of Alaska urges the State of Alaska to take no action on legislation and development of salmon farming mariculture until such time as the aforementioned issues of concern are addressed through private and public forums.

Robert H. Blake

Robert M. Blake
President

2/6/87

Date

MAR 16 1987

March 3, 1987

The Honorable Adelheid Herrman
HOUSE OF REPRESENTATIVES
P. O. Box V
Juneau, Alaska 99811

Dear Representative Herrman:

I am 23 years old. I was born and raised in Alaska. I have commercial fished for the past 6 years, as a deckhand in both the Bristol Bay and Cook Inlet salmon fisheries, and I have longlined for halibut. I am writing to voice my support of House Bill 108, the mariculture bill. As a young Alaskan, I seek employment in a field that will provide me with security and a sense of permanence. More specifically, I have reached the point where I wish to obtain my own commercial fishing operation, yet, prohibitively high start-up costs prevent me from doing so.

The limited entry system has created an economic barrier that prevents many Alaskans like me from participating in the salmon fishing industry in an owner/operator capacity. It requires anywhere from \$100,000 to \$500,000 to break into today's salmon fishery at a successful level. Over half of this start-up cost derives from the exorbitant value placed on limited entry permits.

Traditionally, Alaskan fishermen have been a symbol of independence. In the past, they have prided themselves on being their own bosses, on making a living from Alaska's waters. Recently, however, the economic barriers erected by limited entry have created an exclusive fishery that excludes many Alaskans, both white and native, from participating in a traditional livelihood. Young, aspiring commercial fishermen have been denied access to a natural resource that is the common property of all Alaskans. Currently, over 20% of all limited entry salmon permits are held by non-residents. Additionally, most fish processing plants are owned and operated by Seattle-based firms. Obviously, with such a high percentage of nonresident fishermen and processors, much of the revenue generated by Alaska's salmon fishing industry leaves the State. Alaska's commercial salmon fishery no longer offers

The Honorable Adelheid Herrman
March 3, 1987
Page 2

an alluring sense of independence. Since going limited entry, the salmon industry has transformed into an economically exclusive enterprise. For me, and many like me, the commercial salmon fishery is a closed door.

A second problem which plagues Alaska's salmon fisheries is a short, but intense fishing season during which huge volumes of salmon must be harvested and processed in a matter of weeks. High volumes of fish result in a poor quality product. The fish are thrown about, are walked upon, and in some instances, remain aboard tenders for as long as 48 hours without being processed or refrigerated. Despite precautionary measures taken in transporting and processing the product, salmon are severely bruised by seine nets and gill nets before they are even removed from the water. Because of poor quality, 97% of Alaska's salmon are sold on the frozen and canned market.

A mere 3% of Alaska's salmon are sold on the fresh market. Alaska's fresh salmon production is caught by a handful of Southeast troll fishermen whose low volume fishery enables them to maintain a high standard of quality. As a result, they are rewarded with a sale price that is as much as four times the price of salmon destined for the canned market.

Fish farms will produce a similar, premium product and will cater to this same fresh market. Only fish farms will be able to supply fresh fish on a year-round basis. Southeast troll fishermen contend that fish farming in Alaska will undermine their markets. Such is not the case. Southeast troll fishing cannot possibly meet the rapidly growing demand for fresh salmon. Presently, demand is so great, yet U.S. production is so low, that the United States must import the majority of its fresh salmon from salmon farms in Norway. Secondly, the southeast troll fishermen will not be displaced by Alaskan fish farmers. Instead, foreign suppliers will be forced out of U.S. Markets as Alaskan fish farms begin to fill the demands of a fresh market.

Fish farming is an industry that is taking root throughout the world. Norway and Japan, world leaders in fish farming, already have developed worldwide markets for

The Honorable Adelheid Herrman
March 3, 1987
Page 3

pen-reared salmon. France, New Zealand, Great Britain, Chile, and Canada are rapidly following suit. Although many commercial salmon fishermen sincerely believe that salmon farming in Alaska will destroy their livelihood, this is not the case. Japan, for one, has shown the opposite to be true. In Japan, fish farmers and commercial fishermen coexist successfully. And, closer to home, Washington state has demonstrated similar cooperation between farmers and fishermen. Besides, if commercial fishermen's concerns over competition from Alaskan fish farms were truly warranted, then should they not be equally concerned about competition from foreign fish farms? The fact is, the rest of the world will develop mariculture industries regardless of what Alaska decides to do. Fulfilling this country's fresh market through pen-reared domestic salmon rather than through pen-reared foreign salmon will ultimately secure this country's salmon markets for Alaska's commercial fishermen and fish farmers alike.

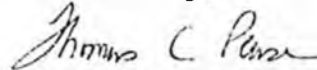
Finally, fish farming can bolster Alaska's depressed economy. It can provide new opportunity for stranded commercial fishermen like me. More importantly, a mariculture industry can directly employ thousands of Alaskans on a year-round basis, and can indirectly employ thousands more in the fields of engineering, construction, transportation and marketing.

Governor Cowper, in his State of the State address, stressed the need for Alaska to break away from its dependence on oil. He emphasized the need to diversify Alaska's economy to ensure fiscal strength in the future. The mariculture industry provides one such opportunity to diversify. Alaska, with its clean waters and limitless coastline, is ideally suited to support a multimillion dollar mariculture industry. The time to act is now. As policymakers and fellow Alaskans, I urge you to support House Bill 108. Mariculture in Alaska can pick up where oil left off by providing high quality, fresh seafood products that can be marketed worldwide and throughout the year. Together, Alaska's fish farmers and commercial fishermen can develop international markets that will propel them to the forefront of world salmon production and will give new

The Honorable Adelheid Herrman
March 3, 1987
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dimension to Alaska's proud title of "the salmon capital of
the world."

Sincerely,



Thomas C. Pease

MAR 12 1987

**SOUTHERN SOUTHEAST REGIONAL
AQUACULTURE ASSOCIATION, INC.**

1621 Tongass Ave., #103

(907) 225-9605

Ketchikan, Alaska 99901

Representative Adelheid Herrmann
Alaska State Legislature
P.O. Box V
Juneau, AK 99801

March 4, 1987

Dear Representative Herrmann:

I am writing to encourage you to oppose those portions of House Bill 108, "an act relating to aquatic farming" that address the private pen rearing of salmon. The Board of Directors of the Southern Southeast Regional Aquaculture Association (SSRAA) urges you to exempt salmon from this act. The reasons for opposing this act are:

- (1) The state of Alaska is already actively and successfully practicing salmon mariculture and, therefore, the proposed legislation for salmon is not needed.
- (2) The act will create limited economic and user benefits for Alaskans.
- (3) The act will create negative competition with private nonprofit aquaculture corporations and commercial user groups.
- (4) The act will place the current nonprofit aquaculture program at risk.
- (5) The net effect of the act would have a negative impact on state employment opportunities.

The Alaska legislature passed an act in 1974 that authorized the private ownership of salmon hatcheries by qualified nonprofit corporations. Following legislation in 1976 that authorized the formation of Regional Aquaculture Associations, SSRAA as well as other Regional Aquaculture Associations, incorporated and initiated projects to contribute, by artificial means, to the rehabilitation of the state's depleted and depressed salmon fishery. A common practice in operating salmon enhancement

PRIVATE NON PROFIT HATCHERIES

projects is to short-term rear the salmon in marine net pens before releasing them to migrate to the sea. The major difference in pen farmed salmon and those produced by private nonprofit corporations (PNP) is that salmon produced by PNP corporations are grown in the open ocean and harvested by the common property fishery; whereas, those produced by pen farming are never released and are grown to harvest size in the net pens.

Those salmon produced by PNP corporations are harvested by the common property fishery providing economic benefit to all user groups, including recreational fishermen, commercial fishermen, processors, subsistence fishermen, the visitors, and all segments of the community. This program is just ten years old and is still developing. The benefits are now being realized and there is still much growth potential. Pen culture of salmon, however, will benefit just a few individuals and mostly large corporations. Experience from Oregon and Washington has shown that most small operations will fail.

If netpen culture of salmon becomes part of the mariculture bill, it will create competition with the PNP corporations for sites. The availability of suitable sites for further expansion of the PNP corporations will be reduced because they will be occupied by the netpen farmers.

Salmon farming would also compete for the available broodstock. Chinook salmon have been determined to be the most desirable. Currently, these broodstocks are being used to supply the expanding enhancement programs of the state and PNP corporations as well as for the rebuilding of the Alaskan wild stocks. Further demand for chinook eggs or other salmon eggs by salmon pen farmers would reduce the current production levels or come from the reduction in harvest in our wild stocks. This would result in fewer salmon being released or harvested to provide the broodstock for salmon farmers. This is undesirable in view of the U.S./Canada treaty and the quota imposed on Alaskan fishermen. This current situation exists in Canada in which the rush for salmon farms has created demand for 38 million chinook eggs from a surplus supply of only 1.3 million.

At present, the PNP programs are providing the broadest economic benefit to all Alaskans and the potential exists for further expansion. The state has already made a financial commitment of over \$40 million in the enhancement loan fund to help assure the success of the PNP corporations, and now that the PNP corporations are becoming established they are investing large amounts of their own funds for further growth. Why should the state risk the success of the current PNP program for a questionable unproven salmon farm program? Where is the most benefit to Alaskan residents?

It has been proposed that salmon farming will provide year-round employment. The current PNP corporations are already doing this and are capable of expanding. Just how many new jobs will salmon farming create and how many will be lost from the current user groups? Where is the net benefit?

S.S.R.A.A.

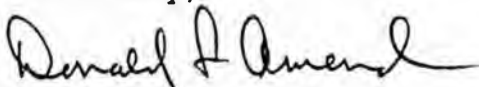
It has been proposed that farmed salmon are superior to commercially harvested salmon because farmed salmon can be provided all year long. It has also been argued that Alaska should enter this market because it is already happening around the world. Technology has vastly improved the frozen products, and the commercial fishermen and processors have made considerable improvements in handling salmon to keep them fresh. Continued improvements will diminish the argument about freshness; furthermore, Alaska has a developing winter king salmon fishery which will continue to provide year-round fresh salmon. The solution for Alaskans is to maintain a high volume of salmon to remain competitive, not more farm raised salmon which will directly compete in the market place with our commercial salmon. The PNP corporations are in the best position to provide a continued high harvest level which contributes to the economic benefit to the most Alaskans. Alaska is not going to lose its productivity for salmon as other countries have.

If it is desirable to pen rear salmon, why must it be by profit corporations? Alaska determined ten years ago that salmon production should be nonprofit. What has changed in the last ten years? If absolutely necessary, the PNP corporations are already capable of salmon farming. Salmon farming by PNP corporations could be used to help offset cost recovery needs and help repay the state loans. There is no need to have profit salmon farming.

The enclosed tables show the production record of SSRAA since 1984 and forecast the harvest through 1992, assuming the current production capabilities. SSRAA started operations in 1978 and released the first production in 1980. In this short period, the harvest has had a significant impact on the commercial fishery and the recreational benefits near Ketchikan have improved dramatically. The future promises even more benefits and this is the record of only one PNP corporation.

In conclusion, I again emphasize that House Bill 108 is not needed for salmon farming and salmon should be excluded from the bill. The potential for salmon farming already exists in the PNP corporations and, in fact, private salmon farming could negatively impact the future success of the existing PNP program which has a broad economic benefit to Alaskans. Your help to exempt private salmon farming from House Bill 108 would be greatly appreciated.

Sincerely,



Donald F. Amend
General Manager

Enclosures

cc: Alaska Trollers Association
Southeast Alaska Seine Boat Owners and Operators
United Southeast Alaska Gillnetters Association

1986 ADULT RETURNS

16-Feb-87

Species	Location	Brood	SSRAA Harvest	GNA Harvest	Sport Harvest	Commercial Harvest	Total
Chinook	Neets Bay	2,500	1,282	590	1,500	5,700	11,572
	Whitman Lake	559	0	0	100	100	759
	Subtotal	3,059	1,282	590	1,600	5,800	12,331
summer chum	Nakat	10,100	540	0	0	81,103	91,743
	Neets Bay	16,000	15	430	0	21,503	37,948
	Subtotal	26,100	555	430	0	102,606	129,691
fall chum	Neets Bay	47,885	94,218	49,677	0	40,550	232,330
coho	Whitman Lake	6,227	28,823	0	2,556	107,700	145,306
	Neets Bay	22,530	41,568	4,613	4,047	158,000	230,758
	Subtotal	28,757	70,391	4,613	6,603	265,700	376,064
TOTAL		105,801	166,446	55,310	8,203	414,656	750,416
PERCENT		14.1	22.2	7.4	1.1	55.3	

	TERMINAL	COMMON PROPERTY
Number	272,247	478,169
Percent	36.3	63.7

SSRGA FRY/SMOLT RELEASE

	1960	1961	1962	1963	1964	1965	1966	1967	60A
COMB									
W.L.	196,000	224,300	219,400	208,000	308,500	855,600	234,200	150,000	
N.E.	280,000	560,000	340,000	980,000	950,000	2,153,000	2,356,000	2,300,000	
E.W.C.	0	0	0	94,000	0	0	100,300	200,000	
NAKAT	0	0	0	0	0	0	99,000	90,000	
SUBTOTAL	476,000	784,300	559,400	1,282,000	1,266,500	3,008,600	2,789,500	2,740,000	
CHINDOK									
W.L.	0	0	145,500	0	0	27,200	119,000	90,000	
N.E.	0	0	0	135,000	144,000	231,400	950,000	750,000	
C.I.	0	0	0	0	0	0	51,000	800,000	
E.W.C.	0	0	0	0	0	0	97,500	300,000	
SUBTOTAL	0	0	145,500	135,000	144,000	258,600	1,197,500	1,940,000	
S. CHUM									
NAKAT	1,340,000	3,145,000	5,076,000	6,240,000	0	4,846,000	4,100,000	4,000,000	
N.E.	0	0	0	1,146,100	2,044,000	8,300,000	9,500,000	9,000,000	
E.W.C.	0	0	0	0	0	0	1,219,000	1,500,000	
SUBTOTAL	1,340,000	3,145,000	5,076,000	7,386,100	2,044,000	13,146,000	14,619,000	14,500,000	
FALL CHUM									
NAKAT	0	0	0	0	0	10,040,000	2,360,000	3,500,000	
N.E.	1,340,000	15,437,200	8,272,900	14,600,000	24,500,000	31,900,000	17,015,000	33,000,000	
SUBTOTAL	1,340,000	15,437,200	8,272,900	14,600,000	24,500,000	41,940,000	19,375,000	36,500,000	
SOCKEYE	0	0	0	0	0	0	100,000	100,000	
GRAND TOTAL	3,166,000	19,366,500	14,055,800	23,423,900	26,834,500	56,356,200	36,283,000	55,740,000	
ZEROS									
COMB									
W.L.	0	0	0	0	153,000	0	0	0	
N.E.	0	0	0	0	754,000	0	0	0	
TOTAL	0	0	0	0	907,000	0	0	0	
CHINDOK									
W.L.	0	0	0	0	0	12,600	0	0	
N.E.	0	0	0	0	205,900	407,200	2,300,000	1,500,000	
C.I.	0	0	0	0	0	0	230,000	250,000	
TOTAL	0	0	0	0	205,900	419,800	2,530,000	1,750,000	

NUMBER OF FISH - ALL SPECIES

GEAR GROUP	ACTUAL					05-Mar-87			
	1984	1985	1986	1987	1988	1989	1990	1991	1992
TROLL	45,294	73,600	196,603	137,650	155,018	180,234	202,273	210,092	210,092
SEINE	372,451	185,412	136,042	209,969	296,242	287,651	468,934	660,016	675,841
GILLNET	90,300	128,200	116,505	131,891	227,748	278,563	455,842	651,965	652,891
SHA-NEETS BAY	465,142	145,826	138,060	494,165	647,377	573,857	857,271	1,006,649	984,009
TOTAL	973,187	533,038	587,210	973,675	1,326,385	1,320,305	1,984,320	2,528,722	2,562,833
*SSRAA ONLY									
SHA OTHER SITES	5,000	3,000	35,050	23,378	99,585	92,871	195,302	240,606	257,818
GRAND TOTAL	978,187	536,038	622,260	997,053	1,425,970	1,413,176	2,179,622	2,769,328	2,820,651

VALUE OF ALL GEAR GROUPS

GEAR GROUP	ACTUAL					05-Mar-87			
	1984	1985	1986	1987	1988	1989	1990	1991	1992
TROLL	\$706,400	\$788,100	\$2,057,882	\$1,584,202	\$1,944,104	\$2,865,645	\$3,801,123	\$4,148,740	\$4,200,000
SEINE	\$1,361,000	\$794,700	\$796,397	\$1,153,555	\$1,596,739	\$1,630,651	\$2,616,512	\$3,659,142	\$3,749,561
GILLNET	\$464,900	\$647,800	\$691,067	\$752,034	\$1,393,784	\$1,457,485	\$2,123,129	\$3,176,287	\$3,455,539
TOTAL	\$2,532,300	\$2,230,600	\$3,545,346	\$3,489,791	\$4,934,627	\$5,953,781	\$8,540,764	\$10,984,169	\$11,405,100

SSRAA PRODUCTION ALL S.E. ALASKA

TROLL-%	28%	35%	58%	45%	39%	48%	45%	38%	37%
SEINE-%	54%	36%	22%	33%	32%	27%	31%	33%	33%
GILLNET-%	18%	29%	19%	22%	28%	24%	25%	29%	30%

STATE OF ALASKA
THE LEGISLATURE

POUCH Y STATE CAPITOL
JUNEAU, ALASKA 99811
907 465 3800

LEGISLATIVE AFFAIRS AGENCY

MEMORANDUM

February 25, 1987

SUBJECT: Sectional analysis of CSHB 108 (L&C),
relating to aquatic farming

TO: Representative Dave Donley

FROM: Edward H. Hein *EH*
Legislative Counsel

Section 1 is a statement of legislative findings and policy, specifying the benefits to the state that aquatic farming could provide and expressing a state policy of encouraging the development of aquatic farming.

Sec. 2 establishes a new chapter, AS 08.06, in the business and professions title of the Alaska Statutes. AS 08.06.010(a) prohibits the construction or operation of an aquatic farm, or a hatchery to supply an aquatic farm, without a permit from the commissioner of commerce and economic development. Subsection (b) states what activities are authorized under a permit. Subsection (c) allows the commissioner to attach conditions to a permit in order to protect public health and natural aquatic animals and plants. At page 2, line 11, "natural" should be changed to "wild".

AS 08.06.020(a) provides for permit applications forms. Subsection (b) specifies that the permit expires after one year. Subsection (c) requires a permit application to include permit fees and a report of a health inspection conducted by the Department of Fish and Game within 30 days before filing the application.

AS 08.06.030(a) requires that a person have an acquisition permit from the Department of Fish and Game in order to acquire wild aquatic plants or animals to supply an aquatic farm. Subsection (b) states that an acquisition permit authorizes only those stock specified in a permit. Subsection (c) requires the commissioner of fish and game to specify the expiration date of permits and allows the commissioner

to attach conditions to the permit. A harvest under an acquisition permit is exempt from limitations applicable to sport, commercial, or subsistence harvests. Subsection (d) directs the commissioner of fish and game to send a copy of each acquisition permit application to the commissioner of commerce and economic development. Subsection (e) authorizes the commissioner of fish and game to deny or restrict an acquisition permit to protect the sustained-yield management of a species. There must be a factual basis for the denial or restriction. If impairment to sustained-yield management could not have been foreseen and avoided, the commissioner must explain why in the decision. Subsection (f) states four alternative conditions under any one of which the commissioner of fish and game must issue an acquisition permit. Subsection (g) states that plants and animals acquired under a permit become property of the permit holder. Subsection (h) directs the commissioner of fish and game to make stock available for aquatic farming purposes.

AS 08.06.040 prohibits the importation into the state of aquatic plants or animals to supply an aquatic farm or hatchery without authorization from the commissioner of fish and game or under a Board of Fisheries regulation. I would recommend that on page 4, line 13, after "hatchery" the phrase "required to have a permit under AS 08.06.010," be inserted, so that it is clear that this section does not apply to all hatcheries.

AS 08.06.050(a) provides that a private hatchery required to have a permit under AS 08.06 may sell or transfer stock only to an aquatic farm or hatchery that has a permit under AS 08.06. Subsection (b) requires that the commissioner of commerce and economic development be notified at least 30 days before stock is transferred to or from an aquatic farm or hatchery. Subsection (c) requires that the notice required under (b) include a stock health inspection report. Subsection (d) allows the Department of Fish and Game to restrict or disapprove a transfer under certain conditions. Subsection (e) prohibits transfers, sales, and purchases of Alaska aquatic farm products unless the products were produced under a permit. References in this section to "this chapter" should be changed to read "AS 08.06.010"; these appear at page 4, lines 17, 19, and 21. and at page 5, line 10.

AS 08.06.060 prohibit the release of trout or salmon from an aquatic farm or hatchery into state water, unless authorized by the Department of Fish and Game.

AS 08.06.070 (a) allows the Department of Fish and Game to order the quarantine or destruction and disposal of diseased hatchery stock or aquatic farm products in order to protect wild stock. Permit holders are required to report disease among their stock or aquatic farm products to the department. Subsection (b) requires permit holders to allow the Department of Fish and Game to inspect the farms and hatcheries during operating hours with reasonable notice. Subsection (c) requires the department to develop a disease management and control program. Subsection (d) allows the department to contract for the performance of its duties under (b) and (c).

AS 08.06.080 requires the commissioner of commerce and economic development to submit an annual report on aquatic farming to the legislature.

AS 08.06.090 authorizes the commissioner of commerce and economic development to adopt regulations necessary for AS 08.06.

AS 08.06.100 makes violation of AS 08.06 or regulations adopted under it a class B misdemeanor.

AS 08.06.900 defines terms for AS 08.06.

Sec. 3 makes the centralized licensing provisions of AS 08.01 in the Department of Commerce and Economic Development applicable to aquatic farms and hatcheries under AS 08.06.

Sec. 4 prohibits the Board of Fisheries from adopting regulations or taking action regarding aquatic farm or hatchery permits under AS 08.06, or to a harvest under an acquisition permit.

Secs. 5, 6, and 9 delete provisions relating to fish farming from AS 16.05 in order to conform to provisions of sec. 2.

Sec. 7 inserts cross-references to AS 08.06, necessitated by sec. 2.

Sec. 8 exempts aquatic farming from the licensing requirements in AS 16.05 for sport fishing, hunting, and commercial fishing and vessels.

Sec. 10 exempts purchases and sales of aquatic farm products from the requirements of AS 16.10.265 - 16.10.267, relating to commercial fish purchases and possession of limited entry permits.

Sec. 11 provides for the inclusion of aquatic farmers in regional aquaculture associations.

Sec. 12 makes provisions related to salmon hatchery permits inapplicable to hatcheries holding a permit under AS 08.06.-010.

Sec. 13 makes an exception to restrictions on the resale or transfer of salmon eggs or fry by a salmon hatchery. The exception would allow resale or transfer to a hatchery or aquatic farm holding a permit under AS 08.06.010. This section also requires that surplus eggs from salmon returning to a hatchery be made available to hatcheries supplying aquatic farms.

Sec. 14 provides that requirements relating to funds derived by a hatchery from the sale of salmon eggs to a hatchery that supplies aquatic farms must be expended in the same manner as provided for funds from sales of eggs to other hatcheries.

Sec. 15 makes the provisions of AS 16.43, relating to limited entry, inapplicable to activities authorized under an aquatic farm permit.

Sec. 16 exempts aquatic farm products from the provisions of AS 16.51, which relate to the Alaska Seafood Marketing Institute.

Sec. 17 provides an immediate effective date for the bill.

EHH:csh
c7/069

STATE OF ALASKA THE LEGISLATURE

POUCH Y STATE CAPITOL
JUNEAU, ALASKA 99811
907 465 3800

LEGISLATIVE AFFAIRS AGENCY

M E M O R A N D U M

February 16, 1987

SUBJECT: Sectional analysis of HB 108, relating to
aquatic farming

TO: Representative Johnny Ellis

FROM: Edward H. Hein *EH*
Legislative Counsel

Section 1 is a statement of legislative findings and policy, specifying the benefits to the state that aquatic farming could provide and expressing a state policy of encouraging the development of aquatic farming.

Sec. 2 establishes a new chapter, AS 08.06, in the businesses and professions title of the Alaska Statutes. AS 08.06.010(a) prohibits the construction or operation of an aquatic farm, or a hatchery to supply an aquatic farm, without a permit from the commissioner of commerce and economic development. Subsection (b) states what activities are authorized under a permit. Subsection (c) allows the commissioner to attach conditions to a permit in order to protect public health and natural aquatic animals and plants. At page 2, line 11, "natural" should be changed to "wild".

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Representative Johnny Ellis

Page 2

February 16, 1987

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AS 08.06.080 authorizes the commissioner of commerce and economic development to adopt regulations necessary for AS 08.06.

AS 08.06.090 makes violation of AS 08.06 or regulations adopted under it a class B misdemeanor.

AS 08.06.900 defines terms for AS 08.06.

Sec. 3 requires the commissioner of natural resources to monitor aquatic farms and hatcheries that hold permits under AS 08.06.070 for the presence of paralytic shellfish poisoning.

Sec. 4 makes the centralized licensing provisions of AS 08.01 in the Department of Commerce and Economic Development applicable to aquatic farms and hatcheries under AS 08.06.

Sec. 5 prohibits the Board of Fisheries from adopting regulations or taking action regarding aquatic farm or hatchery permits under AS 08.06, or to a harvest under an acquisition permit.

Secs. 6, 7, and 10 delete provisions relating to fish farming from AS 16.05 in order to conform to provisions of sec. 2.

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Sec. 17 exempts aquatic farm products from the provisions of AS 16.51, which relate to the Alaska Seafood Marketing Institute.

Sec. 18 provides an immediate effective date for the bill.

EHH:mi
wkmi1/047

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE COMMISSIONER

STEVE COWPER, GOVERNOR

400 WILLOUGHBY AVE.
JUNEAU, ALASKA 99801
PHONE: (907) 465-2400

February 17, 1987

The Honorable Dave Donley
Chairman
House Labor and Commerce Committee
Alaska State Legislature
P.O. Box V
Juneau, Alaska 99811

Dear Representative Donley:

Subject: House Bill 108, relating to Aquatic farming.

Position: The Department of Natural Resources recommends that the House Labor and Commerce Committee pass HB 108 to the Resources Committee for further consideration of land use issues.

Background: HB 108 provides for the construction and operation of Aquatic farms. Under AS 38.05.070, land, including tide, submerged or shoreland, to which the state holds title, may be leased in a manner provided in AS 38.05.070 - 38.05.105 and subject to the approval of the Commissioner of Natural Resources.

Recommendation: While the Department of Natural Resources generally supports the goals of HB 108 and the creation of new commercial opportunities through utilization of the State's resources, in the opinion of the Department, HB 108 needs to further address land use issues.

Specifically, the Department recommends that leasing and permitting processes be designed to encourage development of the mariculture industry, but discourage speculation. This could be accomplished, for example, by requiring applicants to demonstrate by prove up that their projects are viable by preparation of a development schedule. Additionally, leasing and permitting alternatives which encourage small operations, such as lease fees or rent based on gross receipts, could be considered.

The enclosed Fiscal Note is based on an estimate of the number of leases and permits that would result from the bill as presently written. The actual number of new applications will undoubtedly vary depending on the fee structure for leasing and permitting and any special requirements that the final Bill contains.

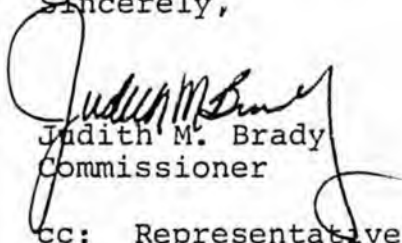
The Honorable Dave Donley

-2-

February 17, 1987

I would be pleased to make my staff available to work with your staff regarding the land use issue. If you would like additional information or have any questions, please contact my office.

Sincerely,



Judith M. Brady
Commissioner

cc: Representative Koponen
Representative Boucher
Representative Davidson
Representative Furnace
Representative Menard
Representative Ellis
Representative Rieger
Representative Cotten
Representative Brown
Representative Pearce
Representative Boyer
Representative Collins
Representative Zawacki
George Sullivan
Rod Swope
Tom Hawkins

HB 108 Analysis

In order to assess the fiscal impact of HB 108, we estimate the number of new applications for tideland leases and permits that we expect. The actual number of applications will vary depending upon the fee structure for leasing and permitting, and the "prove up" requirements of the bill. At present our permit fees are extremely low and the cost of obtaining a lease is quite high. At this stage no "land law" accompanies the bill to alter the lease or permit structure. We recognize that certain changes are desirable to encourage growth of the industry, such as the acceptance of a paper plat rather than a full survey for a lease in remote areas. While such changes may be forthcoming in later committees, the fiscal note here reflects the existing permit structure.

We estimate the number of new applications the first year to be the following:

- 30 salmon
- 25 scallop
- 10 oyster
- 3 mussel
- 2 kelp

We require one adjudicator in the Southeast Region and one adjudicator in the Southcentral Region to handle the new applications. The second year we require one additional adjudicator (to be located where the need is the greatest) to handle additional new applications. By the fourth year we are assuming the need of two adjudicators in each of the two regions.

The second year we require a part time contract administrator to handle the accumulation of two years of lease contracts, and a part time surveyor to review survey plats. (The survey cost may be reduced somewhat if the bill is amended to allow paper plats rather than full surveys in remote areas.)

A goal of the state and of those seriously interested in aquatic farming is to avoid land speculation. In order to accomplish this, it will be necessary to inspect most lease and permit sites once a year. Some inspections can be combined with other field investigations, and some may be performed under cooperative agreements with other agencies. A lean inspection program will cost \$10,000 for each adjudicator the first year (travel and per diem). In subsequent years the cost will decline as we establish inspection efficiencies.

Under existing statutes and regulations, the number of leases and permits estimated above would generate

approximately \$15,500 in revenue the first year. As the number of operations increases each year, the revenue increases modestly. If the bill were amended to allow the Commissioner to charge a percentage of gross receipts, revenues could increase substantially once the industry began to flourish.

Position Summary

Fiscal Year '88

Two (2) - Natural Resource Officers II (Range 16)

Fiscal Years '89 and '90

Three (3) - Natural Resource Officers II (Range 16)
One (1) - Part-time Contract Administrator (Range 14)
One (1) - Part-time Surveyor (Range 20)

Fiscal Years '91 and '92

Four (4) - Natural Resource Officers II (Range 16)
One (1) - Part-time Contract Administrator (Range 14)
One (1) - Part-time Surveyor (Range 20)

**STATE OF ALASKA 1987 LEGISLATIVE SESSION
FISCAL NOTE**

REQUEST: _____
 Revision Date: 2-4-87
 Title: An Act Relating to Aquatic Farming
 Sponsor: Ellis, Rieger, Cotten, Brown,
 Requestor: etc.

Bill Version: HB 108
 Publish Date: _____

Agency Affected: Natural Resources
 BRU: Land and Water Management

Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES	0	84.6	171.3	171.3	210.6	210.6
TRAVEL	0	20.0	25.0	25.0	22.0	22.0
CONTRACTUAL	0	2.0	4.0	4.0	4.0	4.0
SUPPLIES	0	1.0	2.0	2.0	2.0	2.0
EQUIPMENT	0	0	0	0	0	0
LAND & STRUCTURES	0	0	0	0	0	0
GRANTS, CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL OPERATING	0	107.6	202.3	202.3	238.6	238.6

CAPITAL	0	0	0	0	0	0
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REVENUE	0	15.5	23.5	32.0	36.0	40.0
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FUNDING: (Thousands of Dollars)

GENERAL FUND	0	107.6	202.3	202.3	238.6	238.6
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	107.6	202.3	202.3	238.6	238.6

POSITIONS:

FULL-TIME	0	2	3	3	4	4
PART-TIME	0	0	2	2	2	2
TEMPORARY	0	0	0	0	0	0

ANALYSIS : (Attach a separate page if necessary)

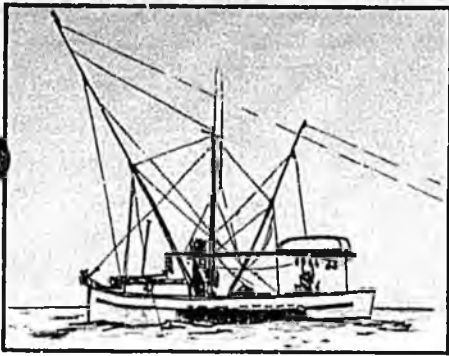
See Attached

Prepared by: Paula Burgess Phone: 465-3400
 Division: Land and Water Management Date: 2/13/87

Approved by Commissioner: [Signature] Date: _____
 Agency: Natural Resources

Distribution (by preparer):
 Legislative Finance
 Legislative Sponsor
 Requestor
 Office of Management and Budget
 Impacted Agency(ies)
 Senate Secretary

MAR 03 1987



Alaska Trollers Association

REPRESENTING ALASKA POWER TROLLERS

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

TESTIMONY OF THE ALASKA TROLLERS ASSOCIATION

RE HB-108 AND SB-106:

"An Act relating to aquatic farming; and providing for an
effective date."

2/16/87

Earl E. Krygier
Executive Director

EXECUTIVE SUMMARY

The Alaska Trollers Association believes that passage of HB-108 and SB-106, "Act(s) relating to aquatic farming...", in their present form would be detrimental to the Alaska salmon industry and not in the best interest of the State. ATA generally supports of aquaculture, and believes there are many opportunities for Alaskans in various aquaculture developments. However, we specifically oppose those aspects of these companion measures aimed at permitting the pen rearing of salmon in Alaska.

Alaska produces some 43 percent of the world harvest of salmon. The pen rearing industry, spearheaded and dominated by foreign interests and backed by their governments' subsidy programs, is in direct competition with our salmon industry. This applies not just to king and coho salmon, but to all fresh and fresh-frozen product forms. Encouraging those interests to invest in and control pen rearing in Alaska is clearly not in the interest of our industry, and will jeopardize the enormous private and public investments already made in our wild and hatchery stocks. We cannot control the actions of other nations, but we need not actively contribute to the market competition facing our own industry.

We are also extremely concerned about possible biological impacts on our wild stocks. While the spread of an extremely virulent infection from penned to wild stocks may be of a low order of probability, the potential for major damage to wild stocks does exist. With so much at stake, is pen rearing worth the risk? Pen rearing will produce chronic habitat problems local to the rearing sites, will compete for release sites with our existing enhancement programs, and may physically displace existing fishery activity, as has been the case with log dumps.

Proponents assertions notwithstanding, pen rearing will divert increasingly scarce State government resources from existing fishery management programs. Fiscal impacts have not been addressed. ADF&G, DEC, DNR, DCED, and Revenue programs will be effected.

We contend that proponents are exaggerating the potential economic benefits of salmon farming in Alaska. Without the strict controls, which are not contemplated by these Bills, pen rearing operations will not be small, Alaska owned businesses. They will be large corporate operations, utilizing foreign technology, and funded and controlled by foreign interests. The few Alaskan jobs they will provide will be at the lower end of the technical and pay scales of these operations. To the extent that Alaskans are involved, either as investors in foreign dominated ventures or as independents, their position will be precarious. This industry is headed for a major "shake out" worldwide, and small, late entrants will be the most vulnerable.

In sum, salmon pen rearing threatens our existing industry and will not be the bonanza that proponents claim. Alaska's support for aquaculture should be in those areas where we can become the technological and market leaders. Let's not get on a bandwagon which is about to run out of gas!

INTRODUCTION

Proponents of aquaculture say it offers one of the single greatest new opportunities to develop and diversify State and local economies and create new jobs. To hear them talk, you'd think that salmon pen rearing in particular is "the greatest thing since sliced bread." Frankly, your fishermen constituents disagree. They think pen rearing of salmon could well be a disaster for them and a very bad deal for the State of Alaska generally.

It is important to look beyond the enthusiastic statements of proponents about the "great opportunity" represented by aquaculture. We must also look at its' effects on the entire spectrum of the existing seafood and support industries. The past administration's Ad Hoc Committee on Mariculture, including the representatives of the fishing industry, found that aquaculture in general does offer new opportunities - though not without costs. Indeed they found that some forms of aquaculture - pen rearing of salmon to be specific - could, in fact, have detrimental effects on the fishing industry, particularly in Southeast fishing communities.

We, the fishing community, suggest that pen-rearing of salmon - the "fish farming" which is really the key element driving this Bill - poses three principal threats to Alaska fisherman:

- saturation in the price and quality leading sectors of our markets which will eventually impact the price of all Alaska salmon, not just our "top of the line" fish;
- negative biological impacts on our vital wild stocks and rearing habitat; and
- diversion of increasingly scarce State government fiscal and managerial resources toward management of a new industrial sector dominated by foreign capital and operators, to the detriment of our Alaskan industry.

Additionally, we contend that the developmental and employment benefits of salmon pen rearing to rural communities and to the economy of the State in general are being heavily, even irresponsibly oversold by pen rearing advocates.

MARKET CONSIDERATIONS

The advocates of aquaculture claim that consumption is rising and that there will be no competition between the farmed and the commercial forms of seafood. The reality is, that the bulk of the highly touted "world increase" in seafood consumption will occur in shellfish, and cod and catfish type fish rather than in the more expensive salmon species. This projected increased in world consumption has two main components.

(1.) Fish as a Cheap Source of Protein: Aquaculture in Third World countries has increased exponentially during the past few years - mostly in the form of warm water pond culture of tilapia and carp. Such culture in Third World nations is often run in conjunction with annual irrigation of rice fields, or in areas where the yield of protein per acre is grossly in favor of pond culture (fish such as Grass Carp or other herbivorous species for local consumption, or shellfish for export) where lands have a low plant productivity due to bad soil conditions. In the industrialized countries cheap protein is also important, but here consumption increases are largely in the form of "fast-food" fillets for fish sandwiches and deep fried catfish. Indeed, the largest aquaculture sector in the U.S. is Mississippi Valley catfish farming, and the single largest fish processor in the U.S. is a catfish processing plant.

(2.) The Health Benefits of Seafood: In North America and Western Europe, the increased recognition of the health benefits of seafood mostly spawned by the educational efforts of such institutions as the Heart Association and the National Marine Fishery Service, has led to a greater consumption of fish and shellfish. Consumers who increased their consumption for health reasons, are normally more interested in the expensive product forms, such as fresh or frozen salmon.

Unfortunately for Alaskan fisherman, the increased awareness and consumption occurred coincidentally with the advent of the Norwegian pen reared salmon industry - though not because of it, as some would claim. Through aggressive marketing and government subsidized production and shipping (including heavily underwritten air freight rates on the government owned airline SAS) the Norwegians made heavy inroads in this product niche of the seafood industry. Our Alaskan commercial fisherman, unprotected from this heavily subsidized, government organized marketing blitz into their traditional markets, have not enjoyed the benefits of increased demand through higher prices or expansion of market opportunities for our other salmon species, such as frozen reds and ocean bright pinks. So, Norwegian salmon has not just hurt trollers, it has limited diversification opportunities for gillnet and seine caught fish as well.

There is really only one market for quality salmon. This market is worldwide and must absorb all inventory, both fresh and fresh-frozen. As fresh-farmed salmon output increases, it cuts into the commercial high quality fresh-frozen market where Alaskan fish has been traditionally been dominant. Present worldwide production of wild salmon is 600,000 to 700,000 metric tons, the vast majority of which is pink, chum and sockeye salmon. Only 70,000 to 80,000 metric tons are high quality coho and king salmon, and it is these fish which are facing competition from pen-reared salmon. This competition is increasing yearly. The production of pen-reared salmon worldwide is expected to approach

150,000 metric tons by 1990. Such an increase will nearly triple the present volume of high quality salmon. In the world market, Western Europe, Canada, and the United States represent "the marketplace" for high-quality salmon. The troll industry's fresh and fresh-frozen product has already felt the impact of market competition from pen reared fish. Our king salmon price to fisherman has dropped from \$2.50/ lb in 1985 to \$1.80/lb in 1986. Cohos dropped .50 cents /lb this past winter when a large inventory of Norwegian fish was dumped on the French market.

Demand for this high quality fish just can't expand as fast as the supply is growing. Studies indicate that every man, woman and child in the United States would need to exchange a meat dinner for a salmon dinner to increase consumption by 25,000 metric tons per year. If pen-reared salmon production does reach 150,000 metric tons by 1990, then a population the size of the United States would have to eat six salmon dinners per year that they are not presently consuming. This is a product which retails for \$6.00 to \$8.00 a lb. Any economist will tell you that it is unreasonable to expect such a demand increase to occur in such a short time. It also means that the enormous amount of high quality salmon on the market will have to sell at reduced prices to compete within its own market niche, with other seafood, and with a more competitive red meat and poultry industry.

This problem was headlined in the December 1986 edition of FISH FARMING INTERNATIONAL which read, "SURPLUS SALMON WARNING - PRODUCTION MAY EXCEED DEMAND BY 23,000 TONS". The article stated that an imbalance of projected supply and demand by 1990 (three years from now) could cause sharp price reductions and upset profit margins. It stated that lower margins would force the least efficient producers out of the industry and preclude small-scale new entrants. It went on to say that farms which produce less than 500 tons per year (this latter type of large facility has a cost of US\$3 million +) would not have the product volume capacity to reach profit margins. They state that such large investment would be very risky, since a stock loss every five years through disease or the effects of unseasonable weather would yield zero net returns. Such losses are not without precedent. Salmon farmers in Norway, on the Sunshine coast of B.C., and at the National Marine Fisheries Service experimental farm at Little Port Walter in Southeast Alaska, have experienced such losses from algal blooms, stress induced by harassment from marine mammals, and from disease.

Commercial fisherman, as users of a wild, common property resource have been striving for years to stabilize natural fluctuations through hatchery enhancement and resource allocation. Pacific coast fisherman, in trying to solve those problems via the U.S./Canada Treaty, will face not only an increase in production from salmon farms, but the need to market the expected great increases in wild and ocean released hatchery

stocks resulting from the U.S./Canada Treaty. Canada and the Pacific States plan to release 2.6 billion enhancement salmon by 1990 - an increase of 245 percent! Add to this the increases from natural stocks rebuilding to maximum sustainable yield. This represents a tremendous investment in management and enhancement dollars, and tremendous sacrifices by our fishermen to achieve wild stock rebuilding. Pen reared salmon compete with these fish and dilute the value of our already massive investment.

It is also frequently asserted that penned salmon won't compete with Alaskan wild stock salmon since most of our production occurs during the summer, whereas penned salmon are sold in the winter. In fact, 10% of all pen reared salmon is sold in the summer. As long as penned salmon production was low, its summer market impact was not too severe. The total Alaska troll king and coho salmon production was about 9,700 MT in 1985. If full projected pen reared salmon production of 150,000 MT is reached by 1990, then a 10% summer market competition will be 15,000 MT in the summer of 1990. That is, they will dump more fresh fish in the summer market alone than the entire Alaskan troll production. As we have said, Alaskans in general will lose from this competition since the development of new product forms of pink/chum/and sockeye, ie. fresh frozen ocean bright quality, will be out-competed by the fresh farmed fish industry which has already developed its market strategy. But, the hardest hit will be the troll fleet. Our product, both fresh and fresh-frozen, competes head to head with pen reared salmon.

Since the volume of pen reared salmon projected by 1990 will triple the product volume available from the current harvest of all king and coho salmon (the two species which compete most directly with pen reared salmon), the issue of product saturation is both real and imminent. Whether or not Alaska becomes involved in the pen rearing of salmon will not change the fact that our wild stock fishing industry will see an increased market competition with pen reared fish, but we don't have to contribute to the problem.

I've spoken about world market impacts and their effects on Alaska fishermen, but if we allowed pen rearing in Alaska we would also have to deal with direct competition in our local markets. Most pen raised fish would be marketed in the winter when local fishermen are supplying local winter markets and getting their best price. When there is such high winter unemployment, winter fishing is both good for mental health and for the pocketbooks. Local pen-reared fish would severely hurt our local winter markets since buyers would not need to wait - as they're presently accustomed to doing - for a winter storm to pass so that local boats can "sneak back out" for a bit of winter fishing.

BIOLOGICAL CONCERNS

Additionally, salmon farming poses threats to our native stocks and our rearing habitat in Southeast. The rapidly growing aquaculture industry faces two big environmental problems; self-inflicted water pollution around the fish farms, and disease epidemics in the pens.

The problem of pollution from feces and unconsumed feed poses a real habitat problem. Most of the choice sites for aquaculture are important as nursery areas for other juvenile fish and shellfish. The problem of bottom habitat degradation is exemplified by the history of log storage facilities. The scientific literature is full of descriptions of the harmful effects to critical environments from hydrogen sulfide pollution - the same pollutant by-product associated with salmon farms.

As for disease, in 1983 epidemics cost the farmed salmon industry approximately \$110 million. Much of this occurred when a bacterial disease in Norway forced 29 out of 40 farms to slaughter their entire stock. Fish farmers, and feed lot farmers in general, respond to diseases with antibiotics which can lead to new virulent forms of disease. Virulency can take the shape of drug resistant disease strains or as new forms of disease to which natural stocks have little or no immunity. The major countries producing farmed salmon have either destroyed their

natural runs or never had them, so they have no natural stocks at risk. However, Alaska produces 90% of all U.S. landings, which equates to 43% of the world landings, from wild, natural runs of salmon. Can we really afford to risk a major disease induced crash of our wild stocks? We think not! Proponents of pen rearing would like to "wish away" the disease problem, but its not a simple thing to deal with and the risks are potentially catastrophic.

MANAGEMENT AND FISCAL CONCERNS

Pen rearing advocates are fond of stating that they aren't seeking State loans and hence won't have a fiscal impact on State government. This is a ruse. Loans aren't the only way of impacting the budget. With revenues getting tighter and tighter State resource managers are faced with doing more and more with less and less. Introducing pen rearing will have an impact on departments charged with regulating the seafood industry and managing the State's tideland resources. DNR, DEC, Revenue and ADF&G will all have to gear up to deal with permitting, regulating and otherwise managing this new industry. You tell me what it will cost! The only certain thing is that it won't be cheap, and that it will negatively impact already shrinking management efforts applied to our existing fisheries.

I think it would be very wise to have a detailed examination of the fiscal impacts of this legislation before proceeding further.

We have previously mentioned the U.S./Canada Treaty. Two additional programs were sold by the State of Alaska to the fishing fleet which promised a long term future and stability, Limited Entry and Salmon Enhancement. Though these programs hold promise, they have put the troll fleet in a precarious make-it or break-it balance. The farming of salmon can upset this balance. It is important to remember that Limited Entry was instituted to control excess effort and give assurances to fisherman that a reasonable livelihood could be obtained. The State also invested heavily in this process by making State loans available and by instituting additional programs which would benefit limited Entry participants and the seafood industry. Such basic assurances encouraged many Alaskans to invest their lives and wealth in this newly stabilized industry. If the State now decides to allow pen rearing of salmon, which competes directly with Limited Entry fisherman, it will have broken its trust with the existing industry. Additionally, salmon enhancement was conceived and developed in Alaska through a legislative process, the main intent of which was to exclude "private-for-profit" salmon farming or ranching. The Alaska Legislature understood at that time the social and economic implications of private salmon culture on a healthy commercial fishing industry. Those legislators understood that salmon culture was capital intensive and would likely be dominated by out-of-State extractive investment unless regulated to ensure that control and benefits remained in Alaska.

OVERSELLING THE ECONOMIC BENEFITS OF SALMON PEN REARING

Proponents of pen rearing salmon like to claim that they will be able to produce 1,900 jobs. Just how many of these will be held by Alaskans? A recent T.V. documentary promoting the salmon farming industry made a sad, unintended joke of this claim, stating that on the large fish farms on the Sunshine Coast in British Columbia you need to speak Norwegian to get by. We strongly contend that this new industry will not create 1,900 new jobs. On the contrary, it may well displace that many and more existing jobs in the seafood industry and its' supporting industries (shipwrights, fuel and food suppliers, etc.).

The Southeast troll fishery has the highest residency rate of any fishery in the state. Fully 85 percent of our fishermen live here in Alaska. Last year this represented nearly 3,500 fisherman and crew members. Using a standard 2.2 employment multiplier for Southeast indicates that the troll fishery alone may generate a total employment of 7,700 fishing, processing and support industry jobs, all of which are in some degree of jeopardy from pen rearing. Many trollers are barely making it now. Further, price slumps will place even more fishermen in the marginal category, forcing many to seek scarce winter employment on shore, and others to quit entirely. To the extent that Alaska based pen rearing hurts Alaskan fishermen, and it will, we are talking about displacing existing investment with new investment and new

people. As residents of Alaska, we want to see more jobs and more economic stability in our communities for the people that live here now. The following analogy exemplifies our dilemma. The Chamber of Commerce is always a strong local proponent of development. That is, until a Fred Meyers, Safeway, or McDonalds' wants to come to town. We all know that this is because the Chamber is made up of locally-owned small restaurant, grocery and shop owners who want some development, but not "that kind" of development. They know from painful experience that such new development often simply displaces existing industry owned and run by local people. That is the threat our fishermen - your neighbors - see and feel.

Pen-rearing is the latest economic "buzz word". Its logical conclusion is market saturation and an economic shake-out. Alaska's late leap onto the bandwagon - which will run out of gas about the time our production reaches market size - means more economic instability in communities which have suffered enough from the boom/bust economy which has characterized Alaska. The hype over salmon farms reminds me of a similar, though not so global, "new opportunity" in the early 1970's. Remember "worm farms"? Sportsfishermen surely wanted worms and the worm casts made a wonderful plant mix. The only problem was market saturation. Toward the end of that little boom, the only real money in worms was in selling the technology and equipment to "new farmers"! Isn't it interesting that Norway has curtailed developing new salmon farms, but is very hot on exporting its

technology, fry and pens to "new farmers" worldwide? They see the shake-out coming. We'd best have our eyes open too! This isn't just my opinion and advice, as I'm repeating sentiments which are increasingly being expressed in the international aquaculture industry press, most notably FISH FARMING INTERNATIONAL.

Salmon farming is capital intensive rather than labor intensive. Multi-national companies and foreign banks will put up the bulk of the start up dollars, and they will expect the earnings to flow back to them, as do out-of-State companies such as Fred Meyers or Safeway. Those profits won't be retained in the local community. Multi-national corporations are known to come in for the quick initial profits and sell out or just quit business for tax losses which offset other corporate gains. This is not just hype.

Certainly, wise foreign investment in Alaska is needed. We need the inflow of capital. However, such investment should be in the form of joint ventures with Alaskans, not just a license to steal from our resource base. Unfortunately, this bill does not address the issue of controlling the form and rate of growth of this proposed new industry to ensure that Alaskans are the primary beneficiaries (nor has the Alaska Mariculture Association put forth any proposals in this regard). Because of the start-up and operating costs involved, "Ma & Pa" type Alaskan operations will have a difficult time even "getting their foot in the door", and it is even more doubtful that any who did get started could stay

afloat if hit with a disease outbreak or a down turn in the market which all experts project within the next 3-5 years. Advocates of pen rearing like to sell the idyllic view of rural coastal Alaska sprinkled with hundreds of small scale, family run salmon farming operations. We see pictures of the old world charm of Norway with a neat, trim little salmon farm in the foreground. What you, as Legislators, aren't being told is that the Norwegians were only able to accomplish that through strict controls on the size of farms, establishment of quasi-public marketing agencies to ensure sales stability and fair treatment of individual small producers, absolute limits on the total number of entrants, etc. - in sum, strong central control over the magnitude, location and conduct of development. Nobody is even talking about those kinds of controls here. So, what will our development really look like?. Odds are it will take the form of large corporate farms with minimal labor inputs. Wherever possible these will be located outside existing cities or villages to avoid local taxes. Managerial personnel will be largely non-Alaskan. This is hardly a view to gladden the hearts of those who see salmon farming as a means to alleviate rural poverty in Alaska, but it is accurate. Just look at what has happened in B.C.

It would be interesting to know if Sealaska, one of the main promoters of this new industry, plans to invest it's own capital, or is it looking for foreign investment capital?

SUMMARY

It's true that many of the aforementioned impacts will occur whether or not Alaska allows the farming of salmon. We can do little more than prepare for the glut of high priced fish by assuring our quality standards and strongly promoting the market virtues of "Wild Alaskan Fresh And Fresh-Frozen Salmon."

The only real justification for permitting the pen rearing of salmon in Alaska is to produce benefits for residents of the State. We need to know in what manner and under what conditions pen rearing of salmon can produce benefits to Alaskans which outweigh the social and economic costs of introducing the new industry. The only answer which make sense to us, is one which compliments the existing industry rather than bringing in new people to compete with the existing seafood industry. Unfortunately, the advocates of pen rearing have not provided us with such a solution, and failing that, we don't see any good reason why the State of Alaska should actively contribute to aggravating difficulties for its own industry by permitting and promoting pen rearing of salmon here.

If entrepreneurs want to develop new aquaculture opportunities which do not negatively impact our existing industrial base, that's great. Indeed, we think there are many opportunities for Alaska to get ahead of the competition in new aquaculture technologies. There is already interesting work going on with scallops and oysters, and there is available technology for

lobster culture which might well be adaptable to high value Alaska crab species. These, and a host of other opportunities are what you should be encouraging. However, we ask you to say no to pen rearing of salmon, and urge you to beware of placing the State in a position of having to cope with the economic instability of a new industry which is nearing a major shake-out worldwide.

I would like to close my testimony with these thoughts from an article in the January, 1987 issue (pg. 5) of SEAFOOD INTERNATIONAL headlined "Salmon Prices Fall As Supply Forecasts Rise":

"Salmon prices are falling, and the Irish Sea Fisheries Board (BIM) is predicting they will continue to do so over the next five years. BIM commissioned a study to examine the potential supply and demand situation for farmed Atlantic salmon in the next decade, and the effects of increased production levels on prices. Using information based on the Norwegian, Scottish and Irish salmon farming industries, BIM concludes that adherence to strict quality standards and efficiency in production, marketing and distribution will become of crucial importance; but prices will still fall. (S)ome experts were forecasting...salmon prices...on a par with cod. The last two months of 1986 certainly saw a drop in price levels (in Europe). In the USA plentiful supplies also pushed prices down, and this is expected to continue. Meanwhile,

in all countries, production forecasts are up for this year. Future emphasis is likely to be on frozen fillets, portions, blocks and prepared items, with merchandising aimed at convincing the consumer that each country's salmon is the best."

Need, a very rough
draft at some
language

Please give me
your opinions

Brent

M E M O R A N D U M

TO: ~~Ned Farquhar, Rep.~~ Cotten
~~Paula Burgess, DNR~~
Diane Mayer, DGC

FROM: Brent Paine, staff *BP*
Rep. Rieger

DATE: March 15, 1987

RE: Criteria For Basing DNR's Best Interest Findings For
Tideland Leases

AS 38.05.____. CRITERIA FOR ISSUANCE OF A PERMIT AND/OR LEASE.

- (a) The commissioner shall issue a permit if he/she finds that
 - (1) the proposed means of construction are adequate;
 - (2) the proposed use of tideland is beneficial; and
 - (3) the proposed permit and/or lease is in the public interest.

- (b) In determining the public interest, the commissioner shall consider
 - (1) the benefit to the applicant resulting from the proposed permit and/or lease;
 - (2) the ~~effect~~^{benefit} of the economic activity resulting from the proposed permit and/or lease;
 - (3) the effect on fish & game resources and on public recreational opportunities;
 - (4) the effect on public health;
 - (5) the intent and ability of the applicant to complete the proposed activity for which the permit and/or lease is applied for;
 - (6) the effect upon access to navigable or public waters.

AS 38.05.____. PREFERENCE IN GRANTING PERMITS AND/OR LEASES. When there are competing applications for tideland use, and the tideland area is insufficient to provide for all applicants, the commissioner shall give preference first to (someone who will own the operation and live within the general area of the tideland site ???) and then to the use which alone or in combination with other foreseeable uses will constitute the most beneficial use.

AS 38.05.____ TERMS OF PERMIT AND/OR LEASE.

AS38.05.____ TIME FOR CONSTRUCTION, COMPLETION, AND PROVE UP.

AS38>05. _____ NOTICES; OBJECTIONS. (a) Upon receipt of an application, the commissioner shall prepare a notice containing the location and extent of the proposed permit and/or lease, the name and address of the applicant and other information he/she considers pertinent. The notice shall state that within 15 days of publication or service of notice, persons may file with the director written objections, stating the name and address of the objector, and any facts tending to show that rights of the objector or the public interest would be adversely affected by the proposed permit and/or lease.

(b) The commissioner shall publish the notice at the applicant's expense in one issue of a newspaper of general distribution in the area of the state in which the permit and/or lease will be located. The commissioner may also have notice served upon any person who may be affected by the proposed permit and/or lease. The commissioner may serve notice upon any governmental agency, political subdivision or person; notice shall also be served upon the Department of Fish and Game and the Department of Environmental Conservation.

(c) Within 15 days of publication or service of notice, an interested person may file an objection. The commissioner may hold hearings upon giving due notice and shall grant, deny, or condition the applicant in whole or in part within 30 days of receipt of the last objection or, if the commissioner elects to hold hearings, within 90 days of receipt of the last objection.

(d) If no objection is filed, the commissioner may proceed to make his/her determination upon the application.

(e) A person aggrieved by the action of the commissioner to grant, deny or condition an application in accordance with (c) of this section may appeal to the superior court.

(f) The commissioner may, by regulation, designate types of activities which are exempt from this section and provide simplified procedures for ruling on the applications.

M E M O R A N D U M

TO: ~~Paula Burgess, DNR~~ ^{NED}

FROM: Brent C. Paine, staff
Representative Steve Rieger

DATE: April 10, 1987

RE: Permit Process for Mariculture Operations

In reviewing the existing process for permitting a mariculture operation, I believe this existing process is a good starting point. The current project consistency review procedures with some minor modifications, as implemented by the Division of Governmental Coordination, can be utilized as a method of reviewing mariculture applications and expediting them through the various state agencies involved.

As I understand the current process for permitting an operation involving the development of the tideland and submersed lands, it is structured such that the tideland lease is the last state authorization filed for. The applicant begins the process by completing a Coastal Project Questionnaire to determine which permits are needed. Knowing what permits are needed, the applicant first file for the federal approvals, such as a Section 10 permit and or a Section 404 permit, and any EPA permits and associated coastal zone consistency permits. Also at this time the applicant files for the necessary state permits, such as the ADEC 401 certification and the DNR tideland permit. I believe the applicant usually does not file for a lease until the other permits are issued. He/she probably applies for a one year tideland permit to reserve the site.

What are the problems? I see two major problems that fall within DNR's jurisdiction. The first is establishing criteria which the Commissioner can use to determine his/her best interest findings, especially with competing interests for one site. The second problem is speculation by people wanting to obtain use of tideland sites for use other than an aquaculture farm. A third concern expressed during hearings on HB 108 is the lack of the public notice/hearing process. Lastly, a concern of a land manager is the potential influx of work caused by creating a new industry. I believe we need a process that utilizes the existing state and federal agencies, and allows for their action on the permits that fall under their realm of authority.

A possible solution would be to create a consolidated aquatic farm (CAF) permit which requests most of the information in the draft language I sent you on 3/28. Under this CAF permit, each agency will have a role, based on their statutory

responsibility and expertise. This CAF permit should not be issued until all the other permits (Corps Sec. 10/404, DEC 401, ect) have been approved, and proper public notice/review has been conducted.

Conceptually, when the applicant submits a complete package to the coordinating agency (DGC), he/she will have to provide detailed information, which the consolidated aquatic permit will require. This is where speculation can be stopped. We can make the CAF approval happen over a period of a couple years, giving the initial approval based on some kind of schedule required by the applicant. If the applicant does not meet the agreed terms (prove up), the CAF permit can be revoked. The burden of showing proof should be on the applicant.

Regarding DNR's specific role in this permit process, I see a couple of changes needed. First we have to ask what is DNR's role. I feel DNR's role is:

- 1) land planning/managing,
- 2) prevent speculation,
- 3) ensure the site is developed and if not, withdraw of the lease, and
- 4) adjudicate conflicting uses.

We need a system were a potential farmer can do some initial site investment/research, with some insurance that if the site proves feasible, he/she can get the lease, without allowing speculation on good sites. What I suggest could happen is that under the CAF permit, the applicant can first obtain a limited tideland use permit, similar to your existing permit. However, the applicant must meet certain goals or markers over a set period of time, or else the permit can be revoked. If all goes well, he/she establishes a good site, then the permit can be converted into a lease, with preference for the lease given to the permit holder. It should not be a competitive lease, but instead the value should be based on fair market value or some percent of fair market value. The farmer will be paying a tax on the value of his/her product, (about 3%), very similar to the fisheries business tax, and allowed a tax credit equal to a percent of the cost of the lease.

Regarding criteria by which the Commissioner can determine best use findings and make a decision, we can look to British Columbia and Washington State regulations to see what they use in their determination. The language for this should be in regulation, as it probably will be changed initially. One solution to allowing a temporary process is to adopt interim guidelines in regulation that can be sunsetted after we arrive at a set of criteria that we know works well. The reason for this is the newness of this industry. Until we get a few operations through the process and in operation, we can only guess at what will work properly. One problem that I am experiencing is that the criteria or guidelines for permitting

a site goes beyond the scope of DNR's responsibility as shown above. ADFG, ADEC and the federal agencies like the Corps and EPA have expertise and concerns in their respective areas. We therefore need to get back to a coordinated approach to review and regulation of this relatively new industry. Therefore, a set of guidelines linked to the approval of the Consolidated Aquatic Farm Permit including a coordinated agency effort is what I see as needed. However, getting back to DNR's role, I can envision a set of criteria like the following: (please note that these guidelines are also for the CAF permit)

1. Operations Plan (to be submitted and approved by DNR)

- improvements at site (e.g., pens, log booms);
- Pen number, size and configuration;
- Schedule of development and maintenance;
- Fish species cultured;
- Size at harvest;
- Annual production;
- Source of eggs and smolt;
- Use of chemicals (e.g., antibiotics)
- Antifoulant use.

2. Environmental Surveys

A. Site Characterization Survey

A site characterization survey should be performed prior to permit application. It will serve three functions. The primary purpose would be to provide the state with the information necessary to evaluate the potential extent of environmental effects. It will also provide the applicant with information critical to determining the suitability of the site for culture. Lastly, it will serve to identify any other competing uses for the site.

B. Hydrographic/Bathymetric Survey

Depth of water and current velocity and direction data, along with salinity, temperature, and dissolved oxygen profiles shall be collected for the site. Also include water quality data.

3. Habitat Surveys

Net-pens should not be located where their siting is likely to affect habitats important to commercial, sport or subsistence fisheries, that are of critical ecological importance. Habitats of special significance include habitats having significant populations of, or which are important to the feeding, reproduction or other life stages of crab, herring, cod, rock fish, and salmon. The determination of whether the site is of special significance to these species will be determined by ADFG on a case-by-case basis.

4. Conflicting Use Surveys

DNR should establish a list of all uses of the tidelands, and research should be done to determine what use the potential site might be incurring, and at best, determine if mariculture activity will compete, enhance or otherwise have no effect on such activity. Somewhat all uses including mariculture should be designated as have equal chance for use of a site (subsistence??). Biological criteria are fairly easy to determine, however, other human use criteria is rather subjective.



Alaska State Legislature

HOUSE OF REPRESENTATIVES
COMMITTEE ON RESOURCES

POUCH V
JUNEAU, ALASKA 99811
(907) 465-3715

MEMORANDUM

TO: Rep. Ben Grussendorf, Speaker
FROM: Rep. Sam Cotten *Neli Farquhar for*
SUBJECT: Mariculture visit
DATE: June 20, 1987

Rep. Ellis wishes to visit the Little Port Walter fish hatchery. Though I do not know the status of the Resources Committee's FY 87 budget, I hope that there is enough money in there to cover Rep. Ellis' plane charter out of Juneau. If there is, please release up to \$400 to cover the charter. Thank you for your help.

Representative ~~William~~ Cotten

APR 8 1987

My name is Rocky Stone. I am a Cordova resident. My partner, Robert Sullivan and I have made our living in the Copper River-Prince William Sound fishery for 24 years. 85% of our income is recycled here in Alaska. Alaska harvests 130 salmon yearly. It's fishing industry is the largest employer of persons in the state.

Those who think fish farming will be labor intensive should think twice. Norway now offers a robot feeder that can assess conditions of fish farms and administer the food, which means that one person and a computer are all that is needed most of the year.

In reports I've read, the Norwegians are faced with disease and genetic deterioration threats to their salmon. They have already invested 12 million dollars in a cryogenic gene bank and have imposed farm free zones near wild streams. A new disease, the "hitra" is responsible for 80% of salmon disease in Norway. This and market saturation are big problems for them. Findings now show that Norway's getting out of this, selling their technology to us, and we're being conned.

Now Norwegian companies, fleeing stringent guidelines of that country, are moving in with a vengeance to B.C. where no controls on farm size and ownership exist. Canada's calling for moratoriums and is worried about disease and the wiping out of her wild stock.

To quote a brief to the Gillespie Commission in B.C., "assurances of the fish farming industry are worthless. In the event of a genetic or disease catastrophe, the huge cost and lost fish production would be borne entirely by the public. It is impossible to put a dollar value on wild salmon resources, and yet this is what we risk in the absence of proper safeguards."

These same problems are going to plague us and farmers will be treating fish with hormones, antibiotics and chemicals. Already TBT, an anti-fouling agent, has been detected in penreared salmon on U.S. markets. This hardly speaks of quality and we don't need to be a part of it.

People are concerned about heart attacks and cancer. Witness the drastic decline in beef sales in the last 2 years. With some marketing expertise, we could rely on the consumer to refuse fish that's a health hazard too.

I read last week that by 1990, just 3 years from now, there will be 153,000 metric tons of farmed salmon on the market...23,000 tons in excess of the total world demand. With this in mind, we're crazy to be wasting money and time on fish farming.

With some marketing ingenuity, we can close this window of panic and open a door of opportunity. We could easily be in a position of having the only quality fish left in the world---Alaska WILD salmon.

Stone
Box 83
Cordova
Alaska 99574

Rocky Stone

Voting "Yes":	King Cruise Troll Bartholomew
Voting "No"	McCarty Steward
Absent:	Hansen
4 votes required for passage	
Effective date:	4/20/87

K E T C H I K A N G A T E W A Y B O R O U G H

Resolution No. 713

A RESOLUTION OF THE ASSEMBLY OF THE
KETCHIKAN GATEWAY BOROUGH, ALASKA,
URGING A THOROUGH STUDY OF THE
BIOLOGICAL AND ECONOMIC EFFECTS OF
PEN-REARING SALMON

R E C I T A L S

A. The salmon fishing industry is a major contributor to the economy of Ketchikan and is vital to the State of Alaska's overall economy. It is a resource worth protecting, enhancing, and stimulating.

B. Ocean ranching of salmon, raising smolts in hatcheries and sending them out to sea to return as adults, is and will continue to be the most important enhancement effort in Alaska. The cornerstone of these enhancement projects is the State's unique system of public and private nonprofit hatcheries which enjoys the full support of our commercial fishing fleets.

C. Alaskan fishermen are opposed to the inclusion of salmon in proposed State legislation on aquaculture because of the belief it will create market competition with products of existing salmon fisheries, competition for available enhancement sites, potential danger to the wild salmon stocks, and pollution in Alaska's bays and estuaries which are vital habitat for natural outmigrating salmon fry.

D. The biological and economic effects of salmon farming, pen-rearing of salmon, on the State's existing programs, existing wild salmon stocks, and the existing salmon fishing industry have not yet been fully defined.

NOW, THEREFORE, BE IT RESOLVED BY THE ASSEMBLY OF THE KETCHIKAN GATEWAY BOROUGH, ALASKA, as follows:

Section 1. The Assembly of the Ketchikan Gateway Borough urges the Alaska State Legislature to conduct a thorough study of the biological and economic effects of pen-rearing salmon before enacting legislation allowing for salmon farming in Alaskan waters.

Section 2. The Assembly further suggests that such a study address at least the following issues:

- a. the effects, economic and otherwise, of salmon farming on the State's commercial fisheries, sport fisheries, subsistence fisheries, related private enterprises, and existing ocean ranching programs;
- b. the protection and availability of State tidelands including pollution control and environmental impacts on wildstock salmon, communities, other



MOSS LANDING MARINE LABORATORIES

CALIFORNIA STATE UNIVERSITY FRESNO, HAYWARD, SACRAMENTO, SAN FRANCISCO, SAN JOSE, STANISLAUS

P O BOX 450
MOSS LANDING CA USA
95039-0450
(408) 633-3304

April 10, 1987

Dear Representative Cotton,

I moved to Alaska in 1981 and fell in love with the State. Later I graduated from U.A.A. with a degree in Natural Science. Currently I'm in California attending graduate school as a Marine Biology/Ichthyology student with the intention of returning to Alaska when my course work is completed.

While I was an undergraduate in Alaska I worked as a seasonal aide creel censusing salmon for the Department of Fish and Game Sportfish Division. I am very proud of the Alaskan salmon runs and the progressive management by the State of Alaska that has ensured the continuation of healthy wild salmon stocks.

I am not proud that the Alaskan lawmakers are apparently conforming to reactionary, uninformed, and/or induced tactics being used by special interest groups to stymie the development of mariculture. Just last week I attended a meeting of the Pacific Fisheries Biologists in Portland, Oregon where the strongest sentiments expressed were of regret for failing to develop mariculture for the fish export market. Oregon is now importing more salmon annually than their commercial fishery produces.

Commercial fishermen work very hard for their living and I would not deny them the opportunity to earn their livelihood. But I do object to a select, self-interested group overriding the best interests of Alaska. It should be kept in perspective that the ocean and the fish that the commercial fishermen are exploiting are public resources.

Compared to the world development of mariculture, the United States is a backward country. The countries that have committed to mariculture have been very successful (China, Norway, Japan, Italy for example) and are exporting fish to the world.

Because of heavy exploitation, Alaskan salmon stocks are now carefully regulated. Similarly the quality of mariculture operations can be regulated through the permitting processes and revenues generated by licensing.

The time is right for Alaska to diversify its economic base. Mariculture, like commercial fishing, is hard, honest work. If Alaska continues to block the efforts of would-be maricultural

entrepreneurs, the development will happen elsewhere where the political climate is more receptive. As a consequence, the fish will still be produced and exported worldwide, at no benefit to Alaska.

I will be finishing my Master's Degree in 1988 and I hope to be able to return to Alaska to develop my own mariculture business. If I'm faced with an uphill battle all the way and denied the opportunity to earn a living in the manner I choose, I'll be forced to go elsewhere. That's the cold, hard reality for Alaska. Alaska can't afford to lose creative, forward thinking people that care about the State and its future.

Sincerely,

Lucy Wold

Lucy Wold

Jon C. Zuck
4340 Raspberry Road
Anchorage, Alaska 99502

April 7, 1987

Representative Sam Cotten
Alaska State Legislature
Pouch V (MS 3100)
Juneau, Alaska 99811

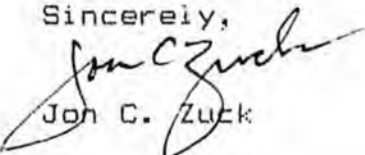
Dear Representative Cotten:

As a resident of the State of Alaska in House District 9, I urge you to support proposed House Bill No. 108, "An Act relating to aquatic farming; and providing for an effective date".

Tremendous potential exists within the State of Alaska for development of an economically viable mariculture industry. This budding industry could complement the present seafood/fishing industry in providing year-round employment opportunities, opening new markets for quality seafood products, maintaining conservation efforts in our fisheries resources, in addition to adding new sources of revenues to the State's economy. The essence of the proposed bill is a framework to provide means in which to encourage responsible private sector development of mariculture opportunities. In structuring this mariculture bill, I believe careful attention must be given to streamline the present permitting process, to ensure an Alaskan owned and operated interest, and to avoid conflicts with existing fisheries (ie, salmon fisheries).

Thank you for your attention to this matter.

Sincerely,


Jon C. Zuck

cc: Representative Drue Fearce
Representative Alyce Hanley
Representative Steven Rieger
Representative Mike Navarre



Peratrovich, Nottingham & Drage, Inc.

Engineering Consultants

Telex 090 26436
Telefax (907) 563-4220

1506 West 36th Avenue • Suite 101 • Anchorage Alaska 99503 • 907-561-1011

April 7, 1987

. ED 87000r

Representative Adelheid Herrmann
Alaska State Legislature
P.O. Box V (MS 3100)
Juneau, Alaska 99811

Dear Representative Herrmann:

With regard to HB No. 108 relating to mariculture, I would like to express my support for this concept. The U.S. seafood industry is making large strides in market development and research, but still does not have the competitive edge. There is no question that Alaska has very little to say about markets and prices.

Market stabilization, support of hatcheries and use of now wasted products would all be directly related to a sound mariculture program. Instead of competing directly with present Alaska fishing methods, mariculture could instead complement the industry.

I was told that recent testimony indicated that Alaskans do not contribute to mariculture. Attached is a photo of a "Norwegian Limit" fish rearing pen designed by Alaskans which is capable of handling rough water. This method is, to my knowledge, in advance of the present Norwegian technology. This pen is presently used in Valdez to start feed about 50 million pinks and chums each spring before release and later in the year to imprint king salmon at Anderson Bay.

As a matter of interest, Alaska Fish and Game has developed better fish ladders and fish incubators than were available outside.

Alaska DOT/PF has done significant arctic research and development with roads and foundations for both land and marine installations. They built the first cable stayed bridge in the United States (see attachment). Alaskans were responsible for many of the unique designs and new technology used on the Trans Alaska Pipeline. Aluminum anodes for protection of steel marine structures from corrosion are now being considered as an industry by Alaskans simply by recycling aluminum cans.

In short, given the chance, Alaskans can develop technology as well as anyone and mariculture is no exception.

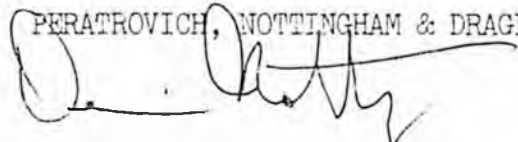
Representative Adelheid Herrmann
April 7, 1987/87000r
Page 2

Please consider the mariculture bill for its long term economic benefits to Alaska.

Thank you.

Sincerely,

PERATROVICH, NOTTINGHAM & DRAGE, INC.



Dennis Nottingham, P.E.
President

DN/jk/LP

cc: Representatives Sam Cotten
Lyman Hoffman
Cliff Davidson
Mike Nevarre
Dick Shultz
John Sund
Henry Springer
Drue Pearce



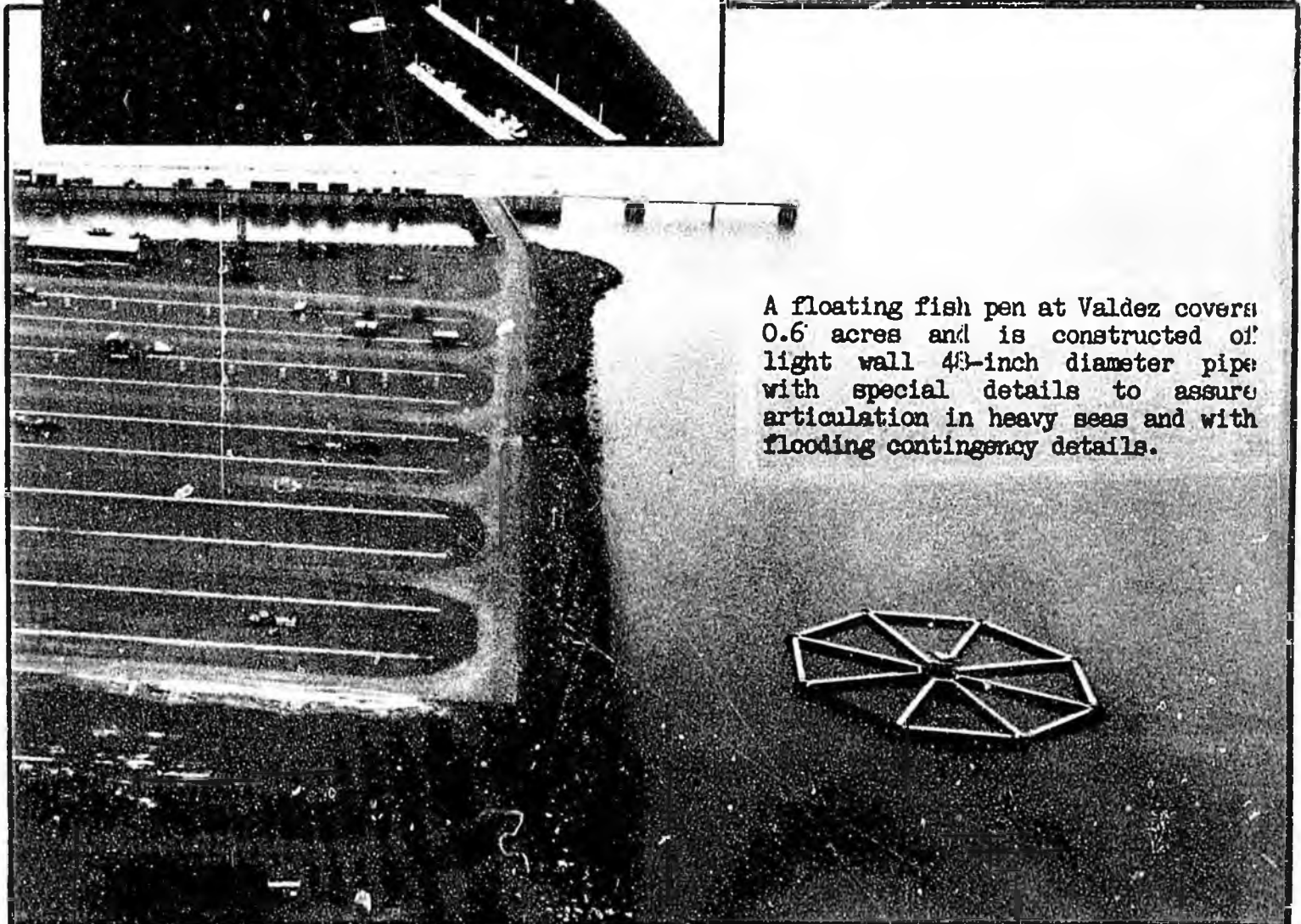


MARINE CONCEPTS: ● SILTATION CONTROL ● FISH EXCLUSION ● FISH CONTAINMENT

Peratrovich, Nottingham & Drage, Inc. has been involved with development of marine components and structures serving to isolate silty water from fish habitat or to isolate fish. These developments to date have been in the form of floating fish rearing pens and filter fabric silt curtains with combinations possible.



The potential to perform in rough water, light ice environments, and limited currents are features that have application to many situations.

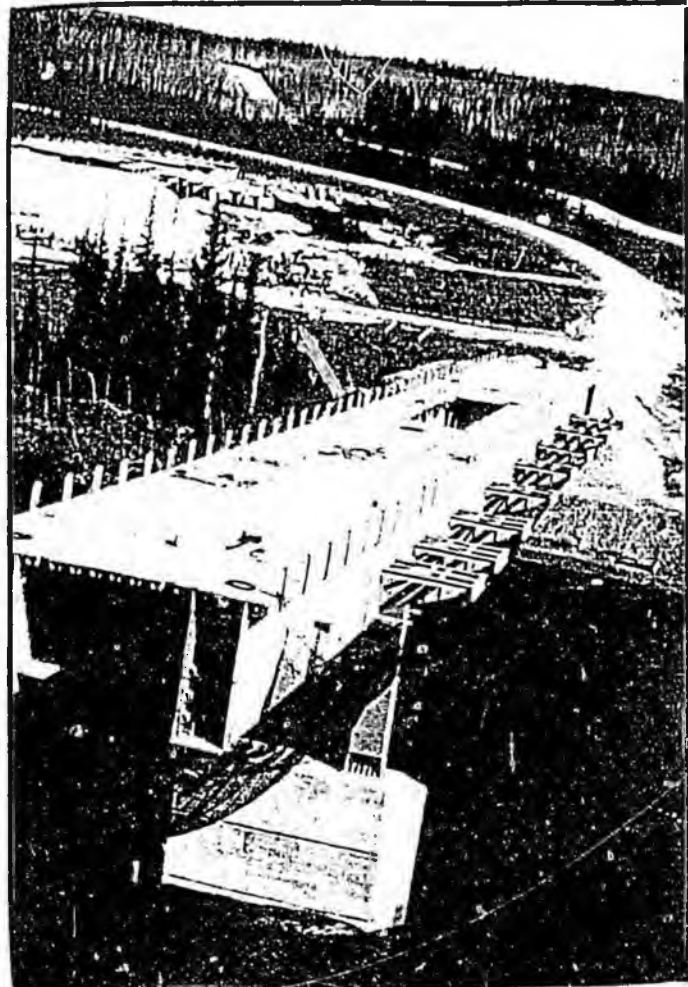
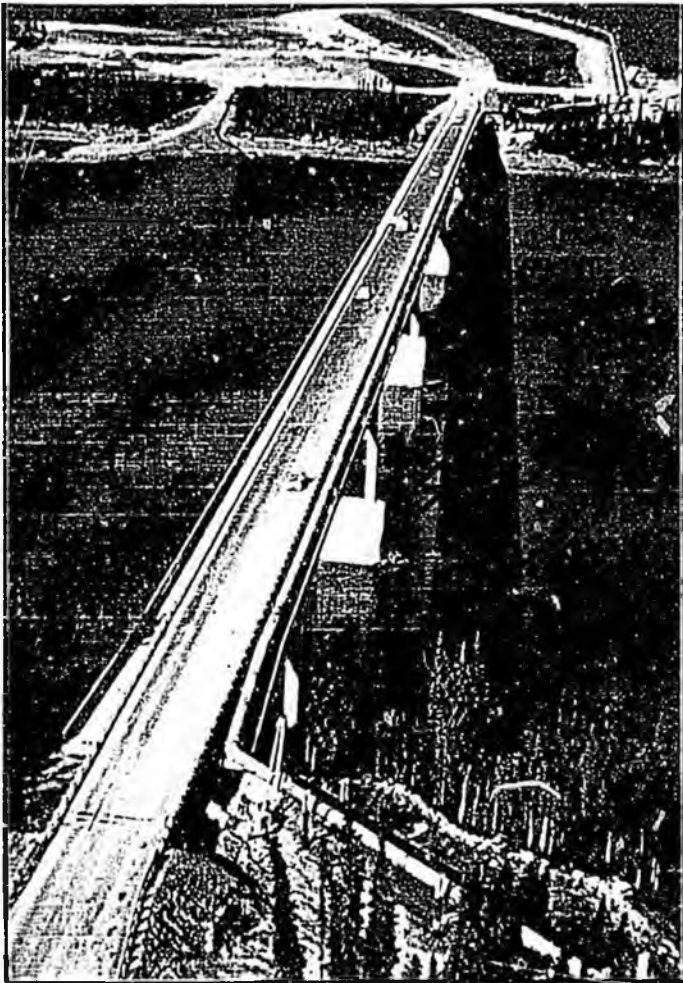


A floating fish pen at Valdez covers 0.6 acres and is constructed of light wall 48-inch diameter pipe with special details to assure articulation in heavy seas and with flooding contingency details.



BOX GIRDER BRIDGES

Modern welding procedures allow the creation of bridges with remarkable stability and redundancy features by utilizing steel box girders. These bridges can take many forms as are shown on the accompanying photos. PN&D has extensive Alaskan experience with box girder bridges and continues to develop this technology.



YUKON RIVER BRIDGE (NEAR FAIRBANKS)

This award winning design spanning the Yukon River is a steel orthotropic structure that carries both the Trans-Alaska Pipeline and vehicular traffic. One of the first of its kind in the United States, it was also the most difficult link in this great Alaskan project.

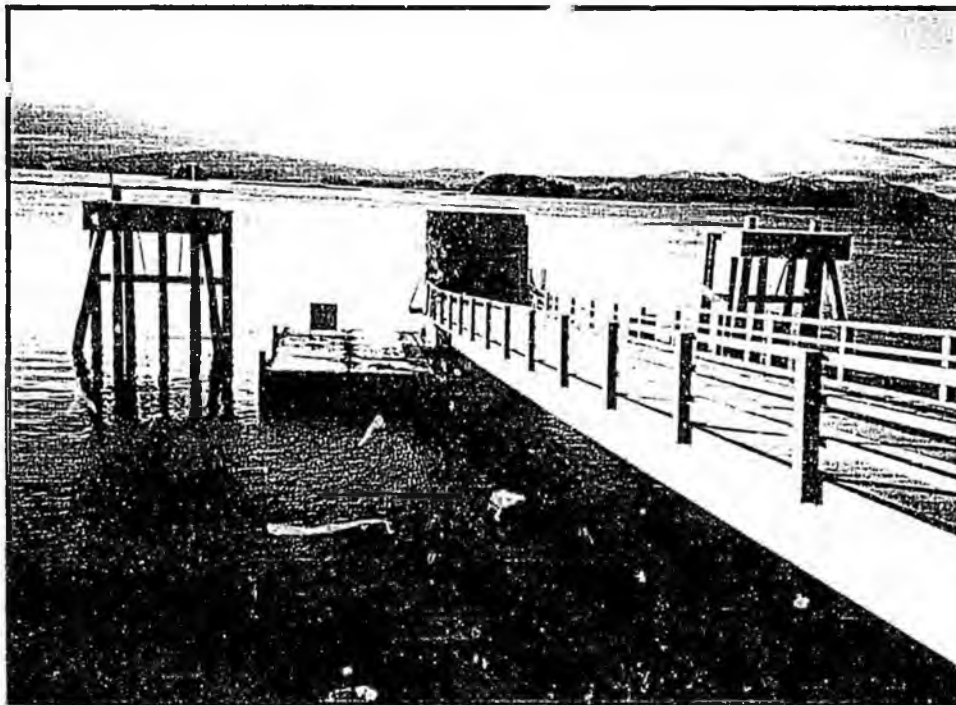


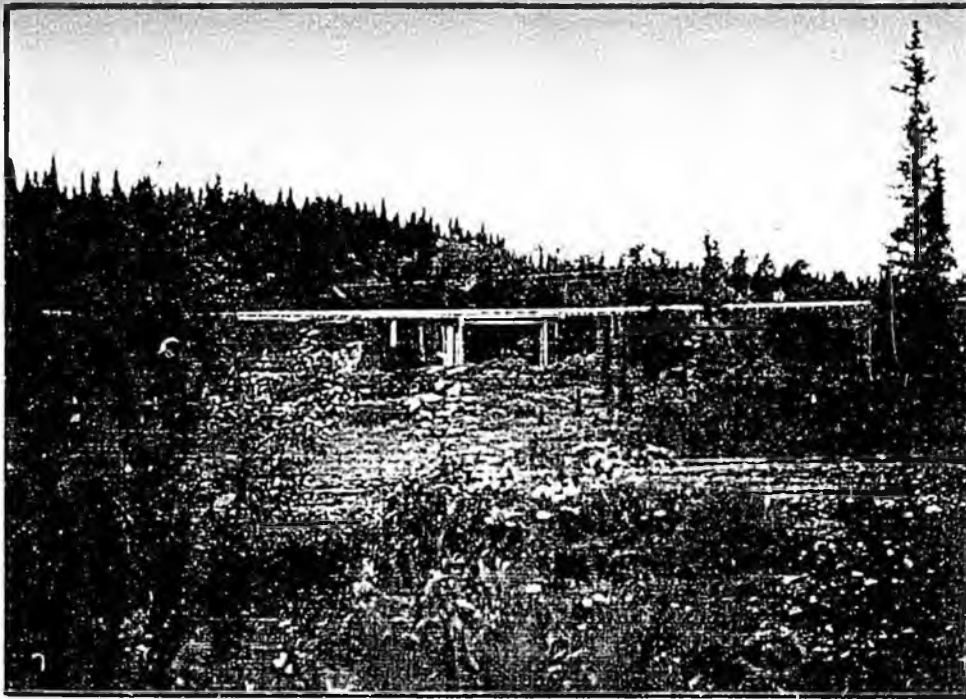
GULKANA BRIDGE

This "scrap iron" bridge was designed and constructed within a 5-month period using available materials. Founded on permafrost, this award winning tied-arch structure carries the Trans-Alaska Pipeline across the Gulkana River near Sourdough. The arch is composed of steel box sections.

KAKE FLOATING FERRY TRANSFER STRUCTURE

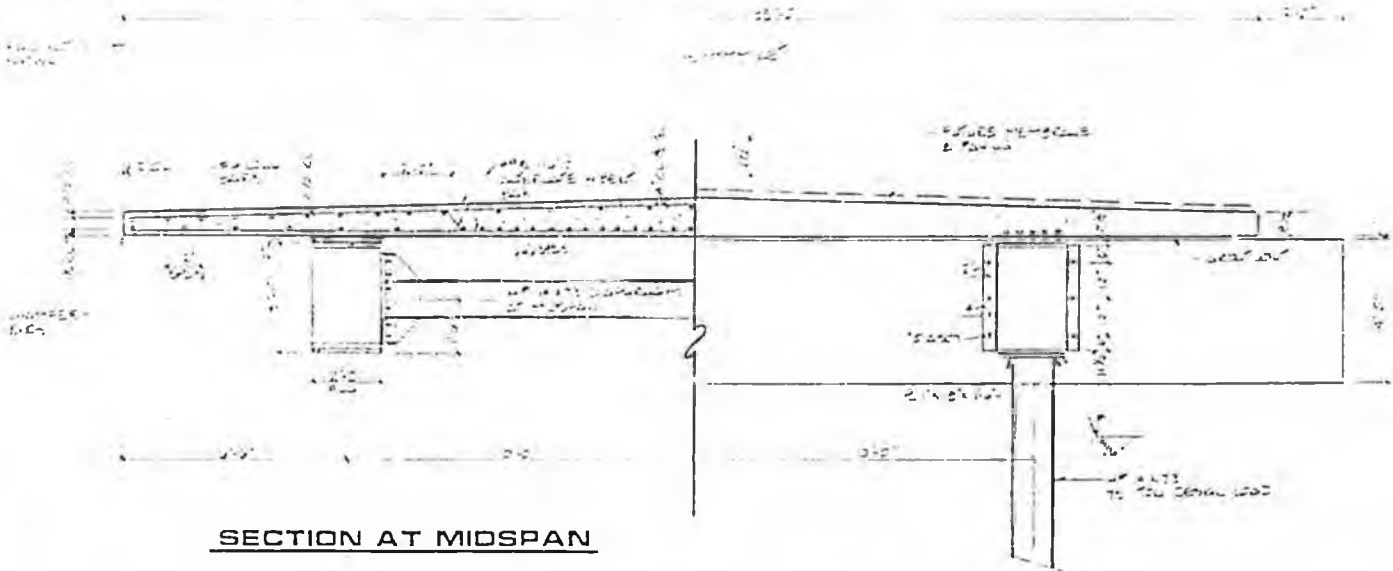
Budget limitations for small communities do not allow use of more expensive "Cordova-type", pile supported, ferry transfer structures. This led to the development of lower first-cost floating systems, such as this one at Kake. The all-steel system utilizes a double orthotropic box girder system.





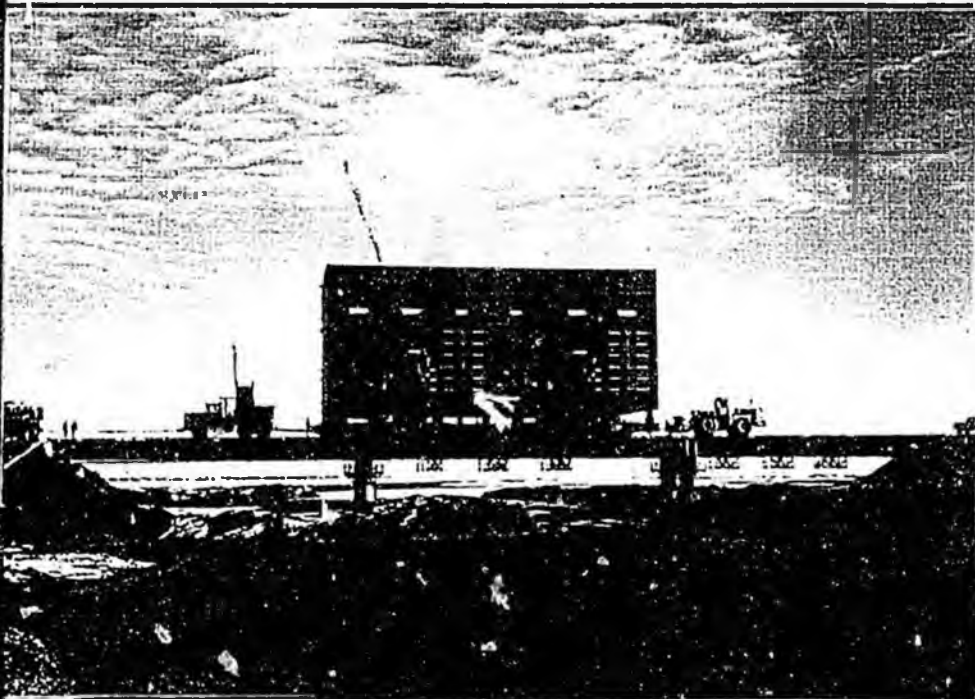
NORTH FORK ANCHOR RIVER BRIDGE

North Fork Anchor River Bridge is of composite concrete and double steel box girder construction for highway loading.



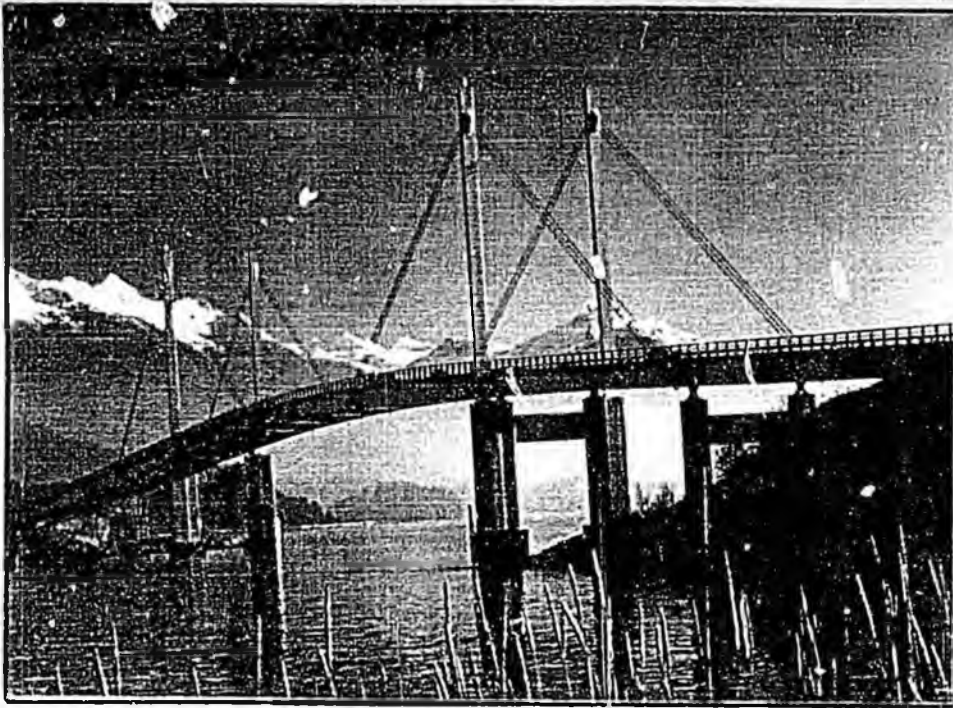
SECTION AT MIDSPAN

SECTION AT ABUTMENT



KUPARUK RIVER BRIDGE (IN THE ARCTIC)

1981 First Place in Heavy Construction Project of the Year, Alaska Construction & Oil magazine, and Third Place in the James F. Lincoln Arc Welding Foundation National Awards. One of the strongest bridges known, accommodating 2,600-ton vehicles, this structure is utilized in oil production development on Alaska's North Slope. Four steel box girders bridge spans of 100 feet.

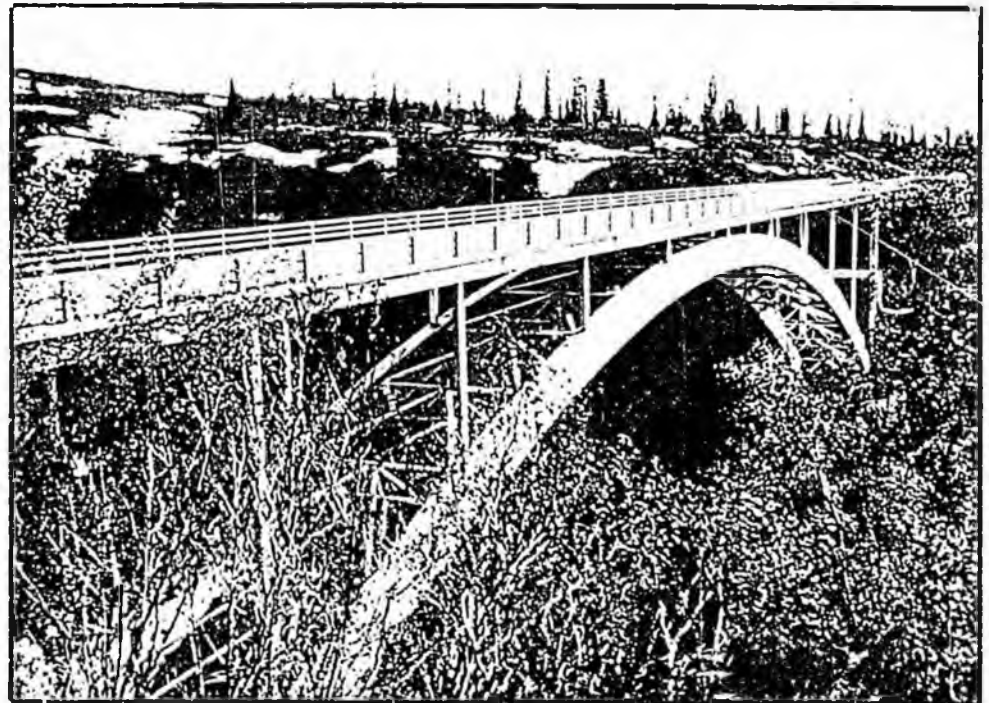


SITKA HARBOR BRIDGE

The Sitka Harbor Bridge has the distinction of being the first cable stayed highway bridge in the United States. Since construction, other states have adopted the live load deflection philosophy utilized here and are now producing these economical structures with ever increasing spans. Double steel box girders supported by cables support the structure.

HURRICANE GULCH BRIDGE

One of the largest two-hinged arches in the United States, this bridge at Hurricane Gulch on the Parks Highway is supported by steel box ribs.



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Anchorage, Alaska 99503
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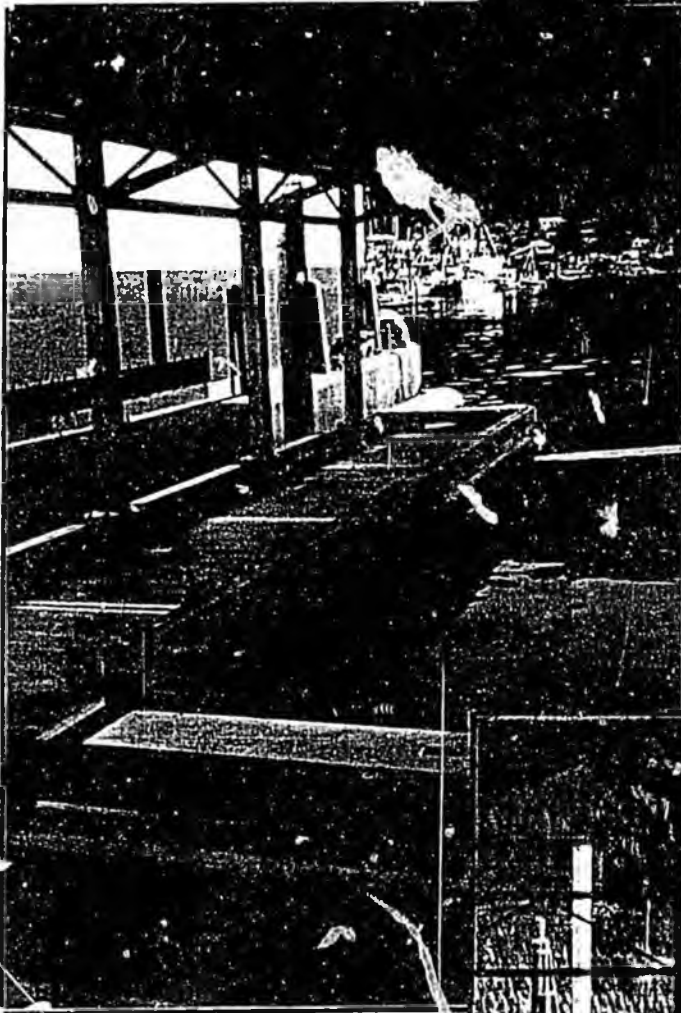
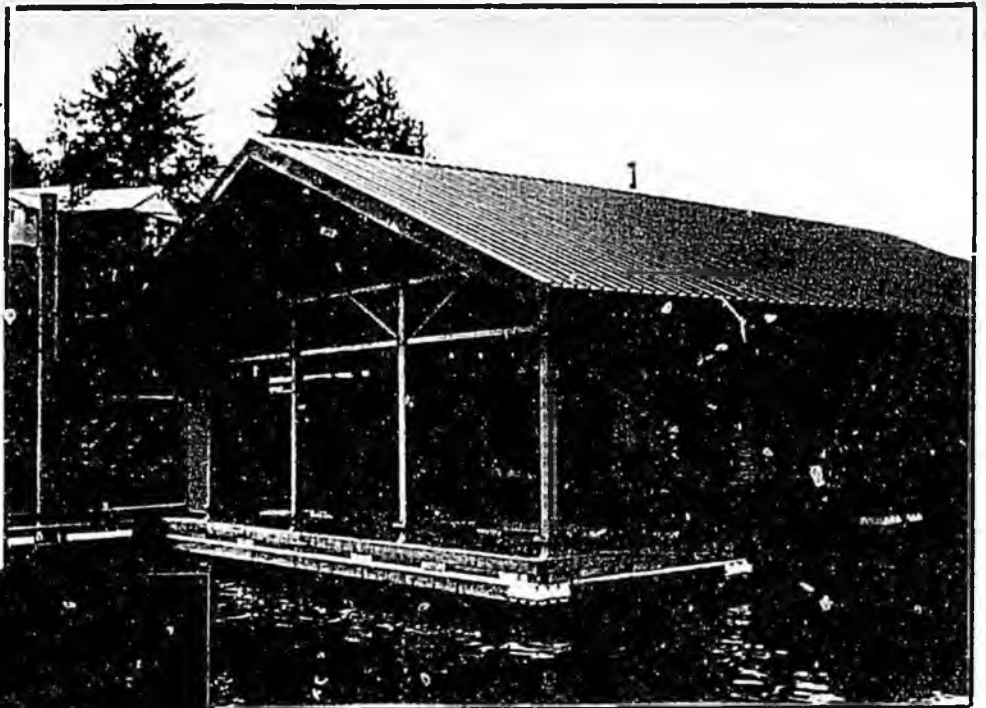
Dennis Nottingham, P.E., President
Roy Peratrovich, Jr., P.E., Vice President
Jim Nelson, P.E., Vice President
Brent T. Drage, P.E., Secretary/Treasurer

Juneau Division
2205 North Jordan Avenue
Juneau, Alaska 99901
(907) 789-5006

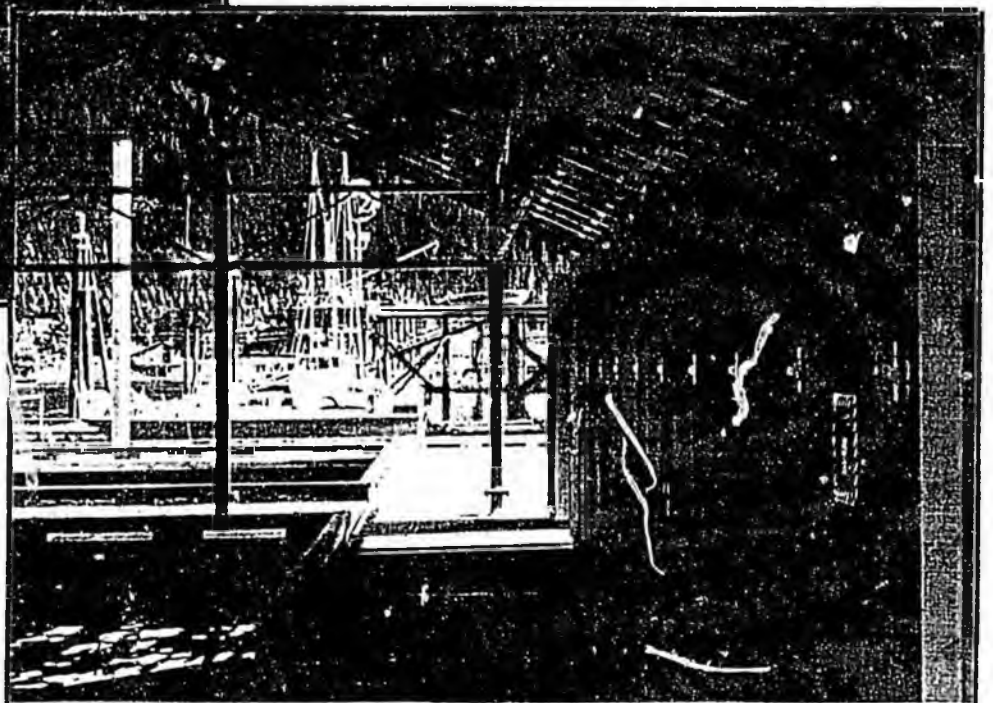
Civil Engineering • Marine Facilities • Coastal Engineering • Bridges/Structures • Foundations
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USFS WRANGELL MARINE FACILITY

This marine facility is composed of a floating warehouse, two covered boat moorage areas and an open float moorage for larger vessels.



This view from beneath a covered moorage area shows galvanized rigid steel frames, concrete floats and treated timber rails and rub strips.

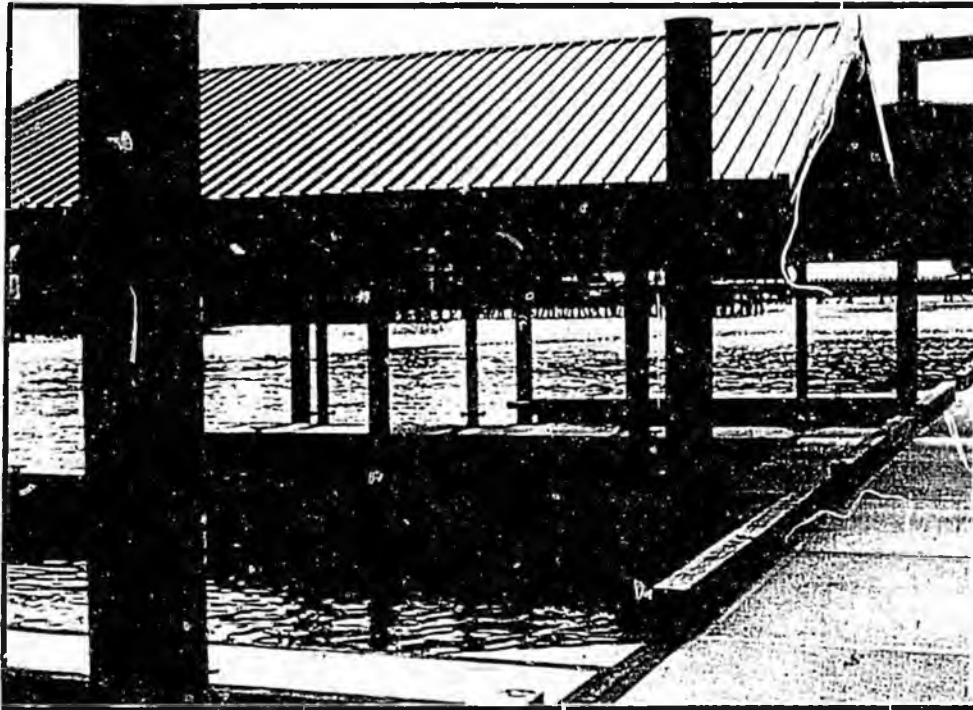


Lockers are provided to store a wide variety of marine supplies and equipment.

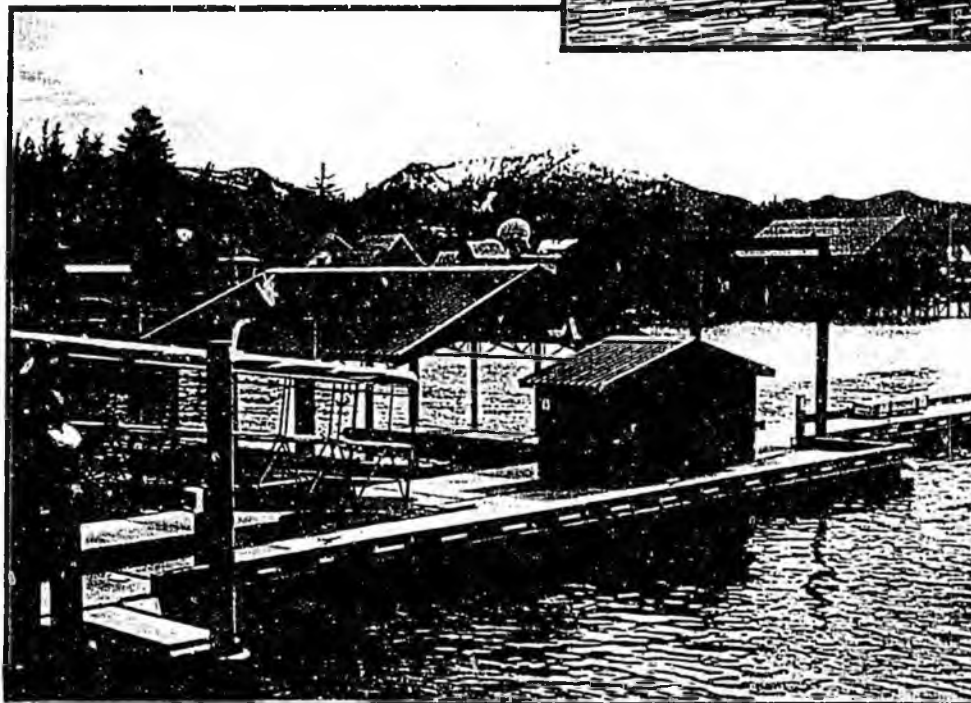
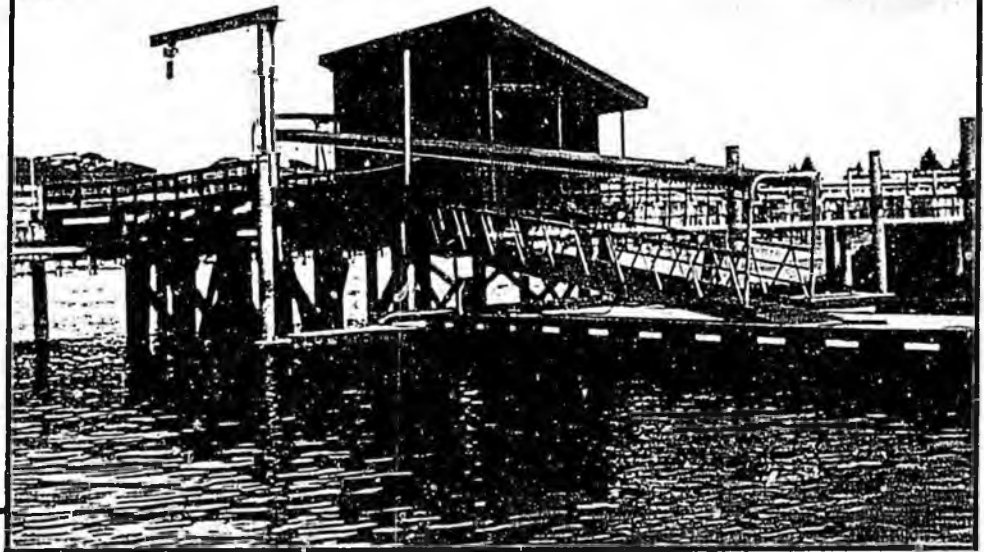


USFS PETERSBURG MARINE FACILITY

PN&D designed this steel-framed, concrete float, supported covered boat shelter as part of a marine facility for the U.S. Forest Service in Petersburg, Alaska. This design provides improved function and aesthetics over past designs.



Facility access dock, crane and covered ramp are shown. Galvanized steel, pressure treated wood and concrete floats insure a low maintenance marine facility.

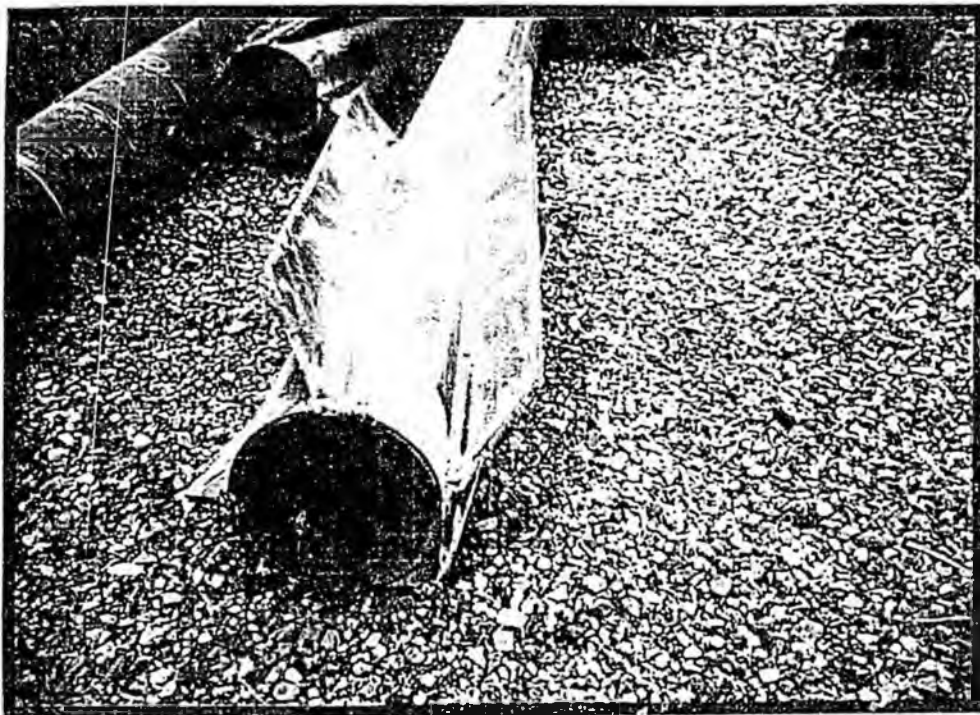


View of the covered access ramp, covered boat shelter, storage building and concrete floats.



SPIN-FIN PILES

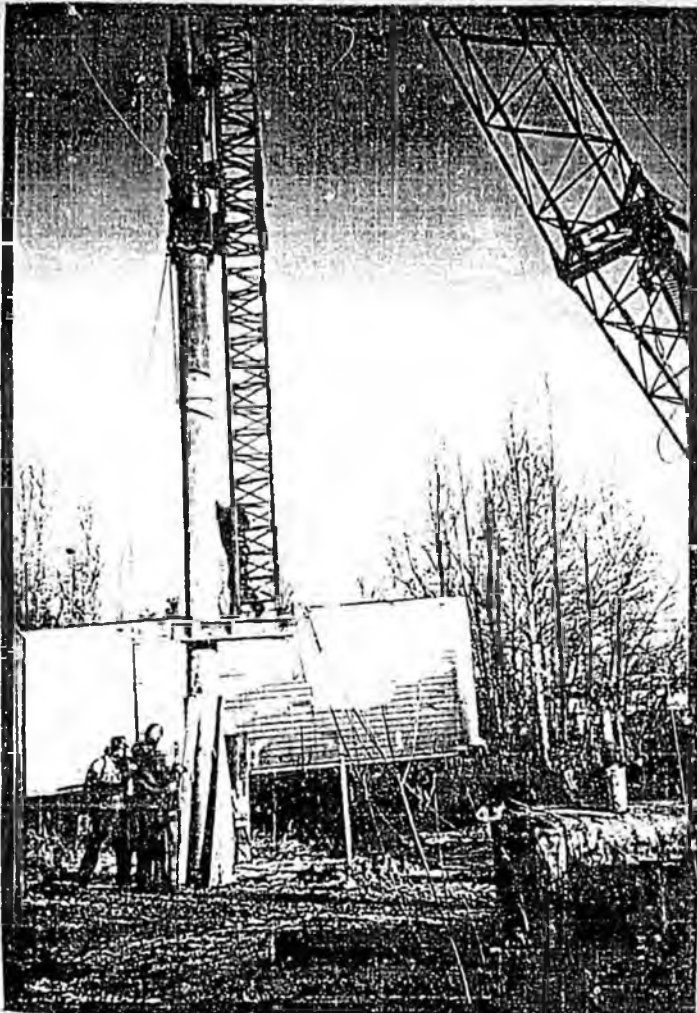
Highly loaded tension piles are being used more frequently and in more diverse applications. Conventional piles must therefore be longer to resist these tension loads. Peratovich, Nottingham & Drage, Inc. (PN&D), has developed an innovative pile, dubbed the "spin-fin," with tension characteristics that are superior to those of a normal pipe pile, that does not require increasing the pile length or making major pile modifications. Spin-fin piles can be used in mooring dolphins, docks, retaining wall tiebacks, ice resistance piers, earthquake anchors, wind footings, or any other pile foundation where anticipated uplift or impact loads may cause pile failure. Because of their unique load deformation characteristics, these piles allow substantial pile deformation without catastrophic failure--even after repetitive loading.



A spin-fin pile is a pipe with steel fins welded at a batter, to give the pile a screw-like appearance and characteristics. The concept was developed by PN&D to improve torsion and uplift resistance in driven piles.

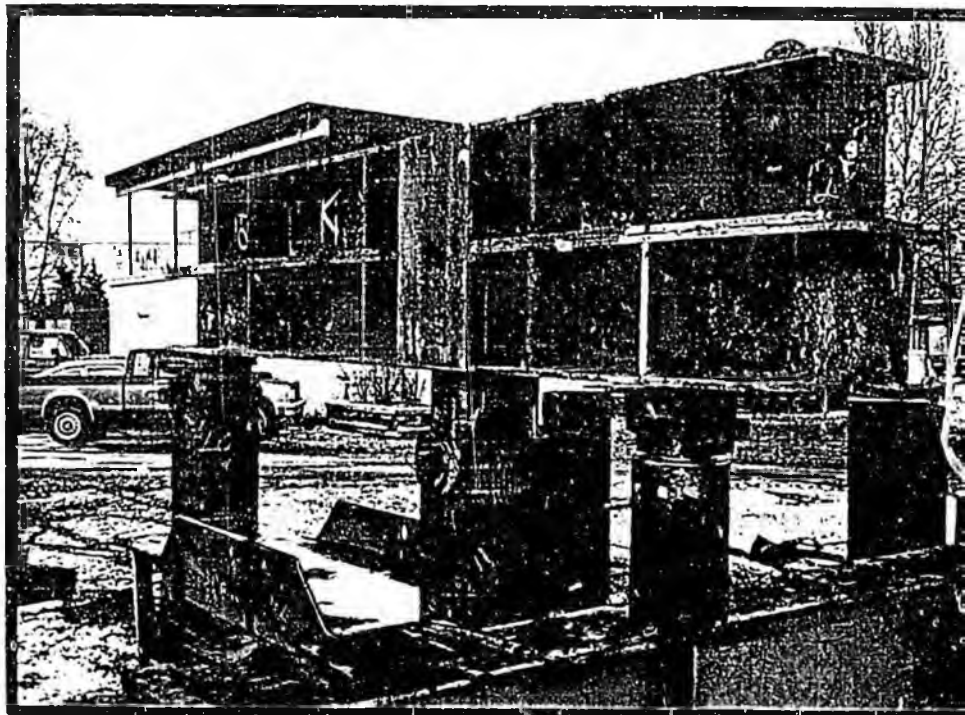
Spin-fin piles being fabricated by welding steel plates to a pipe pile.

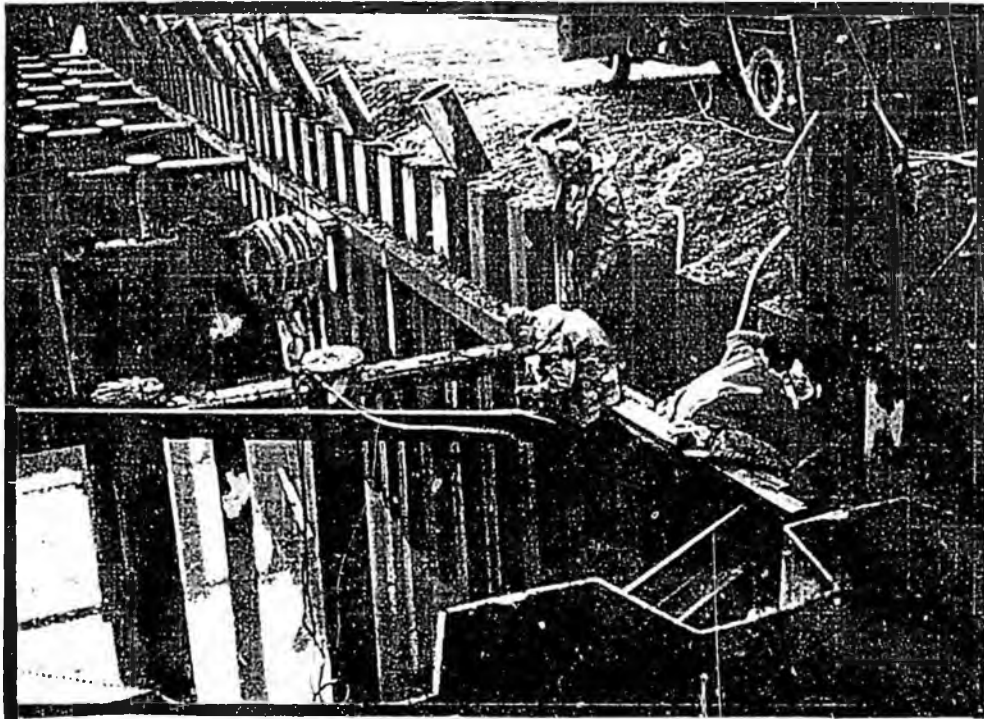




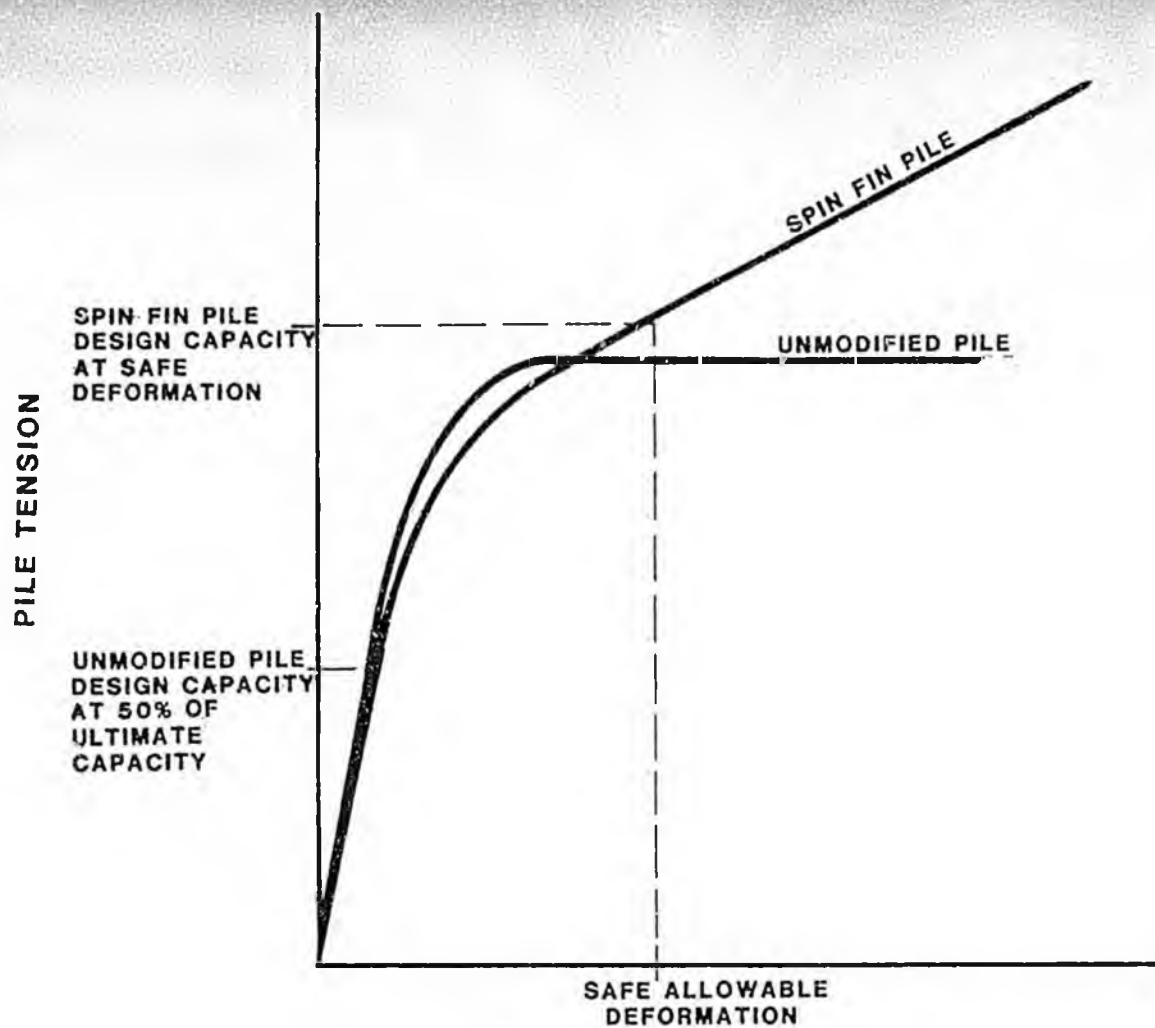
Spin-fin piles are driven like unmodified pipe piles, except that the piles twist as they penetrate the ground. The diesel hammer shown here was used to drive a 16" diameter test pile.

A hydraulic jack and load beam were used by PN&D to conduct tests on 8" and 16" diameter spin-fin piles. An ultimate tension load of over 200 tons was achieved on a 16" pile with 20' embedment.





The first field use of spin-fin piles was at the Seward Coal Transfer Facility. Spin-fin piles were used as anchor foundations for conveyor belt tensioning devices, and also as sheetpile wall tiebacks in the coal receiving pit shown above. The coal car dump facility won a Bronze Award in the national design contest conducted by the James F. Lincoln Arc Welding Foundation in 1985.



SPIN FIN PILE CAPACITY

Design Philosophy

The tension load-deformation characteristics of spin-fin piles shows why designers must modify the generally accepted concepts of factor-of-safety and pile failure, if the spin-fin pile is to be properly utilized. The method of dividing the ultimate capacity of a pile by a suitable factor-of-safety, as in the case of unmodified piles, does not work for spin-fin piles because their load capacity increases with deformation. Thus, the capacity of a spin-fin pile should be determined by selecting a safe load from its load-deformation curve for an allowable deformation that the structure can sustain without damage. Spin-fin capacity should be determined by allowable deformation. Thus, the factor-of-safety for spin-fin piles may be rationally selected by analysis.



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 Jim Nelson, P.E., Vice President
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 2205 North Jordan Avenue
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Civil Engineering • Marine Facilities • Coastal Engineering • Bridges/Structures • Foundations
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Jan Van Dort
Attorney At Law
603 East 4th Street
Juneau, Alaska 99801
(907) 586-6659

February 18, 1987

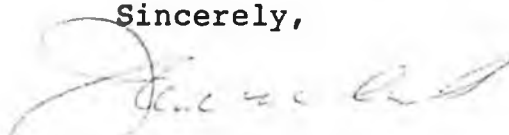
Representative Sam Cotten
P.O. Box V
Juneau, Alaska 99811

Re: HB 108 - Mariculture

Dear Sam:

Please let me know the date and time of any hearing which your committee will hold on House Bill 108. Thank you.

Sincerely,



Jan Van Dort

February 27, 1987

329 Lynnwood Drive
Anchorage, AK 99518

Rep. Sam Cotten
P. O. Box V
Juneau, Alaska 99811

House Bill No. 108:
Aquatic Farming

Dear Representative Cotten:

We are writing this letter to express our support for House Bill No. 108, of which you are a co-sponsor. We would, however, like to convey to you some of our concerns relative to this issue.


After sitting in on the legislative teleconference on February 25 in Anchorage, it was obvious that the commercial fishing industry, as a whole, does not want aquatic farming allowed in this state, which is not surprising. It is, however, very shortsighted. As is pointed out in HB 108, this industry would "provide a consistent source of quality food, provide new jobs, increase state exports, create new commercial fishing and other business opportunities, and increase the stability and diversity of the state's economy;". We are hopeful that, when deliberating the disposition of this bill, the Legislature will look beyond the shortsighted and selfish concerns of the large commercial fishing lobby and vote to pass it. The long-term benefits to our State should outweigh the pocketbooks of a few.

We realize an industry such as this should be properly regulated for the protection of public health and the species, but we are concerned that if there are too many constraints and costly regulations imposed on this industry, only large companies would be able to embark on starting a fish farming business. Starting an industry such as this should be something "Joe Public" could get into, without having to spend all his capital on meeting the requirements of the regulations attached to the permit.

In this regard, we think it is important for an average citizen to be able to obtain funding for an endeavor such as this through the Small Business Administration, or through a State grant. The long-term benefits to the State would more than pay for the initial investment to get an industry such as this off the ground. It is obvious our state needs to diversify its capital base. A renewable resource such as fish farming should be given high priority in this regard.

We would appreciate your consideration of the above concerns when considering HB 108.

Sincerely,


GEORGE W. ROCKHILL


THERESA A. ROCKHILL



ALASKA STATE CHAMBER OF COMMERCE

310 Second Street
Juneau, Alaska 99801
(907) 586-2323

April 3, 1987

The Honorable Sam Cotten
Alaska House of Representatives
Post Office Box V
Juneau, AK 99811

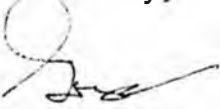
Dear Sam:

I wish to state the Alaska State Chamber's wholehearted endorsement of HB 108.

The development of a viable mariculture industry for Alaska is critically important to all Alaska. New industry means private sector jobs and jobs mean payroll. Alaska's economy can be placed on a continued strong footing, but only through State generated support.

Passage of HB 108 would send a real signal that the Alaska Legislature supports a strong Alaska economy.

Cordially,



George Krusz
President

GK:cbr

Alaska Mariculture Association

May 1, 1987

Representative Adelheid Herrmann
Representative Sam Cotten
Co-Chairs
House Resources Committee
P.O. Box V
Juneau, AK 99811

Dear Representatives Herrmann and Cotten:

The Alaska Mariculture Association (AMA) wishes to extend its thanks to the Resources Committee for the many long hours spent gathering public comment on House Bill 108.

In response to a request during committee hearings by Representative Davidson, I have prepared an assessment of the issues raised during public testimony.

AMA believes it is important that the committee identify the issues needing further work or clarification so the measure can be modified to ensure maximum benefits to Alaska from development of a diverse mariculture industry. This process will allow the committee to focus its efforts on responding to the concerns raised by the public and fashioning the best piece of legislation possible. We are pleased to be able to contribute to this effort.

Competing Uses in the Tidelands

The prospect of the creation of numerous sea farms in our coastal waters has focused attention on an issue of rising public concern: how to balance competing uses of state tidelands and public waters as Alaska's population expands and development extends to our more rural areas. AMA believes the concerns raised about the tidelands permitting process for mariculture extend to all activities in our coastal waters involving projects of long-term use, including floating lodges, industrial parks, log transfer facilities, mining terminals and private docks.

Members of the public have questioned whether the current permitting system provides adequate opportunities for public comment and protection of existing uses of our public waters. We believe the present tidelands permitting process and coastal management program provide the basic framework necessary to respond to these concerns.

We are convinced that notification of affected user groups, such as commercial fishing groups and local fish and game advisory committees, could be improved at very little expense and would help ensure improved public review of all tidelands proposals.

The Department of Natural Resources also has suggested additional policy guidelines in statute would help the agency in balancing competing uses in the tidelands. AMA supports this goal, and suggests the committee approach the issue from the perspective of all tidelands uses. The planning director for the Kodiak Island Borough summed up the situation well at a recent coastal management conference when she suggested it doesn't make any sense to have two sets of rules for use of the tidelands--one for mariculture and one for everything else--when the impacts on competing uses are the same.

Tideland Permits and Leases

Aquatic farming proponents also have raised tidelands issues of great concern to existing and future sea farmers--the instability in mariculture operations created by the current one-year permitting system. Currently, DNR issues one-year permits which are revocable in 30 days without cause and require the tidelands user to reapply each year with no assurances of securing continued use of the site over competing applicants. The only existing alternative is a long-term lease which requires an appraisal and survey costing \$6,000-10,000.

This program should be revamped if the legislature is interested in creating stable mariculture businesses.

Siting Guidelines and Minimizing Environmental Impacts

The environmental impacts of floating mariculture facilities can be minimized by proper siting guidelines. Studies conducted in Washington State and British Columbia have indicated that environmental impacts of properly sited aquatic farms can be minimal. Testimony from the Alaska Department of Environmental Conservation has supported these conclusions.

AMA has provided the committee with siting guidelines for salmon farms which have been adopted by the State of Washington. We believe these guidelines could provide a good starting point for Alaska to develop its own guidelines. While it wouldn't be appropriate to put siting guidelines into statute, the document could provide the committee with some ideas for structuring policy language to guide state agencies in developing siting guidelines.

Ownership and Structure of Salmon Farms

Some members of the public have voiced concern that salmon farms would be owned or controlled by large corporations or foreign interests, and that few benefits would accumulate to Alaskans other than a few low paying jobs. This concern is based upon the perception that smaller salmon farms would not be competitive without massive state assistance.

While it is unclear just what are the economies of scale for salmon farms in Alaska, the existing structure of the fishing industry provides an excellent model for how small operations could be successful. Our fishing fleets are small-scale producers who have close economic relationships with processing corporations which provide the economy of scale for manufacturing and marketing.

Small "mom and pop" salmon farms could be independent "grow out" facilities serviced by existing processing companies providing smolts, feed and other supplies with tendering services. The processors could then purchase the marketable fish from the farmers for processing and marketing through existing infrastructure.

While it may also be difficult for medium-sized salmon farmers to achieve economy of scale through vertical integration, the larger farms could form cooperative arrangements for smolt and feed production, processing and marketing. These operations also could enter into agreements with existing processors to fulfill those functions.

The concern with corporate or foreign control can be dealt with through carefully conceived restrictions on the size of farms and number of permits held by individuals, companies and groups of investors. These restrictions could be combined with a tightening of the definition of Alaska-owned companies or corporations allowed to possess tideland permits.

Disease and Genetics

The Department of Fish and Game has testified that salmon farms and other mariculture operations pose no greater risk to wild stocks than existing enhancement programs, provided similar procedures are followed and the department has adequate resources. The existing disease and genetics policies should be examined in the context of mariculture to determine whether modifications are necessary or public policies should be clarified in enabling legislation.

Economic Impacts on Traditional Fisheries

Another concern raised during public hearings has been the potential for salmon farming in Alaska to adversely affect traditional markets for Alaska salmon. Information generated to date has shown that salmon farming in Alaska should have a minimal impact on traditional salmon markets. The latest report in the growing body of evidence was compiled by two University of Alaska economists who projected a range of adverse impacts of \$600,000 to \$4.7 million. This contrasted sharply with projections for positive economic benefits to Alaska of up to \$300 million.

Cost Recovery

Some have questioned whether mariculture will pay its own way. Mariculture proponents have expressed a willingness to support fair

taxation and licensing structures. To this end, AMA has testified that we are interested in helping the committee draft an aquatic farm product tax similar to the Fisheries Business Tax in effort to ensure the state's direct costs are covered and there is a fair return for the use of common property resources.

Acquisition of Brood Stock from Wild Sources

The present version of House Bill 108 does not provide the Department of Fish and Game adequate ability to balance the needs of existing uses with the needs of aquatic farmers. AMA believes HB 108 should be amended to allow ADFG to turn down wild stock brood stock requests when existing allocations would be affected, in addition to ADFG's authority under the current version to deny brood stock requests that impact the sustained yield. The new language should direct ADFG to refer brood stock requests affecting limited fisheries or in situations when allocations would be impaired to the Board of Fisheries for action.

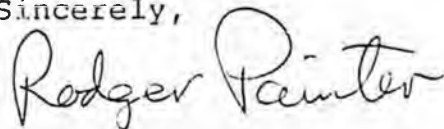
ADFG should grant the brood stock requests in situations where sustained yield or existing allocations would not be affected.

Surplus Salmon Eggs from State and Private Hatcheries

Concern has been expressed that salmon farming will result in the "stealing" of eggs from ocean ranching programs or reductions in catches by commercial fishermen. HB 108 should be amended to make it very clear that salmon farmers will not be allowed to purchase eggs unless they're truly surplus to the needs of ocean ranching programs and will not result in reductions of catches by commercial fishermen.

An April 10 letter from ADFG to Representative Ellis estimates that there were about 88.6 million such surplus eggs in 1986, including 23.2 million coho and 4.6 million chinook eggs. Even larger surpluses are envisioned in future years.

Sincerely,



Rodger Painter
Executive Director

c.c. Members of the House and Senate Resources Committees
Senator Jan Faiks
Representative Grussendorf



UNITED FISHERMEN OF ALASKA

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

February 8, 1988

Dear Fisherman:

Many Anchorage area legislators, in an attempt to diversify the economy of Alaska, are strongly supporting a mariculture bill which includes finfish. Your legislators have been sold the false notion that finfish farming would not endanger the commercial fishing industry. Furthermore, your representatives have told us that "it is apparent that fishermen are not concerned about salmon farming because we never hear from them."

After many months of consideration by UFA, we are convinced that the finfish part of the bill would have disastrous effects on our industry. Therefore, it's time they hear from you. Write or call your legislators and request that they remove finfish from the mariculture bill this session. In this manner, the people interested in scallop culture, shellfish mariculture and other types of mariculture will be able to move forward. A few concerns are:

- Money to regulate and control fish farming in Alaska would likely come directly from already underfunded fisheries budgets.
- Disease and genetic dilution are serious problems. Alaska's valuable wild stocks must not be compromised.
- Fish farms would compete for traditional fishing sites and anchorages while providing few, if any, benefits to Alaskans.
- Other countries that have invested in fish farming did so because their wild stocks declined. Alaska has 43% of all wild salmon stocks worldwide, and 90% of U.S. wild stocks. Commercial fishermen in Norway and British Columbia are suffering because of salmon farming projects.

Your legislators, the Anchorage/MatSu delegation, must hear from you. In this election year your letter will have great power because you are his/her constituent. The enclosed sheet can help you write your letter.

UFA Mariculture Committee

UFA has established the Wild Salmon Defense Fund to fight the mariculture battle in the halls of the Legislature. Some of this money is being used to target fishermen such as yourself: we hope you will help us convince your legislators that salmon farming in Alaska is a bad idea. If you can contribute, please send your check to us today!

Legislators value handwritten letters. It will take only a moment for you to compose your original letter, which can be copied to your legislators. Write to as many as you can!

You may refer to the enclosed UFA fact sheet for help in composing your letter. Your handwritten letter can be brief, as long as you explain your basic concerns. If you say nothing more than "I oppose finfish farming in Alaska", that will help.

If you have the time and/or the interest in helping UFA defeat the finfish bill this session, your assistance would be greatly appreciated. For more information, call Chris Green at 279-6519, and tell him that you would like to help. We will be organizing this effort over the phone and through the mails in an attempt to win this important battle.

Senators:

Mitch Abood

Joe Josephson

Pat Rodey

Arliss Sturgulewski

Jan Faiks

Tim Kelly

Rick Uehling

Rick Halford

Jay Kertulla

Mike Szymanski

Representatives:

Ramona Barnes

Virginia Collins

Johnny Ellis

Alyce Hanley

Curt Menard

Randy Phillips

Jim Zawacki

Red Boucher

Sam Cotten

Walt Furnace

Ron Larson

Drue Pearce

Pat Pourchot

Kay Brown

Dave Donley

Max Gruenberg

Terry Martin

Fritz Pettyjohn

Steve Rieger

Address all above letters to: Pouch V, Juneau, Alaska 99811

It is also essential to write to Gov. Cowper: Pouch A, Juneau, Ak. 99811

Salmon Farming in Alaska: Myths and Facts

Myth: Alaska's wild salmon won't be harmed by farmed salmon.

Fact: The Norwegian government has begun establishing farm-free zones near salmon streams and are establishing a gene bank: they have discovered that 10 to 57% of the fish in their streams aren't wild, but instead are escaped farmed salmon.

Myth: No one can afford to buy into commercial fishing these days. The only way to get into the salmon business is through salmon farming.

Fact: Prices in last month's Alaska Fisherman's Journal for complete fishing packages range from \$30,000 to \$500,000 depending on the fishery. Last month, Paul Fuhs (president of the Alaska Mariculture Assoc.) said establishing a salmon farm would cost from \$300,000 to \$1,000,000. A fisherman begins to make money the very first year; a farmer must wait at least two to three years.

In addition, Rodger Painter (Alaska Mariculture Association) and Judy Brady (commissioner, DNR) have recently admitted that, because of the magnitude of capital and operational costs, fish farming will not be a mom and pop operation.

Myth: Fishermen are opposing salmon farming in order to legislate their competition out of existence.

Fact: Salmon farming is being done around the world and Alaskan fishermen must contend with this competition by better quality control and more aggressive marketing. Fishermen oppose its establishment in Alaska for four primary reasons: 1) It will put common property resources into private hands; 2) it will sap State money and personnel from existing fisheries programs; 3) it will primarily benefit wealthy corporate and foreign investors; 4) it will harm Alaska's economy by harming Alaska's fisheries.

Myth: Farmed salmon won't compete for markets with wild salmon and they'll help keep the price high.

Fact: If a product is in demand, scarcity drives the price up and a large supply lowers it. When Norwegian farmers dumped their salmon on the European market early this year (before they were killed by virus), the price for Alaska's salmon in France went down 50¢ a pound. Adding farmed salmon on top of wild salmon in the market is like having a banner season when the price drops because of the quantity available. Farmed salmon now compete directly with all top quality wild salmon, and farms want to enter the frozen market too.

Myth: Salmon farms will pay their own way because they are willing to pay a tax just like fishermen.

Fact: Rodger Painter (executive director of the Alaska Mariculture Association) has said it would be unreasonable to tax salmon farmers until they'd begun to make a profit. Since it would take a farmer two to three years to make even the first sale, there will be a substantial period of time with State money going out and nothing coming in. The most logical source for this State money is current commercial fisheries programs, which are already being cut back.

Myth: The State can limit the size of farms to keep them locally owned.

Fact: Norwegians have found that small farms aren't profitable. There and in B.C. small farmers have either formed associations or been bought out by large corporations.

Myth: Salmon farmers can regulate themselves: they don't need the State telling them how to run their business.

Fact: Government has an obligation to protect the welfare of the public and the public's resources. It must, at a minimum, check the quality of a product being sold for human consumption, see that environmental standards are being maintained, and monitor use of public tidelands. If government turned its responsibilities over to salmon farmers, the high costs would be prohibitive to someone on a tight budget.

Myth: Thousands of new jobs for Alaskans will be created by salmon farms.

Fact: According to British Columbia's Ministry of Agriculture and Fisheries, the average salmon farm employs only six people. It would take 166 farms to create 1000 jobs in Alaska. In B. C. many of the most highly paid jobs have gone to Norwegians, since they are experienced in the business. The Alaska Legislature has been unsuccessful in requiring local hire. How many Alaskans will be hired?

Myth: The spin-off benefits will be a shot in the arm for local economies.

Fact: According to "B.C. Business" (Oct. 87) Norwegian investors included strings in their finance packages: they required monopolies on construction and supply purchases so operators were unable to take advantage of competitive prices and local merchants received few benefits. In addition, the Norwegians' share of the profits returned to Norway with the investors.

Myth: We'll be able to keep this an Alaskan business.

Fact: Bill Hall (Alaska Commercial Fishing and Agriculture Bank) has said neither CFAB nor any other Alaska bank is willing to loan money for salmon farms. Start up and operating costs will be financed either by foreigners or by corporations such as Weyerhaeuser, British Petroleum, Mitsubishi, Union Carbide and the Campbell Soup Company. Business owners rarely ignore their partners' needs, goals or desires.

In addition, the B.C. fish farming industry is currently 65-90% Norwegian controlled. The largest fish farm in Washington has been recently purchased by Global Aqua, a Norwegian company.

Myth: Norway isn't subsidizing their salmon farms so Alaska won't have to either.

Fact: According to Commissioner Tony Smith (Dept. of Commerce and Economic Development) Norwegian fish farm subsidies include: capital grants; guaranteed loans for start up costs and capital investments; a 50¢/kilo subsidy for all international shipments; salmon egg production; research; price supports; a guaranteed minimum income and vacations for workers. They have budgeted \$14.7 million for these programs for next year. What reason is there to think Alaskan farmers won't need State financial help?

Myth: Salmon farms won't hurt the environment.

Fact: They will certainly change the environment: algacides are used to prevent growths on the nets; fish food containing additives and massive quantities of fecal matter are deposited on the ocean floor; dead fish which have been fed antibiotics are prey for other species, thus entering the food chain.

Alaska

Mariculture Association

TO: House Resource Committee Members
HB 108 Co-sponsors

FROM: Rodger Painter,
AMA Executive Director

DATE: May 6, 1987

RE: Proposed Moratorium on Mariculture Permits

The Alaska Mariculture Association (AMA) wishes to express its opposition to House Bill 303 which would impose an indefinite moratorium on the issuance of any permits or licenses for mariculture projects.

AMA is strongly opposed to a moratorium on permits because there has been no demonstration that the status quo would present significant problems pending resolution of the mariculture issue by the legislature. We believe state agencies have sufficient tools at their disposal to deal with the small number of pending permit applications.

Few concerns have been voiced about shellfish operations, and there is no factual information to support suggestions that the agencies are about to be overwhelmed by applications. In fact, contacts with permitting agencies show, much to contrary, that there are only a handful of pending permit applications.

Discussions with the Department of Natural Resources and the Division of Governmental Coordination reveal the agencies have received about three dozen permit applications for shellfish farming in the past couple years. About two dozen shellfish permits have been granted and there currently are four applications pending. The trends suggest a slow growth in applications submitted and permits issued, and there are no indications a flood of applications will materialize.

Oyster farming is a small but well-established business activity in the state with a history dating back to the early 1900s in the Ketchikan area. There also is one operating mussel farm in Kachemak Bay and three or four additional mussel permits have been granted or are close to issuance.

There is considerable amount of interest in Kodiak regarding scallop farming, but no permit applications have been submitted and it is

unlikely any will be unless the Alaska-Japan experimental project yields positive results. The first phase of that project is not scheduled for completion until the end of this year, and the state may anticipate a few permit applications for scallops at that point if the results are encouraging.

A moratorium on scallop farming permits certainly appears to run contrary to the commitment made by the State of Alaska in funding a major international experiment to test the feasibility of scallop culturing by residents of Kodiak Island. A permit moratorium would prevent participants from making the transition from government-funded studies to private enterprise. One enterprising Cordova resident already has independently captured weathervane scallop in Prince William Sound on his own without being involved in the project. Does the State of Alaska want to halt the ingenuity of enterprising individuals willing to solve problems without government assistance?

Shellfish farming presents no greater problems than any of the other multitude of uses in the tidelands. In terms of problems with competing uses, shellfish farms are no different than log dumps, docks, bouys, floathomes, mineral terminals, processing facilities, wilderness lodges or crab pot storage areas. If the current permitting process is inadequate to deal with shellfish farming impacts then it has the same shortcomings in dealing with these other uses of our public waters.

Regarding salmon farming, we similarly fail to find any factual information to support a moratorium. There were three applications for salmon farming permits rejected just prior to the March 10 attorney general's opinion, and the same applicant has resubmitted the proposals following the legal clarification. The permits will not give the applicant a lease or any other long-term security in the site. If successful in obtaining the permits, the applicant will be able to conduct site evaluations without guarantees the location will be secured for actual farming operations.

Another company applied for water rights to run a salmon farming hatchery, smolt grow-out facility and pen-rearing operation. The application was denied and an appeal is pending in Superior Court. The applicants own a large parcel of property and adjacent patented tidelands at the site.

These are the only salmon farming applications the state has received to date. This hardly supports concerns that a horde of speculators are prepared to flood our permitting agencies to secure tideland rights.

In closing, I'd like to stress we are extremely willing to sit down with all interested parties to work on the problems that have been raised during legislative consideration of HB 108 and SD 106. However, we strongly oppose the imposition of a moratorium on mariculture permits without the showing that significant problems will materialize in the next year without a freeze.

Alaska Mariculture Association

P.O. Box 020704
Juneau, AK 99802-0704
(907) 586-2032

December 30, 1986

Representative Sam Cotten
P.O. Box V
Juneau, Alaska 99811

Dear Representative Cotten:

The Alaska Mariculture Association (AMA) is looking forward to working with you during the upcoming session to help strengthen Alaska's economy by developing a diverse mariculture industry.

Mariculture, or sea farming, represents one of the most promising opportunities for providing new jobs for Alaskans, but the lack of a clear state policy has resulted in confusing patchwork of often conflicting regulations and statutes. While it is virtually impossible to obtain permits to farm most native stocks of finfish and shellfish, the farming of non-indigenous oysters is allowed.

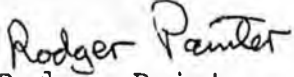
AMA is working on legislation leading to an easily followed path through state regulatory requirements and essential government services to protect public health and our valuable common property fisheries resources. We will be contacting you in the near future with additional information.

Attached is a report on mariculture developed over the past several months by the Alaska Mariculture Technical Work Group. The work group, which was sponsored by AMA, was composed of representatives of various state and federal agencies. This report presents an unbiased analysis of some issues involved in mariculture development and how they may relate to government programs.

In an effort to keep you informed about the growing interest in mariculture, AMA also is providing you with a complimentary subscription to our monthly newsletter.

We look forward to working with you. Please do not hesitate to contact me for additional information.

Sincerely,


Rodger Painter
Executive Director

Report positive

Inquiry clarifies issues for B.C. salmon farmers

Late last fall the B.C. Ministry of Forests and Lands placed a six week freeze on the issuance of salmon farming tenures in British Columbia. The freeze, sparked by concerns of the 6000-member Union of Fishermen and Allied Workers (UFAWU), was authorized by B.C. Premier Bill Vander Zalm and followed up by the creation of a month-long, one-man inquiry into the B.C. aquaculture industry.

The inquiry, conducted by 47-year-old Kamloops lawyer David Gillespie, toured the BC coast holding day-long public hearings in Prince Rupert, Campbell River, Parksville and Sechart. Terms of reference for the inquiry included a review of issues relating to commercial fisheries, markets, environmental impacts and the process of government approvals for the salmon farming industry.

The hearings sparked heated debate from both sides of the fence, with strong opposition from the UFAWU and sporadic but equally convincing arguments from members of the aquacultural community. Though the fishermen's union seemed most concerned about the threat of competition from farmed fish, they raised a number of other seemingly unrelated issues during the hearings.

One recurring theme was that aquaculture was "out of control" in British Columbia. That it was growing too quickly and without due concern for other coastal users. The UFAWU wanted both the freeze and inquiry extended. Fish farmers responded by describing the lengthy application process and the number of permits required to legitimize a coastal salmon farm. They insisted that the freeze be dropped as soon as the inquiry was over. Their primary concern was that an extended freeze could do extensive damage to the B.C. aquaculture industry, possibly frightening off individuals and companies planning to invest in fish farming and/or the support services.

Both fishermen and recreational boaters expressed concern about possible pollution from fish farms and the transmission of disease to wild stocks. Fish farmers and scientists argued that the risks of fish farm pollution and disease transference are minimal and, indeed, of most concern to the fish farmers themselves who would be the first affected.

One of the most controversial issues was over the use of tributyltin (TBT) as an antifouling agent on net pens. The

fisherman's union presented a recent study by the US. National Marine Fisheries Service that found traces of TBT in a number of farm-raised salmon purchased from public markets in Portland and Seattle. TBT, which is the same anti-fouling agent used on boat bottoms, has been suspected of causing mutations in young oysters and consequently has become the cause of considerable concern among B.C. oyster growers. The province has done some preliminary studies on the effects of TBT but apparently lacks funding to

do the more thorough investigations that are obviously required. In the meantime both the B.C. Salmon Farmers Association and the Mariculture Association of B.C. advise their members against using anti-foulants containing TBTs. Government spokesman George Hunter of DFO noted that TBT is really part of the larger picture - *quality control* - and should be governed by industry standards like those in the agricultural sectors.

When it was all over, B.C. salmon farmers generally agreed that the inquiry had been good for the industry. In many ways it had legitimized salmon farming and publicly clarified many of the misunderstandings and 'half-truths' belaboured by opponents of the industry.

The recommendations....

One month and 258 submissions later Inquiry Chairman David Gillespie released a 50 page report containing 52 recommendations relating to the B.C. aquaculture industry. Some of the highlights are summarized below:

- The provincial government should continue its support of the aquaculture industry, develop a clear aquaculture policy, clarifying direction, agency roles and responsibilities of both government and the private sector.
- The province should establish an aquaculture advisory council from key agencies and interest groups. *[This is already in the works and should be finalized by month's end.]*
- The province should establish a master agreement with the federal government respecting approvals, regulations, monitoring and services for the aquaculture industry.
- The province should continue to let market forces dictate farm and wild-caught salmon prices. *[In other words, marketing controls, production limits, etc. should not be considered]*
- Increase support for research, particularly into the long-term effects of salmon farming on the marine environment and into the use and impact of toxicants, hormones and antibiotics used in finfish aquaculture.
- The province should establish a mandatory environmental monitoring system for each site and the surrounding area. *[Government would have to develop some standards first]*
- The province should end the importation of Atlantic salmon eggs by Fall 1987. *[A contentious issue for the half dozen or so farms now raising Atlantic salmon, but of little*

consequence to most others]

- Increase the recommended distance between salmon farms from 1/2-mile to two miles. *[A similar distance is also recommended between new salmon farms and existing oyster leases].*
- Encourage the establishment of standards for aquaculture equipment to eliminate the use of harmful toxicants. *[A direct result of the current controversy over TBT]*
- Initiate immediate coastal resource studies for Campbell River-Johnstone Strait, Islands Trust and Sechart Inlet areas. *[All areas of rapid aquaculture growth]*
- Continue the use of the interagency referral system; expand the list of groups consulted and extend the referral period to 60 days.
- Remove requirements for cost, husbandry, production and harvest strategies from existing farm production plans. *[Government should stick to resource management and planning]*
- Maintain Section 10 licences but change name to something like "investigative permit" to better reflect its nature and quell gold rush image of the industry.
- The province should require a commitment bond to accompany all finfish aquaculture applications. *[Essentially to discourage speculative endeavours]*
- Revise *[raise]* rental rates on crown land and establish a clean-up bond to cover expenses in event of abandonment of a site.

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Prospects

Of Debt and the Dollar

It was no accident that six of the so-called Group of Seven industrialized nations finally met last weekend to discuss the dollar, says Gert von der Linde, chief economist at Donaldson, Lufkin & Jenrette. The meeting came right on the heels of Brazil's announcement that it will suspend interest payments on its \$108 billion in international debt — a plan, says Mr. von der Linde, that has introduced a new threat to the dollar.

If American banks cannot collect on debt owed by Brazil or other South American nations, he says, foreign investors could lose confidence, withdraw their dollar deposits and sell the dollars on international markets — thus weakening the currency further.

But the G-7 meeting "prevented substantial decline in the dollar," Mr. von der Linde said. And the participants' pledge to intervene in the future if the dollar dips too low should help neutralize the Brazilian factor. "With the threat of intervention, the potential negative that Brazil represents is at least postponed, if not eliminated," he said.

Plumper Profits

One reason for the stock market's soaring rise is that investors are anticipating loftier corporate profits in 1987, says Mackey D. Levy, chief economist at Fidelity Bank in Philadelphia. Mr. Levy predicts that profits this year will be 9 percent higher than in 1986.

The weaker dollar is at the heart of the expected improvement, he says. The dollar's diminished value makes imports more expensive, and this, in turn, raises demand — and prices — for American-made products. Since labor costs are likely to remain relatively low —

major wage settlements are not expected until 1988 — profit margins will increase.

Where will profit gains be the greatest? Probably among companies that have been hurt by foreign competition during the strong-dollar years — chemical and pharmaceutical corporations, for instance. Such companies are poised for greater profitability, says Mr. Levy, since by now "they have trimmed their inventories, lowered their operating costs and reduced their break-even points."

Passport Discrimination?

Across America, the Fish Are Jumpin'



maybe some lobsters or some shrimp," and that would

Seafood businessmen like to say that consumers

It's a bigger business than chicken. Even tilapia and skate wings sell.

By N. R. KLEINFELD

DURING Steve Connolly's early days in the seafood business back in the late 1940's, he was accustomed to getting the brush-off.

Working as a salesman for a Boston fish wholesaler, he would go out on his rambling pilgrimages to supermarkets and restaurants and, as he recalled, "I'd tell them I was selling fish. They'd say, 'Well,

maybe some lobsters or some shrimp,' and that would be it. All the time, I'd hear, 'We don't use much fish. Now get going. The meat man just walked in.'"

Five years ago, Mr. Connolly founded his own wholesale company in Boston, called Steve Connolly Seafood. When his salesmen make their rounds, he said, the reaction is, "You're selling seafood? It's right down. Take the best chair. I want something of everything you've got." His company sold \$8 million worth of fish its first year and \$25 million last year.

The seafood industry has changed drastically. As Americans have become bewitched by things like orange roughy, tilapia and opakapaka, the business has gone from mom-and-pop dimensions to sizable operations like Mr. Connolly's that do \$10 million to \$40 million in fish sales annually. With something like 4,000 seafood wholesalers and processors in the country, no one dominates the fish industry, though consolidation is beginning to occur.

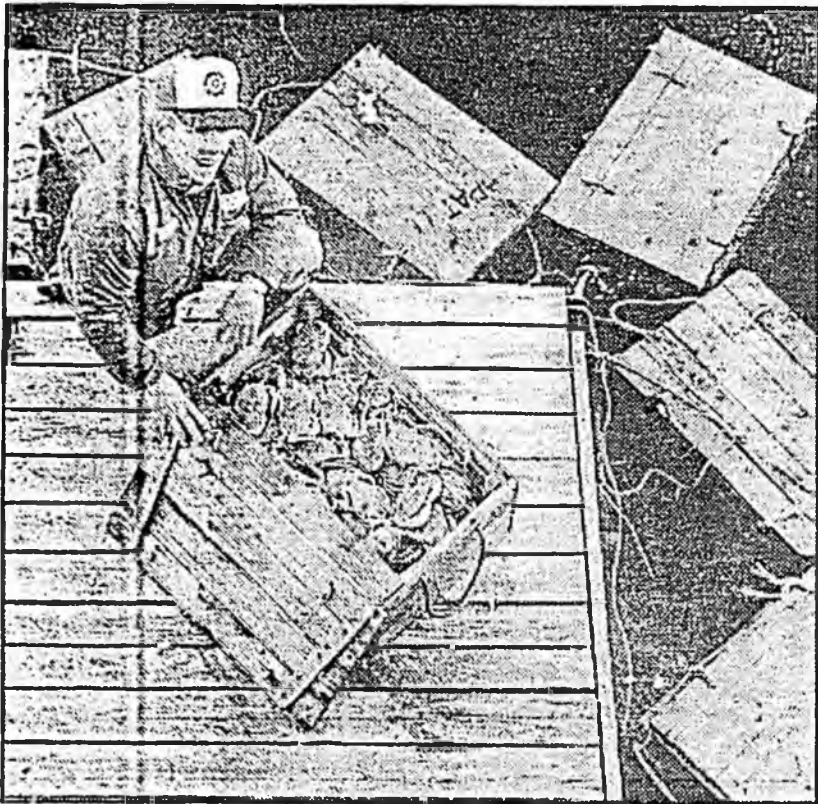
Seafood businessmen like to say that consumers have developed a penchant for just about anything that swims. To meet this demand, the 61-year-old Mr. Connolly has been fairly crafty in marketing peculiar fish products. Even he, though, is sometimes startled at what people will eat. His latest offering, for instance, is skinned skate wings (skate is a flat fish with the broad-winged body of a ray fish). It is tough to remove a skate's skin. Some people accomplish it by taking pliers and yanking it off. A few weeks ago, however, Mr. Connolly succeeded in adapting a machine normally used to skin liver to shave off skate wings.

"I think the wings are going to work well," he said. "They're cheap and so I see them having a wide appeal. Skate could really go."

Only a decade or two ago, fish had a dull image. It was something to eat grudgingly on Friday or when the budget was too strapped for a sirloin. Various fac-

Continued on Page 8

The Fish Are Jumpin' All



The New York Times/Sieve Liss

Culling live crabs at the dock for Connolly's Crabs in Gloucester (left). The crabs are shelled by machine.

Continued from Page 1

tors, however, have conspired to lift it from a food associated with penance to an everyday staple, and even a gourmet treat. Most of all, the concern for healthier diets has prompted consumers to gravitate to meat substitutes, like fish, that are low in calories and in fat. The steady spread of aquaculture, the science of raising fish on watery farms outside of oceans, has increased the seafood stock; some 12 percent of total American fish consumption now comes off farms, four times the amount in 1975. And wider use of airplanes to transport fish and better refrigeration equipment has introduced more fresh species to inland parts of the country.

These factors, says the National Marine Fisheries Service, have pushed per-capita seafood consumption up from 10.9 pounds in 1966 to 12.9 pounds in 1976 to 14.5 pounds in 1985. Expectations are that consumption may approach 30 pounds by 1990. That is still well shy of chicken, in the 59.5-pound neighborhood, and beef, at a dwindling 79.

Nobody, though, expects fish to catch poultry or meat. Not enough fish swim in the world's waters for that to happen, even though America imports more than half its seafood. And most fish do not grow quickly enough for fish farms to meet huge demand. If chicken eating goes up, farmers can toss more eggs into the incubators and within weeks chickens are plump enough for market. Fish,

however, can take two or three years to mature, at sea or on the farm.

"To increase per-capita consumption by one pound," explained Lee Weddig, the executive vice president of the National Fisheries Institute, a trade association, "you would need to catch 700 million additional pounds of fish in the water. The total amount of cod and haddock caught in New England is about 100 million pounds. So you see the problem."

Nevertheless, the taste for fish and the preoccupation with health, have elevated seafood to a roughly \$16 billion annual business — compared with \$12 billion in revenue for chicken, which is cheaper, and \$44 billion for beef — and encouraged a lot of companies to take a new look at it.

Now you can visit any burger outlet — McDonald's, Burger King, Wendy's — and find fish. There is also a growing network of fish specialty chains like Long John Silver, Sea Galle and the Red Lobster. Supermarkets, meanwhile, are opening new and sizable seafood sections. And big corporations like Ralston Purina, W.R. Grace, Campbell Soup, Weyerhaeuser and Con Agra have gotten into fish farming. One group of companies has applied its energies to producing imitation fish products.

Demand keeps climbing even though prices of some species have reached the \$7 to \$10 a pound range. New, inexpensive varieties, however, are hitting the market, some selling for as little as \$2 a pound. Fish are hot

enough that "trash fish" like monkfish that used to be dumped back are now being served in expensive restaurants and at classy dinner parties.

Kroger's reels it is as plugged-in as the wisest supermarket chains to middle American tastes. It was one of the first to discover fresh seafood — even though its 1,050 stores are largely sprinkled through the Midwest, where not a lot of fish swim.

Kroger will fly red snapper in from Taiwan, if that's the only place it can get enough. The chain even has its own fresh fish distribution warehouse, handling 72 varieties, in Greensburg, Ind.

Kroger's got into fresh seafood in 1977, and is steadily adding departments to all of its stores. It has gotten up to store No. 491. Its sales are growing by 15 percent a year, according to Bill Parker, a vice president. "It's probably the best growth category we have," he added. Fish, moreover, generally command higher markups than meat and poultry, Mr. Parker said. And the supermarkets realize that there is an enormous opportunity to be mined, since fish have predominantly been a restaurant product. According to surveys, two-thirds of the seafood sold is consumed at restaurants, though fish people believe the pendulum is starting to swing toward home preparation.

Grand Union took enough care with its new seafood departments that "hired Milton Glaser, a well-know-

graphic designer, to work on them. The white-tiled departments, with their ice cases and tanks for live shellfish, have helped Grand Union's seafood sales to spurt by 12 percent in each of the last two years, according to Steve Osder, the director of seafood merchandising.

Throughout the country, supermarkets have gotten onto a fish kick, putting in more display space and snazzier departments, as well as stocking greater variety. Supermarkets, Mr. Osder said, still sell more frozen than fresh seafood, although sales of frozen seafood have been stagnant. Canned fish, particularly tuna, is another growing category, driven by nutritional concerns and the American infatuation with the tuna fish sandwich; in 1985, annual per-capita canned fish consumption was 5.2 pounds, the highest level since 1937, when it was 5.3.

After tuna, shrimp is the most widely purchased seafood, in pounds sold, followed by codfish, clams and salmon. What's nice about fish is the variety. In all, something like 400 species are available to buy. Some of the hot newcomers are the orange roughy, the kingclip and the catfish (which used to be eaten mainly in the South but is now being promoted and accepted in the North). Kroger's, in fact, says catfish is its No. 1 seller.

There is still a sticky obstacle to selling catfish and other fresh seafood for home consumption: People don't know how to prepare them.

Not to worry at Kroger's. All of its fish departments pass out recipes. Some stores sport video units that enable a customer to call up recipes. At still others, Kroger's has specially designed scales. When attendants weigh a fish, they can punch a button and the scale will print out a recipe on the price sticker. Up to 150 recipes can be stored in each scale.

Recipes or not, it's a dicey managing seafood departments. Mr. Osder of Grand Union knows that all too well. Availability fluctuates almost daily. Prices become unpredictable, often surging with little warning. It has to do with the nature of how we get fish.

"Unlike all other agricultural commodities in the food chain, seafood is the only hunted commodity," Mr. Osder said. "Other products are farmed, and there is a degree of control. Some fish are lagged now — mainly trout, catfish and salmon — but everything else is hunted."

When Bob Valenti goes to get his fish, he steps outside his weather-worn office, walks a dozen feet and gathers them up. Wind, rain, storms — those things don't stop him.

For 11 years, Bob Valenti has been raising striped bass in artificially made pools beside Napeague Bay in Amagansett, L.I. The early settlers called the area the Promised Land, and that's what Mr. Valenti hopes it will become for his Multi-Aquaculture Systems Inc.

He is a jowly man of 43, roughly dressed, with a contagiously cheerful disposition. He gave up a career as a fish geneticist working for private marine laboratories to become a farmer. "I got tired of the politics involved in getting funds," he said. "So, like a lot of fish research people, I thought, hey, aquaculture looks promising. Let's go do it."

The heart of his operation is 22 circular tanks, each 26 feet in diameter. Some people, he said, think farm fish aren't as tasty. He shook his head vigorously. "How can't it taste the same? It swims in water, and the water has to be clean to keep the fish swimming, right?"

The rapid rise in demand for seafood has drained American waters and taxed the nation's fishing fleets. Hence, 64 percent of the all fish sold in the United States is imported, the fisheries service says. That makes this nation the world's No. 2 importer of fish, after Japan. We are also the No. 2 exporter, after Canada, selling mostly salmon and crab to Japan. Imports, though, far outshadow exports: in 1985, the latest figures available, about \$4 billion in fish came in; about \$1 billion went out.

To help keep fish on the dining table, entrepreneurs like Mr. Valenti and huge corporations have gotten into aquaculture, which is being looked on as the best hope of producing enough fish in this country to keep up with growing demand. But researchers have not yet discovered ways to grow many species in artificial settings. And most fish take years of feeding before they get big enough and therefore are often too expensive to farm profitably.

Fish farming began in China 4,000 years ago, but the sophistication has greatly improved as techniques have been perfected in the last decade. The most popular farmed seafood in this country are catfish, trout, crawfish



The New York Times/Michael Shure

Amagansett fish farmer Bob Valenti showing off a stuffed striped bass (above). A skate about to be skinned.



and oysters. Virtually all the rainbow trout sold commercially in America is farmed, as is 95 percent of the catfish. These are species with short and therefore relatively inexpensive growing cycles. But other seafood — abalone, mussels, salmon — are being tried, and the technology is such that some species, like striped bass, now grow to eating size more quickly on farms than in their natural habitats offshore.

Because of all this, Bob Valenti thinks he is on the brink of big dollars. His farm strategy has gone through several cycles. For the first five years, he raised pan-sized striped bass to sell to restaurants and wholesalers, but then the commercial catch became plentiful enough that his income almost disappeared. He switched to raising young fish to sell to stock lakes or for other farms.

But a dwindling supply of striped bass, as well as contamination of them in some waters, has prompted various states in the last few years to restrict striped bass fishing. Thus Mr. Valenti is returning this year to raising pan-sized bass. He figures to produce about 35,000 pounds a year. Don't look for his fish tomorrow. It takes 12 to 18 months for farm bass to grow big enough to cook.

A lot of seafood fans seem perfectly happy to dine on surimi — a cheap fish disguised as an expensive one.

The disguise process begins with a fish block generally made from the flesh of pollack, a fish available in enormous quantities from the Bering Sea. By complex cooking and blending techniques, the block is fashioned into different filament lengths and structures. Mixed in are ingredients such as egg white, wheat, food coloring and often artificial flavoring so that the pollack winds up looking like a shellfish. Depending on the ingredients, it can appear as shrimp or crab or just about anything.

"Surimi is like flour to the baker," said David Berelson Jr., the president of the Berelson Company, the biggest American surimi marketer. "It can be created into any product."

Berelson, which is based in San Francisco, brought the idea to America in 1975 from Japan, where surimi is an old art. The Suguyo Company, a small enterprise in Naha, had sold Berelson other fish products, and when executives told David Berelson Jr. about surimi, lights went off.

"I was born and raised out in California," Mr. Berelson said, "and I always loved crab. I saw it got very scarce and very expensive and I thought, my God, this is a wonderful opportunity."

Berelson's Sea Legs brand is now the biggest selling surimi product. Sea Legs Supreme, a crab salad, is the most popular item, though the company also markets other crab and lobster surimi products. About 20 other companies also sell surimi versions of shrimp and scallops.

Since surimi's arrival in the United States, the concept has blossomed into what is estimated to be a \$400 million business. Berelson won't disclose what its surimi revenues are, but it says industrywide surimi sales

have doubled each year, until they leveled off in 1984 because of price increases of about 20 percent, set off by the rise in the value of the yen.

Surimi isn't for everyone. Some say it tastes awful compared with unprocessed fish. The product, moreover, doesn't contain as much protein or as many nutrients as fresh fish. Nevertheless, some restaurants drop surimi into salads and seafood offerings without advising consumers. That's legal everywhere but in Maine, where seafood ingredients must be identified.

Many fish, unfortunately, don't sound like something you would want to put in your mouth. They've got these abysmal names. Do you want to go out on a date and order dogfish? Would you ever serve the w-laws a k-i-p-i-n-g of blowfish?

There's a simple solution. Change the names. Fish wholesalers have. Dogfish is more commonly known now as salmon shark or grayfish. Blowfish is called sea robin or sea squab. Monkfish, which not only sounds like something best left in the sea but also happens to be about the ugliest fish in the ocean, goes by its French name. "The name doesn't sound so hot, so you make up new ones," said Bill Desmond, a vice president of Inland Seafood, an Atlanta fish wholesaler. "A lot of this seafood business is marketing. Just about any fish in the sea, you have something similar to it. So you borrow that name."

The three-year-old Sea Grill Restaurant in Manhattan, in fact, has found a marketing edge by calling o-carre fish. Bob McKay, the assistant director, says that the establishment has been especially successful with Hawaiian fish like mahi, ono and opah. "They're going to be one of the trends to watch in 1987," he said. "We're finding that the public really has an open mind. They'll try these things they never heard of. And I don't blame them. They're good." ■

RESOURCE DEVELOPMENT COUNCIL

DRAFT
STRATEGY FOR ADVANCING
ALASKA'S MARICULTURE INDUSTRY

FEBRUARY 19, 1987

PROPOSED DRAFT LEGISLATION

LAND OWNERSHIP AND MANAGEMENT

Objective I-A:

Define regulations and procedures to provide for the use of state lands (tidal and submerged) for aquaculture products and port and harbor development.

Task 1: Revise AS Title 38 Sec. 05.082 Leases for shore fisheries development to make it applicable to aquaculture development.

* Section 38.05.082 is amended as follows:

(a) The director, with approval of the commissioner, may lease tide and submerged land for fisheries development. Fisheries development includes the utilization of shore gill nets or set nets for the taking of fish and development and operation of an aquatic farm as defined under AS 08.06.300 and permitted under AS 08.06.010. Every lease issued under this section shall reserve to the public a right-of-way for access to navigable waters and other tide and submerged land.

Adding the following subsections:

(f) The director may classify land as subject to leases for fisheries development, and publicly invite applications for the selected areas. The director will continue to accept and execute fisheries development lease applications (in lieu of the aforementioned land classification. Each application shall be accompanied by an affidavit describing the proposed aquaculture farm project and shall include a schedule for developing and operating the aquatic farm and to the effect that the applicant presently intends to follow the schedule for utilizing the leased area. This information may be incorporated in the lease agreement. If two or more applications are received for the same area, the director shall award the lease to the most qualified applicant. ~~In determining the qualification of applicants, the director shall consider the (length of time during which the applicant has been engaged in aquatic farming) the proximity to best aquatic farm sites of the applicant to the land to be leased, the present ability of the applicant to utilize the resources to their potential, and other factors relevant to~~

~~the equitable assignment of the disputed area. If the director
can not determine a preference between conflicting applicants for
the same lease site on the basis of qualifications, the director
shall select between the applicants by lot. An aggrieved
applicant may appeal to the commissioner within five days for a
review of the director's determination.~~

(g) A lease for aquatic farming may be issued for any period not exceeding 25 years. If the commissioner determines that the land is being utilized for the purpose for which the lease is issued, the lease may be declared void. The director shall establish a reasonable rental for the lease, equal to the administrative costs involved in processing the leasehold applications.

(h) Term of leases are governed by AS 38.05.085

RDC-9

DNR Progress
to date

Possible changes in DNR statutes/regs/policies

- lease preference to permittee (right of first refusal)
- lease not by auction, but to project in the state's best interest
- highest and best use
- reasonable fee charged (leases and permits)
- lease fee based on minimum royalty their gross receipts (encourage small operators, allow industry to get going)
- lease preference to Alaskans (if constitutional) (One year residency?)
- lease clean-up bond
- lease commitment bond (also permits) (to avoid speculation)
- show economic viability (to avoid speculation)
- require development schedule (to avoid speculation)
- require adequate site monitoring and reporting (to avoid speculation)
- require demarcation of lease area
- renewal based on performance
- don't require classification outside of area plan
- no survey in remote areas/paper plat acceptable

Siting criteria

aquatic farms will be sited so as to:

- * minimize land use conflicts
- * provide environmental safeguards
- * maintain navigation and access channels
- * reduce visual and aesthetic impacts

DELIVER TO: <u>Dick LeFebvre</u>	LOCATION: <u>Arctic Ltn</u>
FROM: <u>Paula Burgess</u>	LOCATION: <u>L+W-Juneau</u>
TELEPHONE/TELECOPIER # _____	TOTAL NUMBER OF PAGES <u>1</u>
TRANSMITTING ON/SPEED <u>Standard</u>	DATE <u>2-20-87</u> TIME <u>3:50</u>
PHONE FOR PROBLEMS/NAME/NUMBER <u>765-2460, Lori</u>	
COMMENTS <u>Please give to Bob Meyer</u>	

**STATE OF ALASKA 1987 LEGISLATIVE SESSION
FISCAL NOTE**

REQUEST: _____
 Bill Version: HB 108/SB 106
 Publish Date: 2/4/87
 Revision Date: N/A
 Title: Aquatic Farming: Mariculture
 Agency Affected: Commerce & Econ. Dev.
 BRU: Economic Development Advocates
 Sponsor: Rep. Ellis/Senator Znaroff
 Requestor: _____
 Components: Office of Commercial Fisheries Development

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES	15.0	5.5	6.0	6.6	7.3	8.0
TRAVEL	10.0	5.5	6.1	6.7	7.3	8.1
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	25.0	11.0	12.1	13.3	14.6	16.1
CAPITAL						
REVENUE	5.0	10.0	15.0	20.0	25.0	30.0

FUNDING: (Thousands of Dollars)

GENERAL FUND	25.0	11.0	12.1	13.3	14.6	16.1
FEDERAL FUNDS						
OTHER						
TOTAL	25.0	11.0	12.1	13.3	14.6	16.1

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

This program will become a priority mission of OCFD and shall be assigned to existing personnel. Initial permit requests are not expected to exceed 80% of one Development Specialist II available time. Travel is programmed for site visits as envisioned by the bill and contractual includes phone, photocopy and

Prepared by: W.G. Paulick Phone: 465-2162
 Division: Office of Commercial Fisheries Development Date: 2/17/87
 Approved by Commissioner: Anthony Smith Date: 2/17/87
 Agency: Department of Commerce and Economic Development

Distribution (by preparer):

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)
- Senate Secretary

1987 LEGISLATIVE SESSION
FISCAL NOTE

HB 108/SB 106

Analysis: (Continued)

other expenses related to permitting as required by the bill. FY 87 includes funding for public hearings, etc., to finalize new regulations. Program receipts have been estimated by using a fee of \$100 per annual permit; 50 new permits per year.

IN THE

BY

_____ BILL NO. _____

IN THE LEGISLATURE OF THE STATE OF ALASKA
FIFTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act authorizing and encouraging
aquatic farming and providing an
effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. FINDINGS AND PURPOSES. The legislature
finds and declares that

(1) Aquatic farming in Alaska would provide a consistent
source of quality food, provide new jobs, increase Alaska
exports, create new commercial fishing and other business
opportunities, and increase the stability and diversity of
Alaska's economy;

(2) Many areas of the state are ecologically suited for
aquatic farming development;

(3) Aquatic farming would complement and enhance the
variety and quality of Alaska seafood and aquatic products, and
would thus benefit Alaska's economy as a whole;

(4) The principal responsibility for development of
aquatic farming in the state rests with the private sector.
Existing constraints on the private sector tend to be
administrative rather than scientific or technological, and the
proper role of government is to ease those constraints and to
provide encouragement and support through programs and services
that cannot reasonably be expected from private sources; and

(5) It is the policy of this state to encourage the
establishment and growth of an aquatic farming industry.

* Section 2. AS 16 is amended by adding a new chapter to read:

CHAPTER 12. AQUATIC FARMING

Sec. 16.12.010. AQUATIC FARM AND HATCHERY PERMITS; LIMITATION ON RELEASE. (a) No person may conduct either of the following activities without a permit from the commissioner:

(1) the construction or operation of an aquatic farm;
or

(2) the construction and operation of a hatchery for the purpose of supplying aquatic plants and animals to an aquatic farm.

(b) A permit issued under this section authorizes the permittee, subject to the conditions of this chapter, to acquire, purchase, offer to purchase, transport, possess, sell and offer to sell stock and aquatic farm products that are used or reared at the hatchery or aquatic farm.

(c) No salmon, steelhead or other trout may be released from a hatchery or aquatic farm permitted under this section into the public waters of the state without authorization from the Department of Fish and Game.

Sec. 16.12.020. COLLECTOR PERMITS. (a) No person may collect aquatic plants or animals from wild stock in the state for the purpose of supplying stock to an aquatic farm or hatchery permitted under AS 16.12.010 without a permit from the commissioner.

(b) A permit issued under this section authorizes the permittee, subject to the conditions of this chapter, to harvest those 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 permitted under AS 16.12.010.

(c) The commissioner, in consultation with the commissioner of fish and game, may attach conditions to a permit issued under this section, 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 animals do not apply to a permitted collector harvest under this section.

(d) The commissioner shall forward a copy of any permit application under this section to the commissioner of fish and game. If the commissioner of fish and game objects to the permit's issuance within 14 days of receipt of the application, the permit must be denied. The commissioner of fish and game may object to the issuance of a permit under this section only upon finding that the proposed harvest will substantially impair natural production needs, and the objection must contain the factual basis for that finding.

(e) The commissioner shall grant a permit under this section if:

(1) wild stock is needed for initial farms or hatchery stock;

(2) there are technological limitations on the propagation of cultured stock for the species sought;

(3) wild stock is needed to maintain the gene pool of a hatchery or farm; or

(4) commercial harvest of the species sought is neither limited under AS 16.43 nor fully developed.

(f) When aquatic plants or animals are acquired under a permit issued under this section, they become the property of the permittee and are no longer a public or common resource.

Sec. 16.12.030. IMPORTATION OF AQUATIC PLANTS OR ANIMALS FOR STOCK. No person may import an aquatic plant or animal into

the state for the purpose of supplying stock to an aquatic farm or hatchery unless authorized by a permit or regulation of the Board of Fisheries.

Sec. 16.12.040. REGULATIONS; OTHER AUTHORITY. (a) The commissioner may adopt regulations necessary to implement this chapter. The commissioner shall compile and annually report aquatic farm and hatchery production statistics.

(b) Except as provided in AS 16.12.030, the Board of Fisheries may not adopt any regulations, or take any action regarding either the issuance, denial or conditioning of any permit under AS 16.12.010 - 16.12.020; the construction or operation of any farm or hatchery permitted under AS 16.12.010; or a permitted harvest under AS 16.12.020. Regulations or orders adopted by the Board of Fisheries under AS 16.05.251 do not apply to a permitted harvest under AS 16.12.020.

Sec. 16.12.050. DISEASE CONTROL AND INSPECTION. (a) The Department of Fish and Game may order the destruction and disposal of any diseased stock or aquatic farm products when that department finds it necessary to protect natural stocks. A permit holder under AS 16.12.010 - 16.12.020 shall immediately report any outbreak or incidence of disease to the Department of Fish and Game.

(b) A permittee under AS 16.12.010 - 16.12.020 shall permit the Department of Fish and Game to inspect the farm or hatchery during operating hours and upon reasonable notice. The cost of inspection will be borne by that department.

(c) The Department of Fish and Game shall develop a disease management and control program for aquatic farms and hatcheries.

(d) The Department of Fish and Game shall, to the extent feasible, provide permittees with disease diagnostic and management services, and may enter into contracts with other state or federal agencies, or the private sector, to provide those services.

Sec. 16.12.060. PERMIT CONDITIONS; RESTRICTION ON TRANSFER; ANNUAL RENEWAL. (a) The Commissioner, after consulting with the Department of Fish and Game, may attach conditions to a permit under AS 16.12.010 that are necessary to protect the public health or natural stocks.

(b) A private hatchery permitted under AS 16.12.010 may sell or transfer stock from the hatchery only to an aquatic farm or other hatchery permitted under AS 16.12.010.

(c) No stock may be transported to or from an aquatic farm or hatchery permitted under AS 16.12.010 without first submitting a notice of transfer to the Commissioner. The notice must be accompanied by a health inspection report from the Department of Fish and Game, or from a disease diagnostician approved by that department. The notice of transfer must be submitted no later than 30 days before the proposed date of transfer. The Department of Fish and Game may restrict or disapprove the transfer if it finds that the transfer would either present a substantial risk of spreading disease or, in the case of a transfer from a hatchery, would significantly impair the production needs of that hatchery.

(d) A permit issued under AS 16.12.010 must be renewed annually. The renewal application must be submitted to the Commissioner no later than 30 days prior to the expiration of the permit. Each renewal application must be accompanied by a health inspection report from the Department of Fish and Game, or from a fish disease diagnostician approved by that

department. In the renewal, the Commissioner may impose additional conditions necessary to control and manage disease.

Sec. 16.12.070. LIMITATIONS ON SALE. (a) No person may sell, transfer or offer to sell any aquatic farm product unless that product was grown or propagated on a farm permitted under AS 16.12.010, and that permit was in effect at the time of the sale, transfer or offer.

(b) No person may knowingly purchase, receive or offer to purchase or receive any aquatic farm product that was not grown or propagated from a farm having a valid permit under AS 16.12.010 at the time of the purchase, receipt or offer.

(c) The sale of any aquatic farm product must be evidenced by a bill of sale, and a copy of the bill of sale must be sent to the commissioner within 45 days of the sale. Bills of sale submitted under this subsection, and information contained in the bill of sale when presented in a manner so as to enable identification of the seller, are confidential and may not be released by the commissioner. This subsection does not prevent the commissioner from releasing:

(1) aggregated sales information that does not enable identification of a particular seller or the substance of that seller's transactions;

(2) the bill of sale:

(A) to the Department of Revenue to assist that department in carrying out its statutory responsibilities on the condition that the confidentiality required by this subsection will be accorded by that department;

(B) the municipality with jurisdiction over the sale for the purpose of verifying applicable taxes due on the sale, on the condition that the confidentiality required by this subsection will be accorded by that municipality;

(C) pursuant to court order; or
(D) to the seller upon the seller's written request.

Sec. 16.12.080. PENALTY FOR VIOLATION. A person who violates a provision of AS 16.12.010 - 16.12.070, a regulation adopted under AS 16.12.010 - 16.12.070, or a term or condition of a permit issued under AS 16.12.010, is guilty of a class B misdemeanor.

Sec. 16.12.100. DEFINITIONS. In this chapter,

(1) "Aquatic farm" means a facility which grows, farms, or cultivates aquatic farm products within either artificially enclosed marine or fresh waters, or within controlled waters for immobile species. The term does not include releasing fish or shellfish into the waters of the state and their subsequent recapture in the practice known as ocean ranching;

(2) "Aquatic farm products" include any form of aquatic plants and animals, and fish parts that are propagated, farmed, or cultivated in an aquatic farm and that are sold or offered for consumption;

(3) "Commissioner" means the commissioner of the Alaska Department of Commerce and Economic Development;

(4) "Hatchery" means a facility for the artificial incubation of stock, including rearing of juvenile aquatic plant or animals;

(5) "Stock" includes any form of live aquatic plants and animals that are acquired, possessed or intended for use by a hatchery or aquatic farm permitted under AS 16.12.010 for the purpose of further growth or propagation.

* Section 3. AS 03.05.020(a) is amended by adding a new paragraph to read:

(6) monitor aquatic farms and hatcheries permitted under AS 16.12.010 for the possible presence of paralytic shellfish poisoning.

* Section 4. AS 16.05.251 is amended by adding a new subsection to read:

(f) The authority of the Board of Fisheries under this section is subject to the limitations of AS 16.12.040(b).

* Section 5. AS 16.05.330(a) is amended to read:

(a) Except as otherwise permitted in this chapter, a person may not engage in sport fishing, including the taking of razor clams; in hunting, trapping, or fur dealing; in the farming of [FISH,] fur[,] or game; or in taxidermy, without having the appropriate license or tag in actual possession.

* Section 6. AS 16.05.340(a)(14) is amended to read:

(14) [FISH OR] game farming biennial licenses100

* Section 7. AS 16.05.920(a) is amended to read:

(a) Unless permitted by this chapter or AS 16.12, or by regulation adopted under this chapter or AS 16.12, a person may not take, possess, transport, sell, offer to sell, purchase, or offer to purchase fish, game or marine aquatic plants, or any part of fish, game or aquatic plants, or a nest or egg of fish or game.

* Section 8. AS 16.05.930 is amended by adding a new subsection to read:

(g) AS 16.05.330 - 16.05.720 do not apply to any activity authorized by a permit issued under AS 16.12.010 - 16.12.020, or to any person or vessel employed in pursuit of an activity permitted under AS 16.12.010 - 16.12.020.

* Section 9. AS 16.10 is amended by adding a new section to read:

Sec. 16.10.269. LIMITATIONS. AS 16.10.265 - 16.10.267 do not apply to the purchase or sale of aquatic farm products from a permittee under AS 16.12.010 or stock from a permittee under AS 16.12.020.

* Section 10. AS 16.10.380(b) is amended to read:

(b) In this section "user group" includes, but is not limited to, sport fishermen, processors, commercial fishermen, aquatic farmers, subsistence fishermen, and representatives of local communities.

* Section 11. AS 16.10.400 is amended by adding a new subsection to read:

(h) AS 16.10.400 - 16.10.475 do not apply to the construction or operation of a private hatchery permitted under AS 16.12.010.

* Section 12. AS 16.10.420(3) is amended to read:

(3) no salmon eggs or resulting fry, sold to a permit holder by the state or by another party approved by the department, may be resold or otherwise transferred to another person, unless that person holds a permit under AS 16.12.010;

* Section 13. AS 16.10.420(7) is amended to read:

(7) surplus eggs from salmon returning to the hatchery be made available for sale first to the department and then, after inspection and approval by the department, to operators of other hatcheries authorized by permit to operate under AS 16.10.400 - 16.10.470, or AS 16.12.010;

* Section 14. AS 16.10.450 is amended to read:

Sec. 16.10.450. SALE OF SALMON AND SALMON EGGS BY HATCHERY. A hatchery operator who sells salmon returning from the natural waters of the state, or sells salmon eggs to another hatchery operating under AS 16.10.400 - 16.10.470 or AS 16.12.010, after utilizing the funds for reasonable operating costs, including debt retirement, expanding its facilities, salmon rehabilitation projects, fisheries research, or for costs of operating the qualified regional association for the area in which the hatchery is located, shall expend the remaining funds on other fisheries activities of the qualified regional association. Fish returning to hatcheries and sold for human consumption shall be of comparable quality to fish harvested by commercial fisheries in the area, and shall be sold at prices commensurate with the current market.

* Section 15. AS 16.43.140 is amended by adding a new subsection to read:

(d) This chapter does not apply to activities authorized by permit under AS 16.12.010 - 16.12.020.

* Section 16. AS 16.51.180(5) is amended to read:

(5) "seafood" means finfish, shellfish, and by-products, including but not limited to salmon, halibut, herring, flounder, crab, clam, cod, shrimp, and pollock. The terms does not

include aquatic farm products as that term is defined in AS 16.12.100(2) [;]

* Section 17. AS 43.75.011 is amended to read:

Sec. 43.75.011. FISHERIES BUSINESS LICENSE. (a) A person engaging or attempting to engage in a fisheries business shall first apply for and obtain a license as provided in AS 43.75.020.

(b) This section does not apply to the operation of an aquatic farm permitted under AS 16.12.010.

* Section 18. AS 43.75.017 is amended to read:

Sec. 43.75.017. EXCLUSION FROM FISHERIES BUSINESS TAX. A person is not liable for the fisheries business tax under AS 43.75.015:

(1) when the fishery resource is frozen aboard a fishing vessel if

(A)[(1)] the vessel is operated as a commercial fishing vessel under a valid commercial fishing license;

(B)[(2)] the fishery resource is not processed beyond heading, gutting or cleaning, freezing and glazing;

(C)[(3)] the fishery resource was caught by the vessel; and

(D)[(4)] the fishery resource is sold by the person claiming an exclusion from the tax to a fisheries business licensed under this chapter; or

(2) for the processing or sale of aquatic farm products by an aquatic farm permitted under AS 16.12.010.

* Sec. 18. AS 16.05.940(12) is repealed.

* Sec. 19. This Act takes effect immediately in accordance with AS 01.10.070(c).

Liquaculture Bill
"Lobby 2" Disc

IN THE

BY

_____ BILL NO. _____

IN THE LEGISLATURE OF THE STATE OF ALASKA

FIFTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act authorizing and encouraging aquatic farming and providing an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. FINDINGS AND PURPOSES. The legislature finds and declares that

(1) Aquatic farming in Alaska would provide a consistent source of quality food, provide new jobs, increase Alaska exports, create new commercial fishing and other business opportunities, and increase the stability and diversity of Alaska's economy;

(2) Many areas of the state are ecologically suited for aquatic farming development;

(3) Aquatic farming would complement and enhance the variety and quality of Alaska seafood and aquatic products, and would thus benefit Alaska's economy as a whole;

(4) The principal responsibility for development of aquatic farming in the state rests with the private sector. Existing constraints on the private sector tend to be administrative rather than scientific or technological. The proper role of government is to ease those constraints and to provide encouragement and support through programs and services that cannot reasonably be expected from private sources; and

(5) It is the policy of this state to encourage the establishment and growth of an aquatic farming industry.

* Section 2. AS 08 is amended by adding a new chapter to read:

CHAPTER 94. AQUATIC FARMING

Sec. 08.94.010. AQUATIC FARM AND HATCHERY PERMITS; LIMITATION ON RELEASE. (a) No person may conduct either of the following activities without a permit from the commissioner:

(1) the construction or operation of an aquatic farm;
or

(2) the construction and operation of a hatchery for the purpose of supplying aquatic plants and animals to an aquatic farm.

(b) A permit issued under this section authorizes the permittee, subject to the conditions of this chapter, to acquire, purchase, offer to purchase, transport, possess, sell and offer to sell stock and aquatic farm products that are used or reared at the hatchery or aquatic farm.

(c) No salmon, steelhead or other trout may be released from a hatchery or aquatic farm permitted under this section into the public waters of the state without authorization from the Department of Fish and Game.

(d) An application fee of \$100 must accompany the application for a permit under this section.

Sec. 08.94.020. REGULATIONS; OTHER AUTHORITY. (a) The commissioner may adopt regulations necessary to implement this chapter. The commissioner shall compile and annually report aquatic farm and hatchery production statistics.

(b) Except as expressly provided in AS 16.05.822, the Board of Fisheries may not adopt any regulations, or take any action regarding either the issuance, denial or conditioning of any permit under AS 08.94.010 or AS 16.05.821; the construction or operation of any farm or hatchery permitted under

AS 08.94.010; or a permitted harvest under AS 16.05.821. Regulations or orders adopted by the Board of Fisheries under AS 16.05.251 do not apply to a permitted harvest under AS 16.05.821.

Sec. 08.94.030. DISEASE CONTROL AND INSPECTION. (a) The Department of Fish and Game may order the destruction and disposal of any diseased stock or aquatic farm products when that department finds it necessary to protect natural stocks. A permit holder under AS 08.94.010 or AS 16.05.821 shall immediately report any outbreak or incidence of disease to the Department of Fish and Game.

(b) A permittee under AS 08.94.010 shall permit the Department of Fish and Game to inspect the farm or hatchery during operating hours and upon reasonable notice. The cost of inspection will be borne by that department.

(c) The Department of Fish and Game shall develop a disease management and control program for aquatic farms and hatcheries.

(d) The Department of Fish and Game shall, to the extent feasible, provide permittees with disease diagnostic and management services, and may enter into agreements with other state or federal agencies, or the private sector, to provide those services.

Sec. 08.94.040. PERMIT CONDITIONS; RESTRICTION ON TRANSFER; ANNUAL RENEWAL. (a) The Commissioner, after consulting with the commissioners of fish and game, and environmental conservation may attach conditions to a permit under AS 08.94.010 that are necessary to protect the public health or natural stocks.

(b) A private hatchery permitted under AS 08.94.010 may sell or transfer stock from the hatchery only to an aquatic farm or other hatchery permitted under AS 08.94.010.

(c) No stock may be transported to or from an aquatic farm or hatchery permitted under AS 08.94.010 without first submitting a notice of transfer to the Commissioner. The notice must be accompanied by a health inspection report from the Department of Fish and Game, or from a disease diagnostician approved by that department. The notice of transfer must be submitted no later than 30 days before the proposed date of transfer. The Department of Fish and Game may restrict or disapprove the transfer if it finds that the transfer would either present a substantial risk of spreading disease or, in the case of a transfer from a hatchery, would significantly impair the production needs of that hatchery.

(d) A permit issued under AS 08.94.010 must be renewed annually. The renewal application must be submitted to the Commissioner no later than 30 days prior to the expiration of the permit. Each renewal application must be accompanied by a health inspection report from the Department of Fish and Game, or from a fish disease diagnostician approved by that department. In the renewal, the commissioner may impose additional conditions necessary to control and manage disease.

Sec. 08.94.070. LIMITATIONS ON SALE. (a) No person may sell, transfer or offer to sell any aquatic farm product unless that product was grown or propagated on a farm permitted under AS 08.94.010, and that permit was in effect at the time of the sale, transfer or offer.

(b) No person may knowingly purchase, receive or offer to purchase or receive any aquatic farm product that was not grown

or propagated from a farm having a valid permit under AS 08.94.010 at the time of the purchase, receipt or offer.

(c) The sale of any aquatic farm product must be evidenced by a bill of sale. A summary of all bills of sale specifying quantities, products and sales prices must be submitted to the commissioner on a quarterly basis. Quarterly summaries submitted under this subsection, and information contained in the summary when presented in a manner so as to enable identification of the seller, are confidential and may not be released by the commissioner. This subsection does not prevent the commissioner from releasing:

(1) aggregated sales information that does not enable identification of a particular seller or the substance of that seller's transactions; or

(2) the quarterly summary:

(A) to the Department of Revenue to assist that department in carrying out its statutory responsibilities on the condition that the confidentiality required by this subsection will be accorded by that department;

(B) the municipality with jurisdiction over the sale for the purpose of verifying applicable taxes due on the sale, on the condition that the confidentiality required by this subsection will be accorded by that municipality;

(C) pursuant to court order; or

(D) to the seller upon the seller's written request.

Sec. 08.94.060. PENALTY FOR VIOLATION. A person who violates a provision of this chapter, a regulation adopted under this chapter, or a term or condition of a permit issued under AS 08.94.010, is guilty of a class B misdemeanor.

Sec. 08.94.100. DEFINITIONS. In this chapter,

(1) "Aquatic farm" means a facility which grows, farms, or cultivates aquatic farm products within either artificially enclosed marine or fresh waters, or within controlled waters for immobile species. The term does not include releasing fish or shellfish into the waters of the state and their subsequent recapture in the practice known as ocean ranching;

(2) "Aquatic farm products" include any form of aquatic plants and animals, and fish parts that are propagated, farmed, or cultivated in an aquatic farm and that are sold or offered for consumption;

(3) "Commissioner" means the commissioner of the Alaska Department of Commerce and Economic Development;

(4) "Hatchery" means a facility for the artificial incubation of stock, including rearing of juvenile aquatic plant or animals;

(5) "Stock" includes any form of live aquatic plants and animals that are acquired, collected, possessed or intended for use by a hatchery or aquatic farm permitted under AS 16.12.010 for the purpose of further growth or propagation.

* Section 3. AS 03.05.020(a) is amended by adding a new paragraph to read:

(6) monitor aquatic farms and hatcheries permitted under AS 08.94.010 for the possible presence of paralytic shellfish poisoning.

* Section 4. AS 03.05.026(d) is amended to read:

(d) The commissioner of environmental conservation, after consultation with the Alaska Seafood Marketing Institute and representatives of the aquatic farming industry, shall develop product specifications and standards for the use of the "premium

quality" seal on Alaska seafood products. The commissioner shall authorize a seafood processor to display "premium quality" seal on products that quality for the seal if the processor meets the requirements of regulations adopted under this section and AS 03.05.025, and has been issued a permit to operate under AS 03.05.025. The commissioner shall authorize an aquatic farm permitted under AS 08.94.010 to display a "premium quality" seal on aquatic farm products if the aquatic farm meets the requirements of regulations developed under this section in consultation with the aquatic farming industry and the requirements of AS 08.94.

* Section 5. AS 16.05.251 is amended by adding a new subsection to read:

(f) The authority of the Board of Fisheries under this section is subject to the limitations of AS 08.94.020.

* Section 6. AS 16.05.330(a) is amended to read:

(a) Except as otherwise permitted in this chapter, a person may not engage in sport fishing, including the taking of razor clams; in hunting, trapping, or fur dealing; in the farming of [FISH,] fur[,] or game; or in taxidermy, without having the appropriate license or tag in actual possession.

* Section 7. AS 16.05.340(a)(14) is amended to read:

(14) [FISH OR] game farming biennial licenses100

* Section ~~8~~⁸. AS 16.05 is amended by adding new sections to read:

Sec. 16.05.821. AQUATIC FARM STOCK ACQUISITION PERMITS.

(a) No person may acquire aquatic plants or animals from wild stock in the state for the purpose of supplying stock to an

aquatic farm or hatchery permitted under AS 08.94.010 without a permit from the commissioner. An application fee of \$100 must accompany the permit application.

(b) A permit issued under this section authorizes the permittee, subject to the conditions of AS 08.94, to harvest those 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 permitted under AS 08.94.010.

(c) The commissioner, in consultation with the commissioner of commerce and economic development, may attach conditions to a permit issued under this section, 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 animals do not apply to a permitted harvest under this section.

(d) The commissioner shall forward a copy of any permit application under this section to the commissioner of commerce and economic development. The commissioner's decision must be made within 30 days of receipt of the application.

(e) The commissioner may deny or restrict a permit under this section upon finding that the proposed harvest will substantially impair sustained yield of the species. The commissioner's decision must contain the factual basis for that finding and must also explain why the substantial impairment could not have been reasonably foreseen and avoided through available management options. If the commissioner is unable to find substantial impairment, the permit application must be granted if any of the following circumstances exist:

(1) wild stock is needed for initial farms or hatchery stock;

(2) there are technological limitations on the propagation of cultured stock for the species sought;

(3) wild stock is needed to maintain the gene pool of a hatchery or farm; or

(4) commercial harvest of the species sought is neither limited under AS 16.43 nor fully developed.

(f) When aquatic plants or animals are acquired under a permit issued under this section, they become the property of the permittee and are no longer a public or common resource.

(g) The commissioner shall make stock available for aquatic farming purposes.

Sec. 16.05.822. IMPORTATION OF AQUATIC PLANTS OR ANIMALS FOR STOCK. No person may import an aquatic plant or animal into the state for the purpose of supplying stock to an aquatic farm or hatchery unless authorized by a permit or regulation of the Board of Fisheries.

Section 16.05.823. PENALTIES FOR VIOLATION. A person who violates a provision of AS 16.05.821 - 16.05.822, a regulation adopted under AS 16.05.821 - 16.05.822, or a term or condition of a permit issued under AS 16.05.821, is guilty of a Class B misdemeanor.

* Section 9. AS 16.05.920(a) is amended to read:

(a) Unless permitted by this chapter or AS 08.94, or by regulation adopted under this chapter or AS 08.94, a person may not take, possess, transport, sell, offer to sell, purchase, or offer to purchase fish, game or marine aquatic plants, or any part of fish, game or aquatic plants, or a nest or egg of fish or game.

* Section 10. AS 16.05.930 is amended by adding a new subsection to read:

(g) AS 16.05.330 - 16.05.720 do not apply to any activity authorized by a permit issued under AS 08.94.010 or AS 16.05.821, or to any person or vessel employed in pursuit of an activity permitted under AS 08.94.010 or AS 16.05.821.

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

Sec. 16.10.269. LIMITATIONS. AS 16.10.265 - 16.10.267 do not apply to the purchase or sale of aquatic farm products from a permittee under AS 08.94.010 or stock from a permittee under AS 16.05.821.

* Section 12. AS 16.10.380(b) is amended to read:

(b) In this section "user group" includes, but is not limited to, sport fishermen, processors, commercial fishermen, aquatic farmers, subsistence fishermen, and representatives of local communities.

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

(h) AS 16.10.400 - 16.10.475 do not apply to the construction or operation of a private hatchery permitted under AS 08.94.010.

* Section 14. AS 16.10.420(3) is amended to read:

(3) no salmon eggs or resulting fry, sold to a permit holder by the state or by another party approved by the department, may be resold or otherwise transferred to another person, unless that person holds a permit under AS 08.94.010;

* Section 15. AS 16.10.420(7) is amended to read:

(7) surplus eggs from salmon returning to the hatchery be made available for sale first to the department and then, after inspection and approval by the department, to operators of other hatcheries authorized by permit to operate under AS 16.10.400 - 16.10.470, or AS 08.94.010;

* Section 16. AS 16.10.450 is amended to read:

Sec. 16.10.450. SALE OF SALMON AND SALMON EGGS BY HATCHERY. A hatchery operator who sells salmon returning from the natural waters of the state, or sells salmon eggs to another hatchery operating under AS 16.10.400 - 16.10.470 or AS 08.94.010, after utilizing the funds for reasonable operating costs, including debt retirement, expanding its facilities, salmon rehabilitation projects, fisheries research, or for costs of operating the qualified regional association for the area in which the hatchery is located, shall expend the remaining funds on other fisheries activities of the qualified regional association. Fish returning to hatcheries and sold for human consumption shall be of comparable quality to fish harvested by commercial fisheries in the area, and shall be sold at prices commensurate with the current market.

* Section 17. AS 16.43.140 is amended by adding a new subsection to read:

(d) This chapter does not apply to activities authorized by permit under AS 08.94.010 or AS 16.05.821.

* Section 18. AS 16.51.180(5) is amended to read:

(5) "seafood" means finfish, shellfish, and by-products, including but not limited to salmon, halibut, herring, flounder, crab, clam, cod, shrimp, and pollock. The terms does not

include aquatic farm products as that term is defined in AS 08.94.100(2);

* Sec. 19. AS 16.05.940(12) is repealed.

* Sec. 20. This Act takes effect immediately in accordance with AS 01.10.070(c).

1 IN THE HOUSE

2 HOUSE BILL NO.

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 FIFTEENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act relating to aquatic farming; and providing
7 for an effective date."

8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

9 * Section 1. FINDINGS AND POLICY. (a) The legislature finds that

10 (1) aquatic farming in the state would provide a consistent
11 source of quality food, provide new jobs, increase state exports, create
12 new commercial fishing and other business opportunities, and increase the
13 stability and diversity of the state's economy;

14 (2) many areas of the state are ecologically suited for aquatic
15 farming development;

16 (3) aquatic farming would complement and enhance the variety and
17 quality of Alaska seafood and aquatic products, and thereby benefit the
18 state's economy; and

19 (4) the principal responsibility for development of aquatic
20 farming in the state rests with the private sector.

21 (b) It is the policy of the state to encourage the establishment and
22 growth of an aquatic farming industry and to assist in the planning and
23 orderly development of the industry.

24 * Sec. 2. AS 08 is amended by adding a new chapter to read:

25 CHAPTER 06. AQUATIC FARMING.

26 Sec. 08.06.010. AQUATIC FARM AND HATCHERY PERMITS. (a) A
27 person may not, without a permit from the commissioner, construct or
28 operate

29 (1) an aquatic farm: or

1 (2) a hatchery for the purpose of supplying aquatic plants
2 or aquatic animals to an aquatic farm.

3 (b) A permit issued under this section authorizes the permittee,
4 subject to the conditions of this chapter, to acquire, purchase, offer
5 to purchase, transfer, possess, sell, and offer to sell stock and
6 aquatic farm products that are used or reared at the hatchery or
7 aquatic farm.

8 (c) The commissioner, after consulting with the commissioner of
9 fish and game and the commissioner of environmental conservation, may
10 attach conditions to a permit issued or renewed under this section
11 that are necessary to protect the public health or natural stocks.

12 Sec. 08.06.020. PERMIT APPLICATION, EXPIRATION, AND RENEWAL.

13 (a) An applicant for an aquatic farming or hatchery permit required
14 under AS 08.06.010 shall apply on a form prescribed by the commis-
15 sioner.

16 (b) A permit issued under AS 08.06.010 expires one year after
17 the date of issue.

18 (c) An application for renewal shall be submitted to the commis-
19 sioner at least 30 days before the permit expires.

20 (d) An application for renewal must be accompanied by a report
21 of a health inspection of the farm or hatchery to be permitted. The
22 inspection shall be conducted by the Department of Fish and Game or by
23 a fish disease diagnostician approved by the Department of Fish and
24 Game. The inspection shall be conducted not more than 15 days before
25 the application is submitted to the department.

26 Sec. 08.06.030. AQUATIC FARM STOCK ACQUISITION PERMITS. (a) A
27 person may not acquire aquatic plants or aquatic animals from wild
28 stock in the state for the purpose of supplying stock to an aquatic
29 farm or hatchery required to have a permit under AS 08.06.010 unless

1 the person holds an acquisition permit from the commissioner of fish
2 and game.

3 (b) An acquisition permit authorizes the permit holder to ac-
4 quire the species and quantities of wild stock in the state specified
5 in the permit for the purpose of supplying stock to an aquatic farm or
6 hatchery required to have a permit under AS 08.06.010.

7 (c) The commissioner of fish and game, in consultation with the
8 commissioner of commerce and economic development, shall specify the
9 expiration date of an acquisition permit and may attach conditions to
10 an acquisition permit, including conditions relating to the time,
11 place, and manner of harvest. Size, gear, place, time, licensing, and
12 other limitations applicable to sport, commercial, or subsistence
13 harvest of aquatic plants and aquatic animals do not apply to a har-
14 vest with a permit issued under this section.

15 (d) The commissioner of fish and game shall forward a copy of
16 each permit application under this section to the commissioner of
17 commerce and economic development. The commissioner of fish and game
18 shall issue or deny a permit within 30 days after receiving an appli-
19 cation.

20 (e) The commissioner of fish and game may deny or restrict a
21 permit under this section upon findings that (1) the proposed harvest
22 will substantially impair sustained yield of the species; and (2) the
23 substantial impairment could not have been reasonably foreseen and
24 avoided through available management options. The decision of the
25 commissioner of fish and game must contain the factual basis for the
26 findings.

27 (f) Except as provided in (e) of this section, the commissioner
28 of fish and game shall issue a permit if

29 (1) wild stock is needed for initial farms or hatchery

1 stock;

2 (2) there are technological limitations on the propagation
3 of cultured stock for the species sought;

4 (3) wild stock is needed to maintain the gene pool of a
5 hatchery or aquatic farm; or

6 (4) commercial harvest of the species sought is not limited
7 under AS 16.43 and is not fully developed.

8 (g) Aquatic plants and aquatic animals acquired under a permit
9 issued under this section become the property of the permit holder and
10 are no longer a public or common resource.

11 (h) The commissioner of fish and game shall make stock available
12 for aquatic farming purposes.

13 Sec. 08.06.040. IMPORTATION OF AQUATIC PLANTS OR AQUATIC ANIMALS
14 FOR STOCK. A person may not import into the state an aquatic plant or
15 aquatic animal for the purpose of supplying stock to an aquatic farm
16 or hatchery unless authorized by the commissioner of fish and game or
17 by a regulation of the Board of Fisheries.

18 Sec. 08.06.050. LIMITATION ON SALE, TRANSFER OF STOCK, AND
19 PRODUCTS. (a) A private hatchery required to have a permit under
20 this chapter may sell or transfer stock from the hatchery only to an
21 aquatic farm or other hatchery that has a permit issued under this
22 chapter.

23 (b) A stock may not be transferred to or from an aquatic farm or
24 hatchery required to have a permit under this chapter without prior
25 notice of the transfer to the commissioner. A notice of transfer
26 shall be submitted at least 30 days before the proposed date of trans-
27 fer.

28 (c) A notice of transfer must be accompanied by a report of a
29 health inspection of the stock. The inspection shall be conducted by

1 the Department of Fish and Game or by a disease diagnostician approved
2 by the Department of Fish and Game. The inspection shall be conducted
3 not more than seven days before the notice of transfer is submitted to
4 the commissioner.

5 (d) The Department of Fish and Game may restrict or disapprove a
6 transfer of a stock if it finds that the transfer would present a
7 substantial risk of spreading disease or, in the case of a transfer
8 from a hatchery, would significantly impair the production needs of
9 the hatchery.

10 (e) A person may not sell, transfer, or offer to sell or trans-
11 fer, or knowingly purchase or receive, an aquatic farm product unless
12 the product was grown or propagated on a farm with a permit issued
13 under this chapter. The permit must be in effect at the time of the
14 sale, transfer, purchase, receipt, or offer.

15 Sec. 08.06.060. RELEASE OF CERTAIN FISH PROHIBITED. Salmon and
16 trout may not be released into the public water of the state from a
17 hatchery or aquatic farm required to have a permit under this chapter
18 without prior authorization from the Department of Fish and Game.

19 Sec. 08.06.070. DISEASE CONTROL AND INSPECTION. (a) The De-
20 partment of Fish and Game may order the destruction and disposal of a
21 diseased hatchery stock or of aquatic farm products when necessary to
22 protect wild stocks. A holder of a permit issued under this chapter
23 shall report to the Department of Fish and Game an outbreak or inci-
24 dence of disease among stock or aquatic farm products of the permit
25 holder.

26 (b) A holder of a permit issued under AS 08.06.070 shall allow
27 the Department of Fish and Game to inspect the permit holder's farm or
28 hatchery during operating hours and upon reasonable notice. The cost
29 of inspection shall be borne by the Department of Fish and Game.

1 (c) The Department of Fish and Game shall develop a disease
2 management and control program for aquatic farms and hatcheries.

3 (d) The Department of Fish and Game may enter into an agreement
4 with a state or federal agency or a private provider to provide ser-
5 vices under (b) and (c) of this section.

6 Sec. 08.06.080. REGULATIONS. The commissioner may adopt regu-
7 lations necessary to implement this chapter.

8 Sec. 08.06.090. PENALTY. A person who violates a provision of
9 this chapter, a regulation adopted under this chapter, or a term or
10 condition of a permit issued under this chapter, is guilty of a class
11 B misdemeanor.

12 Sec. 08.06.900. DEFINITIONS. In this chapter

13 (1) "aquatic farm" means a facility that grows, farms, or
14 cultivates

15 (A) aquatic farm products in artificially enclosed
16 marine or fresh water; or

17 (B) immobile species in controlled water;

18 (2) "aquatic farm product" includes an aquatic plant or
19 aquatic animal, or fish parts that are propagated, farmed, or cul-
20 tivated in an aquatic farm and sold or offered for consumption;

21 (3) "commissioner" means the commissioner of commerce and
22 economic development;

23 (4) "hatchery" means a facility for the artificial propa-
24 gation of stock, including rearing of juvenile aquatic plants or
25 aquatic animals;

26 (5) "stock" means live aquatic plants and aquatic animals
27 acquired, collected, possessed, or intended for use by a hatchery or
28 aquatic farm for the purpose of further growth or propagation.

29 * Sec. 3. AS 03.05.020(a) is amended to read:

1 (a) The commissioner shall

2 (1) require routine inspection of food animals, fish,
3 poultry and derivative food products, to protect the public against
4 fraud, disease and spoilage, and in this connection adopt uniform
5 regulations establishing standards of identity and composition of
6 these food products and minimum standards of sanitation and handling
7 methods as to all phases of slaughtering, processing, storing, trans-
8 porting, displaying and selling of these food products;

9 (2) issue orders or cause the orders to be issued by an
10 authorized veterinarian prohibiting transportation and sale of food
11 products intended for human consumption which do not meet the minimum
12 requirements established under (1) of this subsection, and limiting
13 their use and disposal in conformity with protection of the public;

14 (3) adopt a schedule of fees or charges, and credit pro-
15 visions, for services rendered by state veterinarians to farmers and
16 others at their request in caring for livestock and poultry, and all
17 the fees shall be transmitted to the commissioner for deposit in the
18 state treasury;

19 (4) designate points of entry for admission of livestock or
20 poultry into the state, and arrange inspection at those points with or
21 without collaboration and assistance of the federal government, and
22 bar entry of stock or poultry not shipped under a valid permit or not
23 free from contagious or infectious disease;

24 (5) adopt, repeal, and amend regulations consistent with
25 existing law for

26 (A) the labeling and grading of milk and milk products
27 and standards of cleanliness and sanitation, to at least the
28 minimum of current recommendations of the United States Public
29 Health Service, for the operation of dairies selling, or offering

1 for sale, milk or milk products;

2 (B) the production and sale of ice cream and allied
3 frozen desserts;

4 (C) the production and sale of imitation milk and
5 imitation milk products;

6 (6) monitor aquatic farms and hatcheries that hold permits
7 under AS 08.06.010 for the possible presence of paralytic shellfish
8 poisoning.

9 * Sec. 4. AS 08.01.010 is amended by adding a new paragraph to read:

10 (27) regulation of aquatic farms and hatcheries under
11 AS 08.06.

12 * Sec. 5. AS 16.05.251 is amended by adding a new subsection to read:

13 (f) Except as expressly provided in AS 08.06.040, the Board of
14 Fisheries may not adopt regulations or take action regarding the
15 issuance, denial, or conditioning of a permit under AS 08.06, the
16 construction or operation of a farm or hatchery required to have a
17 permit under AS 08.06.010, or a harvest with a permit issued under
18 AS 08.06.030. Regulations or orders adopted by the Board of Fisheries
19 under this section do not apply to a harvest with a permit issued
20 under AS 08.06.030.

21 * Sec. 6. AS 16.05.330(a) is amended to read:

22 (a) Except as otherwise permitted in this chapter, a person may
23 not engage in sport fishing, including the taking of razor clams; in
24 hunting, trapping, or fur dealing; in the farming of [FISH,] fur
25 or game; or in taxidermy, without having the appropriate license
26 tag in actual possession.

27 * Sec. 7. AS 16.05.340(a)(14) is amended to read:

28 (14) [FISH OR] game farming biennial licenses.....200

29 * Sec. 8. AS 16.05.920(a) is amended to read:

1 (a) Unless permitted by AS 16.05 - AS 16.40 or AS 08.06, or by
2 regulation adopted under AS 16.05 - AS 16.40 or AS 08.06, a person may
3 not take, possess, transport, sell, offer to sell, purchase, or offer
4 to purchase fish, game, or marine aquatic plants, or any part of fish,
5 game, or aquatic plants, or a nest or egg of fish or game.

6 * Sec. 9. AS 16.05.930 is amended by adding a new subsection to read:

7 (g) AS 16.05.330 - 16.05.720 do not apply to an activity au-
8 thorized by a permit issued under AS 08.06.010 or 08.06.030, or to a
9 person or vessel employed in an activity authorized by a permit issued
10 under AS 08.06.010 or 08.06.030.

11 * Sec. 10. AS 16.05.940(14) is amended to read:

12 (14) "[FISH OR] game farming" means the business of prop-
13 agating, breeding, raising, or producing [FISH OR] game in captivity
14 for the purpose of marketing the [FISH OR] game or game [THEIR] prod-
15 ucts, and "captivity" means having the [FISH OR] game under positive
16 control, as in a pen [, POND,] or an area of land that [OR WATER
17 WHICH] is completely enclosed by a generally escape-proof barrier:

18 * Sec. 11. AS 16.10 is amended by adding a new section to read:

19 Sec. 16.10.269. LIMITATIONS. AS 16.10.265 - 16.10.267 do not
20 apply to the purchase or sale of aquatic farm products from a holder
21 of a permit issued under AS 08.06.010 or stock from a holder of a
22 permit issued under AS 08.06.030.

23 * Sec. 12. AS 16.10.380(b) is amended to read:

24 (b) In this section "user group" includes, but is not limited
25 to, sport fishermen, processors, commercial fishermen, aquatic farm-
26 ers, subsistence fishermen, and representatives of local communities.

27 * Sec. 13. AS 16.10.400 is amended by adding a new subsection to read:

28 (h) AS 16.10.400 - 16.10.475 do not apply to the construction or
29 operation of a private hatchery that has a permit issued under

1 AS 08.06.010.

2 * Sec. 14. AS 16.10.420 is amended to read:

3 Sec. 16.10.420. CONDITIONS OF A PERMIT. The department
4 shall require, in a permit issued to a hatchery operator, that

5 (1) salmon eggs procured by the hatchery must be from the
6 department or a source approved by the department;

7 (2) no salmon eggs or resulting fry be placed in waters of
8 the state other than those specifically designated in the permit;

9 (3) no salmon eggs or resulting fry, sold to a permit
10 holder by the state or by another party approved by the department,
11 may be resold or otherwise transferred to another person, unless that
12 person holds a permit issued under AS 08.06.010;

13 (4) no salmon be released by the hatchery before department
14 approval, and, for purposes of pathological examination and approval,
15 the department shall be notified of the proposed release of salmon at
16 least 15 days before the date of their proposed release by the hatch-
17 ery;

18 (5) diseased salmon be destroyed in a specific manner and
19 place designated by the department;

20 (6) adult salmon be harvested by hatchery operators only at
21 specific locations as designated by the department;

22 (7) surplus eggs from salmon returning to the hatchery be
23 made available for sale first to the department and then, after in-
24 spection and approval by the department, to operators of other hatch-
25 eries authorized by permit to operate under AS 16.10.400 - 16.10.477
26 or AS 08.06.010;

27 (8) if surplus salmon eggs are sold by a permit holder to
28 another permit holder, a copy of the sales transaction be provided to
29 the department;

1 (9) [REPEALED

2 (10)] a hatchery be located in an area where a reasonable
3 segregation from natural stocks occurs, but, when feasible, in an area
4 where returning hatchery fish will pass through traditional salmon
5 fisheries.

6 * Sec. 15. AS 16.10.450 is amended to read:

7 Sec. 16.10.450. SALE OF SALMON AND SALMON EGGS BY HATCHERY. A
8 hatchery operator who sells salmon returning from the natural water
9 [WATERS] of the state, or sells salmon eggs to another hatchery op-
10 erating under AS 16.10.400 - 16.10.470 or with a permit issued under
11 AS 08.06.010, after utilizing the funds for reasonable operating
12 costs, including debt retirement, expanding its facilities, salmon
13 rehabilitation projects, fisheries research, or for costs of operating
14 the qualified regional association for the area in which the hatchery
15 is located, shall expend the remaining funds on other fisheries activ-
16 ities of the qualified regional association. Fish returning to hatch-
17 eries and sold for human consumption must [SHALL] be of comparable
18 quality to fish harvested by commercial fisheries in the area, and
19 shall be sold at prices commensurate with the current market.

20 * Sec. 16. AS 16.43.140 is amended by adding a new subsection to read:

21 (d) This chapter does not apply to activities authorized by a
22 permit issued under AS 08.06.010 or 08.06.030.

23 * Sec. 17. AS 16.51.180(5) is amended to read:

24 (5) "seafood" means finfish, shellfish, and fish by-prod-
25 ucts, including but not limited to salmon, halibut, herring, flounder,
26 crab, clam, cod, shrimp, and pollock, but does not include aquacul-
27 ture farm products as defined in AS 08.06.900;

28 * Sec. 18. This Act takes effect immediately under AS 01.10.070(c).

1 IN THE HOUSE

BY ELLIS, RIEGER, COTTEN
AND BROWN.

2 HOUSE BILL NO.

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 FIFTEENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act relating to aquatic farming; and providing
7 for an effective date."

8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

9 * Section 1. FINDINGS AND POLICY. (a) The legislature finds that

10 (1) aquatic farming in the state would provide a consistent
11 source of quality food, provide new jobs, increase state exports, create
12 new commercial fishing and other business opportunities, and increase the
13 stability and diversity of the state's economy;

14 (2) many areas of the state are ecologically suited for aquatic
15 farming development;

16 (3) aquatic farming would complement and enhance the variety and
17 quality of Alaska seafood and aquatic products, and thereby benefit the
18 state's economy; and

19 (4) the principal responsibility for development of aquatic
20 farming in the state rests with the private sector.

21 (b) It is the policy of the state to encourage the establishment and
22 growth of an aquatic farming industry and to assist in the planning and
23 orderly development of the industry.

24 * Sec. 2. AS 08 is amended by adding a new chapter to read:

25 CHAPTER 06. AQUATIC FARMING.

26 Sec. 08.06.010. ~~AQUATIC FARM AND HATCHERY PERMITS.~~ (a) A
27 person may not, ~~without a permit from the commissioner,~~ construct or
28 operate

29 (1) an aquatic farm; or

1 (2) a hatchery for the purpose of supplying aquatic plants
2 or aquatic animals to an aquatic farm.

3 (b) A permit issued under this section authorizes the permittee,
4 subject to the conditions of this chapter, to acquire, purchase, offer
5 to purchase, transfer, possess, sell, and offer to sell stock and
6 aquatic farm products that are used or reared at the hatchery or
7 aquatic farm.

8 (c) The commissioner, after consulting with the commissioner of
9 fish and game and the commissioner of environmental conservation, may
10 attach conditions to a permit issued under this section that are
11 necessary to protect the public health or natural stock.

12 Sec. 08.06.020. PERMIT APPLICATION AND RENEWAL. (a) An
13 applicant for an aquatic farming or hatchery permit required under
14 AS 08.06.010 shall apply on a form prescribed by the commissioner.

15 (b) An application for renewal must be accompanied by fees
16 required under AS 08.01.065 and a report of a health inspection of the
17 farm or hatchery to be permitted. The inspection shall be conducted
18 by the Department of Fish and Game or by a fish disease diagnostician
19 approved by the Department of Fish and Game. The inspection shall be
20 conducted not more than 30 days before the application is submitted to
21 the department.

22 Sec. 08.06.030. AQUATIC FARM STOCK ACQUISITION PERMITS. (a) A
23 person may not acquire aquatic plants or aquatic animals from wild
24 stock in the state for the purpose of supplying stock to an aquatic
25 farm or hatchery required to have a permit under AS 08.06.010 unless
26 the person holds an acquisition permit from the commissioner of fish
27 and game.

28 (b) An acquisition permit authorizes the permit holder to ac-
quire the species and quantities of wild stock in the state specified

1 in the permit for the purpose of supplying stock to an aquatic farm or
2 hatchery required to have a permit under AS 08.06.010.

3 (c) The commissioner of fish and game, in consultation with the
4 commissioner of commerce and economic development, shall specify the
5 expiration date of an acquisition permit and may attach conditions to
6 an acquisition permit, including conditions relating to the time,
7 place, and manner of harvest. Size, gear, place, time, licensing, and
8 other limitations applicable to sport, commercial, or subsistence
9 harvest of aquatic plants and aquatic animals do not apply to a har-
10 vest with a permit issued under this section.

11 (d) The commissioner of fish and game shall forward a copy of
12 each permit application under this section to the commissioner of
13 commerce and economic development. The commissioner of fish and game
14 shall issue or deny a permit within 30 days after receiving an appli-
15 cation.

16 (e) The commissioner of fish and game may deny or restrict a
17 permit under this section if the commissioner finds that the proposed
18 harvest will substantially impair sustained yield of the species. The
19 decision of the commissioner of fish and game must contain the factual
20 basis for the findings. If the substantial impairment could not have
21 been reasonably foreseen and avoided through available management
22 options, the commissioner of fish and game shall explain why in the
23 decision.

24 (f) Except as provided in (e) of this section, the commissioner
25 of fish and game shall issue a permit if

26 (1) wild stock is needed for initial farms or hatchery
27 stock;

28 (2) there are technological limitations on the propagation
29 of cultured stock for the species sought;

1 (3) wild stock is needed to maintain the gene pool of a
2 hatchery or aquatic farm; or

3 (4) commercial harvest of the species sought is not limited
4 under AS 16.43 and is not fully developed.

5 (g) Aquatic plants and aquatic animals acquired under a permit
6 issued under this section become the property of the permit holder and
7 are no longer a public or common resource.

8 (h) The commissioner of fish and game shall make stock available
9 for aquatic farming purposes.

10 Sec. 08.06.040. IMPORTATION OF AQUATIC PLANTS OR AQUATIC ANIMALS
11 FOR STOCK. A person may not import into the state an aquatic plant or
12 aquatic animal for the purpose of supplying stock to an aquatic farm
13 or hatchery unless authorized by the commissioner of fish and game or
14 by a regulation of the Board of Fisheries.

15 Sec. 08.06.050. LIMITATION ON SALE, TRANSFER OF STOCK, AND
16 PRODUCTS. (a) A private hatchery required to have a permit under
17 this chapter may sell or transfer stock from the hatchery only to an
18 aquatic farm or other hatchery that has a permit issued under this
19 chapter.

20 (b) Stock may not be transferred to or from an aquatic farm or
21 hatchery required to have a permit under this chapter without prior
22 notice of the transfer to the commissioner. A notice of transfer
23 shall be submitted at least 30 days before the proposed date of trans-
24 fer.

25 (c) A notice of transfer must be accompanied by a report of a
26 health inspection of the stock. The inspection shall be conducted by
27 the Department of Fish and Game or by a disease diagnostician approved
28 by the Department of Fish and Game.

29 (d) The Department of Fish and Game may restrict or disapprove a

1 transfer of stock if it finds that the transfer

2 (1) would present a substantial risk of spreading disease;
3 or

4 (2) in the case of a transfer from a hatchery for which a
5 permit has been issued under AS 16.10.400, would significantly impair
6 the production needs of the hatchery.

7 (e) A person may not sell, transfer, or offer to sell or trans-
8 fer, or knowingly purchase or receive, an aquatic farm product grown
9 or propagated in the state unless the product was grown or propagated
10 on a farm with a permit issued under this chapter. The permit must be
11 in effect at the time of the sale, transfer, purchase, receipt, or
12 offer.

13 Sec. 08.06.060. RELEASE OF CERTAIN FISH PROHIBITED. Salmon and
14 trout may not intentionally be released into the public water of the
15 state from a hatchery or aquatic farm required to have a permit under
16 this chapter without prior authorization from the Department of Fish
17 and Game.

18 Sec. 08.06.070. DISEASE CONTROL AND INSPECTION. (a) The De-
19 partment of Fish and Game may order the quarantine or the destruction
20 and disposal of diseased hatchery stock or of aquatic farm products
21 when necessary to protect wild stock. A holder of a permit issued
22 under this chapter shall report to the Department of Fish and Game an
23 outbreak or incidence of disease among stock or aquatic farm products
24 of the permit holder.

25 (b) A holder of a permit issued under AS 08.06.010 shall allow
26 the Department of Fish and Game to inspect the permit holder's farm or
27 hatchery during operating hours and upon reasonable notice. The cost
28 of inspection shall be borne by the Department of Fish and Game.

29 (c) The Department of Fish and Game shall develop a disease

1 management and control program for aquatic farms and hatcheries.

2 (d) The Department of Fish and Game may enter into an agreement
3 with a state or federal agency or a private provider to provide ser-
4 vices under (b) and (c) of this section, or inspections under AS 08.-
5 06.020(b).

6 Sec. 08.06.080. REGULATIONS. The commissioner may adopt regu-
7 lations necessary to implement this chapter.

8 Sec. 08.06.090. PENALTY. A person who violates a provision of
9 this chapter, a regulation adopted under this chapter, or a term or
10 condition of a permit issued under this chapter, is guilty of a class
11 B misdemeanor.

12 Sec. 08.06.900. DEFINITIONS. In this chapter

13 (1) "aquatic farm" means a facility that grows, farms, or
14 cultivates aquatic farm products in captivity or under positive
15 control;

16 (2) "aquatic farm product" includes an aquatic plant or
17 aquatic animal, or fish parts that are propagated, farmed, or cul-
18 tivated in an aquatic farm and sold or offered for consumption;

19 (3) "commissioner" means the commissioner of commerce and
20 economic development;

21 (4) "hatchery" means a facility for the artificial incu-
22 bation of stock, including rearing of juvenile aquatic plants or
23 aquatic animals;

24 (5) "positive control" means, for fish and other mobile
25 species, enclosed within a natural or artificial escape-proof barrier;
26 for species with limited or no mobility, such as a bivalve or an
27 aquatic plant, "positive control" also includes managed cultivation in
28 unenclosed water;

29 (6) "stock" means live aquatic plants and aquatic animals

1 acquired, collected, possessed, or intended for use by a hatchery or
2 aquatic farm for the purpose of further growth or propagation.

3 * Sec. 3. AS 03.05.020(a) is amended to read:

4 (a) The commissioner shall

5 (1) require routine inspection of food animals, fish,
6 poultry and derivative food products, to protect the public against
7 fraud, disease and spoilage, and in this connection adopt uniform
8 regulations establishing standards of identity and composition of
9 these food products and minimum standards of sanitation and handling
10 methods as to all phases of slaughtering, processing, storing, trans-
11 porting, displaying and selling of these food products;

12 (2) issue orders or cause the orders to be issued by an
13 authorized veterinarian prohibiting transportation and sale of food
14 products intended for human consumption which do not meet the minimum
15 requirements established under (1) of this subsection, and limiting
16 their use and disposal in conformity with protection of the public;

17 (3) adopt a schedule of fees or charges, and credit pro-
18 visions, for services rendered by state veterinarians to farmers and
19 others at their request in caring for livestock and poultry, and all
20 the fees shall be transmitted to the commissioner for deposit in the
21 state treasury;

22 (4) designate points of entry for admission of livestock or
23 poultry into the state, and arrange inspection at those points with or
24 without collaboration and assistance of the federal government, and
25 bar entry of stock or poultry not shipped under a valid permit or not
26 free from contagious or infectious disease;

27 (5) adopt, repeal, and amend regulations consistent with
28 existing law for

29 (A) the labeling and grading of milk and milk products

1 and standards of cleanliness and sanitation, to at least the
2 minimum of current recommendations of the United States Public
3 Health Service, for the operation of dairies selling, or offering
4 for sale, milk or milk products;

5 (B) the production and sale of ice cream and allied
6 frozen desserts;

7 (C) the production and sale of imitation milk and
8 imitation milk products;

9 (6) monitor aquatic farms and hatcheries that hold permits
10 under AS 08.06.010 for the possible presence of paralytic shellfish
11 poisoning.

12 * Sec. 4. AS 08.01.010 is amended by adding a new paragraph to read:

13 (27) regulation of aquatic farms and hatcheries under
14 AS 08.06.

15 * Sec. 5. AS 16.05.251 is amended by adding a new subsection to read:

16 (f) Except as expressly provided in AS 08.06.040, the Board of
17 Fisheries may not adopt regulations or take action regarding the
18 issuance, denial, or conditioning of a permit under AS 08.06, the
19 construction or operation of a farm or hatchery required to have a
20 permit under AS 08.06.010, or a harvest with a permit issued under
21 AS 08.06.030. Regulations or orders adopted by the Board of Fisheries
22 under this section do not apply to a harvest with a permit issued
23 under AS 08.06.030.

24 * Sec. 6. AS 16.05.330(a) is amended to read:

25 (a) Except as otherwise permitted in this chapter, a person may
26 not engage in sport fishing, including the taking of razor clams; in
27 hunting, trapping, or fur dealing; in the farming of [FISH,] fur [,]
28 or game; or in taxidermy, without having the appropriate license or
29 tag in actual possession.

1 * Sec. 7. AS 16.05.340(a)(14) is amended to read:

2 (14) [FISH OR] game farming biennial licenses.....200

3 * Sec. 8. AS 16.05.920(a) is amended to read:

4 (a) Unless permitted by AS 16.05 - AS 16.40 or AS 08.06, or by
5 regulation adopted under AS 16.05 - AS 16.40 or AS 08.06, a person may
6 not take, possess, transport, sell, offer to sell, purchase, or offer
7 to purchase fish, game, or marine aquatic plants, or any part of fish,
8 game, or aquatic plants, or a nest or egg of fish or game.

9 * Sec. 9. AS 16.05.930 is amended by adding a new subsection to read:

10 (g) AS 16.05.330 - 16.05.720 do not apply to an activity au-
11 thorized by a permit issued under AS 08.06.010 or 08.06.030, or to a
12 person or vessel employed in an activity authorized by a permit issued
13 under AS 08.06.010 or 08.06.030.

14 * Sec. 10. AS 16.05.940(14) is amended to read:

15 (14) "[FISH OR] game farming" means the business of prop-
16 agating, breeding, raising, or producing [FISH OR] game in captivity
17 for the purpose of marketing the [FISH OR] game or game [THEIR] prod-
18 ucts, and "captivity" means having the [FISH OR] game under positive
19 control, as in a pen [, POND,] or an area of land that [OR WATER
20 WHICH] is completely enclosed by a generally escape-proof barrier;

21 * Sec. 11. AS 16.10 is amended by adding a new section to read:

22 Sec. 16.10.269. LIMITATIONS. AS 16.10.265 - 16.10.267 do not
23 apply to the purchase or sale of aquatic farm products from a holder
24 of a permit issued under AS 08.06.010 or stock from a holder of a
25 permit issued under AS 08.06.030.

26 * Sec. 12. AS 16.10.380(b) is amended to read:

27 (b) In this section "user group" includes, but is not limited
28 to, sport fishermen, processors, commercial fishermen, aquatic farm-
29 ers, subsistence fishermen, and representatives of local communities.

1 * Sec. 13. AS 16.10.400 is amended by adding a new subsection to read:

2 (h) AS 16.10.400 - 16.10.475 do not apply to the construction or
3 operation of a private hatchery that has a permit issued under AS 08.-
4 06.010.

5 * Sec. 14. AS 16.10.420 is amended to read:

6 Sec. 16.10.420. CONDITIONS OF A PERMIT. The department
7 shall require, in a permit issued to a hatchery operator, that

8 (1) salmon eggs procured by the hatchery must be from the
9 department or a source approved by the department;

10 (2) no salmon eggs or resulting fry be placed in waters of
11 the state other than those specifically designated in the permit;

12 (3) no salmon eggs or resulting fry, sold to a permit
13 holder by the state or by another party approved by the department,
14 may be resold or otherwise transferred to another person, unless that
15 person holds a permit issued under AS 08.06.010;

16 (4) no salmon be released by the hatchery before department
17 approval, and, for purposes of pathological examination and approval,
18 the department shall be notified of the proposed release of salmon at
19 least 15 days before the date of their proposed release by the hatch-
20 ery;

(5) diseased salmon be destroyed in a specific manner and
21 place designated by the department;

(6) adult salmon be harvested by hatchery operators only at
22 specific locations as designated by the department;

(7) surplus eggs from salmon returning to the hatchery be
23 made available for sale first to the department and then, after in-
24 spection and approval by the department, to operators of other hatch-
25 eries authorized by permit to operate under AS 16.10.400 - 16.10.470,
26 or AS 08.06.010;

1 (8) if surplus salmon eggs are sold by a permit holder to
2 another permit holder, a copy of the sales transaction be provided to
3 the department;

4 (9) [REPEALED

5 (10)] a hatchery be located in an area where a reasonable
6 segregation from natural stocks occurs, but, when feasible, in an area
7 where returning hatchery fish will pass through traditional salmon
8 fisheries.

9 * Sec. 15. AS 16.10.450 is amended to read:

10 Sec. 16.10.450. SALE OF SALMON AND SALMON EGGS BY HATCHERY. A
11 hatchery operator who sells salmon returning from the natural water
12 [WATERS] of the state, or sells salmon eggs to another hatchery op-
13 erating under AS 16.10.400 - 16.10.470 or with a permit issued under
14 AS 08.06.010, after utilizing the funds for reasonable operating
15 costs, including debt retirement, expanding its facilities, salmon
16 rehabilitation projects, fisheries research, or for costs of operating
17 the qualified regional association for the area in which the hatchery
18 is located, shall expend the remaining funds on other fisheries activ-
19 ities of the qualified regional association. Fish returning to hatch-
20 eries and sold for human consumption must [SHALL] be of comparable
21 quality to fish harvested by commercial fisheries in the area, and
22 shall be sold at prices commensurate with the current market.

23 * Sec. 16. AS 16.43.140 is amended by adding a new subsection to read:

24 (d) This chapter does not apply to activities authorized by a
25 permit issued under AS 08.06.010 or 08.06.030.

26 * Sec. 17. AS 16.51.180(5) is amended to read:

27 (5) "seafood" means finfish, shellfish, and fish by-prod-
28 ucts, including but not limited to salmon, halibut, herring, flounder,
29 crab, clam, cod, shrimp, and pollock, but does not include aquatic

1 farm products as defined in AS 08.06.900;

2 * Sec. 18. This Act takes effect immediately under AS 01.10.070(c).

RESOURCE DEVELOPMENT COUNCIL

DRAFT
STRATEGY FOR ADVANCING
ALASKA'S MARICULTURE INDUSTRY

FEBRUARY 19, 1987

PROPOSED DRAFT LEGISLATION

LAND OWNERSHIP AND MANAGEMENT

Objective I-A:

Define regulations and procedures to provide for the use of state lands (tidal and submerged) for aquaculture products and port and harbor development.

Task 1: Revise AS Title 38 Sec. 05.082 Leases for shore fisheries development to make it applicable to aquaculture development.

* Section 38.05.082 is amended as follows:

(a) The director, with approval of the commissioner, may lease tide and submerged land for fisheries development. Fisheries development includes the utilization of shore gill nets or set nets for the taking of fish and development and operation of an aquatic farm as defined under AS 08.06.300 and permitted under AS 08.06.010. Every lease issued under this section shall reserve to the public a right-of-way for access to navigable waters and other tide and submerged land.

Adding the following subsections:

(f) The director may classify land as subject to leases for fisheries development, and publicly invite applications for lease in the selected areas. The director will continue to accept and execute fisheries development lease applications (in lieu of the aforementioned land classification. Each application shall be accompanied by an affidavit describing the proposed aquaculture farm project and shall include a schedule for developing and operating the aquatic farm and to the effect that the applicant presently intends to follow the schedule for utilizing the leased area. This information may be incorporated in the lease agreement. If two or more applications are received for the same area, the director shall award the lease to the most qualified applicant. ~~In determining the qualifications of applicants, the director shall consider the (length of time during which the applicant has been engaged in aquatic farming) the proximity to past aquatic farm sites of the applicant to the land to be leased, the present ability of the applicant to utilize the location to its maximum potential, and other factors relevant to~~

~~the equitable assignment of the disputed area. If the director can not determine a preference between conflicting applicants for the same lease site on the basis of qualifications, the director shall select between the applicants by lot. An aggrieved applicant may appeal to the commissioner within five days for a review of the director's determination.~~

(g) A lease for aquatic farming may be issued for any period not exceeding 25 years. If the commissioner determines that the land is being utilized for the purpose for which the lease is issued, the lease may be declared void. The director shall establish a reasonable rental for the lease, equal to the administrative costs involved in processing the leasehold applications.

(h) Term of leases are governed by AS 38.05.085

RDC-9



Official Business

COMMITTEE:

HOUSE LABOR & COMMERCE

DATE: 2/25/87 4:30 PM

SIGN-IN

Subject of meeting:

HB 108 - MARICULTURE

NAME	ADDRESS	PHONE	REPRESENTING	DO YOU WANT TO TESTIFY?
✓ Roger Painter	130 Seward #201 Juneau	463-3600	AK Mariculture Assoc.	yes
✓ Bob Bble	324 4 th Apt #1102 Juneau	463-3124	1- United Fishermen of Alaska 2- Prince Williams Sound Aquaculture Corp 3- Cordova District Fishermen United	✓
✓ Gary Fisk	130 SEWARD #213 JUNEAU	586-9400	ALASKA TROLLERS ASSOCIATION	YES
✓ RICH DAVIS	3706 AMALGA ST. APT B	787-2696	SELF	YES
Larry Ostrawsky Paula Burgess	400 Welloughy	465-2400	DNR	AVAILABLE FOR QUESTIONS FROM COMMITTEE →
✓ Mike Abbott	Box 100516 Anch 99510	276-0700	RAC	Resource Development Council yes

JOINT INTERIM WORKING GROUP ON AQUATIC FARMING

fm.
Rep
Ellis

COMPOSITION OF THE WORKING GROUP:

2 Senate Members

2 House Members

Ex-officio Members:

Kate Graham (Fishing Industry)
Rodger Painter (Mariculture Industry)
Environmental Lobby Representative
Sport Fishing Representative
Administration Representative

MEETING SCHEDULE:

May organizational meeting

mid-August report back meeting

September: work session

October: create draft legislation for circulation

November: amend draft

AGENDA:

define problems/assign issues
create two or three industry scope scenarios
co-ordinate with agencies for issue resolution based on
two or three different industry scenarios
discuss resolutions/possible regulations
draft legislation
circulate legislation/public hearings
redraft legislation
present to Legislature

HOUSE COMMITTEE REPORT

(7)

Date referred: 2/4/87

FURTHER REFERRALS: Resources
Finance

DATE: 2/25/87

The Labor & Commerce Committee has considered HB 108

"An Act relating to aquatic farming; and providing for an effective date."

RECOMMENDS:

- replace with CS HB108 (L+C) the same title
- attached amendment(s) a new title
- do pass
- do not pass
- no recommendation
- individual recommendations
- additional referral to the _____ Committee

ADOPTS: _____ letter of intent

ATTACHES NEW FISCAL NOTE(S):

- fiscal impact same as previous fiscal note published _____
- zero fiscal note same as previous zero fiscal note published _____
- zero with analysis

SIGNING DO PASS:

SIGNING OTHER RECOMMENDATIONS:

Ch. Ellis (with full public hearings in the Resources Committee)

Walt Furman no rec
Alta Kopson no rec
Dave Douley no rec
Cliff Davidson (no rec)

Cont. Minimum (with public hearings)

Dave Douley
Chairman's signature

STATE OF ALASKA 1987 LEGISLATIVE SESSION FISCAL NOTE

Revision Date : _____

REQUEST

Bill/Resolution No. : HB 108
 Title : "An Act relating to aquatic farming"
 Sponsor : ELLIS
 Requestor : _____
 Date of Request : _____

FISCAL DETAIL

Agency Affected : Environmental Conservation
 BRU : Environmental Health
 Components : Seafood Industry,
Palmer Laboratory

EXPENDITURES/REVENUES : (Thousands of Dollars)

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0

CAPITAL	0	0	0	0	0	0
---------	---	---	---	---	---	---

REVENUE	0	0	0	0	0	0
---------	---	---	---	---	---	---

FUNDING : (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL	0	0	0	0	0	0

POSITIONS :

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS : Attach a separate page if necessary

This Bill will have no fiscal impact on the Department of Environmental Conservation.

Prepared by : Douglas Donegan Phone : 465-2609

Division : Environmental Health Date : _____

Approved by Commissioner :  Date : 4/16/87

Agency : Environmental Conservation

Distribution (by Agency preparing fiscal note) :

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

**STATE OF ALASKA 1987 LEGISLATIVE SESSION
FISCAL NOTE**

REQUEST: _____
 Revision Date: 2-4-87
 Title: An Act Relating to Aquatic Farming
 Sponsor: Ellis, Rieger, Cotten, Brown,
 Requestor: etc.

Bill Version: HB 108
 Publish Date: _____

Agency Affected: Natural Resources
 BRU: Land and Water Management

Components: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES	0	84.6	171.3	171.3	210.6	210.6
TRAVEL	0	20.0	25.0	25.0	22.0	22.0
CONTRACTUAL	0	2.0	4.0	4.0	4.0	4.0
SUPPLIES	0	1.0	2.0	2.0	2.0	2.0
EQUIPMENT	0	0	0	0	0	0
LAND & STRUCTURES	0	0	0	0	0	0
GRANTS, CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
TOTAL OPERATING	0	107.6	202.3	202.3	238.6	238.6

CAPITAL	0	0	0	0	0	0
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REVENUE	0	15.5	23.5	32.0	36.0	40.0
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FUNDING: (Thousands of Dollars)

GENERAL FUND	0	107.6	202.3	202.3	238.6	238.6
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
TOTAL	0	107.6	202.3	202.3	238.6	238.6

POSITIONS:

FULL-TIME	0	2	3	3	4	4
PART-TIME	0	0	2	2	2	2
TEMPORARY	0	0	0	0	0	0

ANALYSIS : (Attach a separate page if necessary)

See Attached

Prepared by: Paula Burgess
 Division: Land and Water Management

Phone: 465-3400
 Date: 2/13/87

Approved by Commissioner: [Signature]
 Agency: Natural Resources

Date: _____

Distribution (by preparer):
 Legislative Finance
 Legislative Sponsor
 Requestor
 Office of Management and Budget
 Impacted Agency(ies)
 Senate Secretary

HB 108 Analysis

In order to assess the fiscal impact of HB 108, we estimate the number of new applications for tideland leases and permits that we expect. The actual number of applications will vary depending upon the fee structure for leasing and permitting, and the "prove up" requirements of the bill. At present our permit fees are extremely low and the cost of obtaining a lease is quite high. At this stage no "land law" accompanies the bill to alter the lease or permit structure. We recognize that certain changes are desirable to encourage growth of the industry, such as the acceptance of a paper plat rather than a full survey for a lease in remote areas. While such changes may be forthcoming in later committees, the fiscal note here reflects the existing permit structure.

We estimate the number of new applications the first year to be the following:

- 30 salmon
- 25 scallop
- 10 oyster
- 3 mussel
- 2 kelp

We require one adjudicator in the Southeast Region and one adjudicator in the Southcentral Region to handle the new applications. The second year we require one additional adjudicator (to be located where the need is the greatest) to handle additional new applications. By the fourth year we are assuming the need of two adjudicators in each of the two regions.

The second year we require a part time contract administrator to handle the accumulation of two years of lease contracts, and a part time surveyor to review survey plats. (The survey cost may be reduced somewhat if the bill is amended to allow paper plats rather than full surveys in remote areas.)

A goal of the state and of those seriously interested in aquatic farming is to avoid land speculation. In order to accomplish this, it will be necessary to inspect most lease and permit sites once a year. Some inspections can be combined with other field investigations, and some may be performed under cooperative agreements with other agencies. A lean inspection program will cost \$10,000 for each adjudicator the first year (travel and per diem). In subsequent years the cost will decline as we establish inspection efficiencies.

Under existing statutes and regulations, the number of leases and permits estimated above would generate

approximately \$15,500 in revenue the first year. As the number of operations increases each year, the revenue increases modestly. If the bill were amended to allow the Commissioner to charge a percentage of gross receipts, revenues could increase substantially once the industry began to flourish.

Position Summary

Fiscal Year '88

Two (2) - Natural Resource Officers II (Range 16)

Fiscal Years '89 and '90

Three (3) - Natural Resource Officers II (Range 16)
One (1) - Part-time Contract Administrator (Range 14)
One (1) - Part-time Surveyor (Range 20)

Fiscal Years '91 and '92

Four (4) - Natural Resource Officers II (Range 16)
One (1) - Part-time Contract Administrator (Range 14)
One (1) - Part-time Surveyor (Range 20)

STATE OF ALASKA 1987 LEGISLATIVE SESSION
FISCAL NOTE

Bill Version : SB 106/HB 108
Publish Date : 2/4/87

REQUEST: _____

Revision Date: _____
Title : _____

Agency Affected : ADF&G
BRU : FRED

Sponsor : Zharoff et al. Ellis et al.
Requestor : _____

Components : FRED

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 87	FY 88	FY 89	FY 90	FY 91	FY 92
PERSONAL SERVICES		157	157	183	236	330
TRAVEL		6	6	10	17	20
CONTRACTUAL		1	1	2	4	3
SUPPLIES		2	4	6	10	22
EQUIPMENT				1	2	5
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANECUS						
TOTAL OPERATING		166	168	202	269	385

CAPITAL						
---------	--	--	--	--	--	--

REVENUE						
---------	--	--	--	--	--	--

FUNDING: (Thousands of Dollars)

GENERAL FUND		166	168	202	269	385
FEDERAL FUNDS						
OTHER						
TOTAL						

POSITIONS:

FULL-TIME		2	2	3	3.5	9
PART-TIME		1	2	1	2	0
TEMPORARY		1	0	0	0	0

ANALYSIS : (Attach a separate page if necessary)

This analysis estimates costs of pathology services and permitting based on 100 permit applications in FY 88, ultimately resulting in 20 operational fish farms by FY 92 of economically significant size.

(see attached for additional comments)

Prepared by : Dr. Mike Kaill
Division : ADF&G/FRED

Phone : 465-4160
Date : _____

Approved by Commussioner : *Norman*
Agency : _____

Date : 2-2-87

Distribution (by preparer) :

- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agencies
- Senate Secretary

Estimated cost of services to be provided by ADF&G are fish pathology services, permit processing and technical oversight.

For pathology services, estimated costs are based on current workload and budget for the section at this time, to arrive at a per-unit cost (e.g. \$600,000/37 hatcheries = \$16,000/hatchery). An additional \$12,000 is budgeted for investigations and diagnostic services in the first year. Types of services are: diagnostic, broodstock, water source analysis, shellfish certification, pre-release inspection, and human health concerns.

For permitting and technical oversight services, an assessment of work requirements was made by calling the Marine Resources Division of the B.C. provincial government. For the first three years, two full-time technicians would be required. Thereafter, manpower needs will diminish. The types of work to be undertaken will be communication with applicants, review of application materials, coordination with programs such as coastal zone consistency review, and technical biology and fish culture oversight.

It is very difficult to anticipate what will happen if a mariculture program is enabled in Alaska. We have prepared this note based on observations and consultations with managers of similar programs. We then applied this to Alaska, using the incomplete data at hand. These must be considered rough estimates of cost. As further information becomes available, the fiscal note could change. Also, as the bill becomes modified as it passes through the legislative process, there may be changes in the bill that will have corresponding changes in the fiscal note.

COMPARISON OF 2/17/87 AND 2/24/87 COMMITTEE SUBSTITUTES

The only difference between CS HB 108 (L&C) 2/17//87 which was adopted by the committee last Tuesday and CS HB 108 (L&C) 2/24/87 is that the the old CS had 18 sections and the new CS has 17 sections reflecting the elimination of Section 3.

Section 3 of the 2/17/87 CS was eliminated at the suggestion of the Department of Environmental Conservation to avoid potential duplication of existing services.

The section added language to AS 03.05.020(a) which read:

(6) monitor aquatic farms and hatcheries that hold permits under AS 08.06.101 for the possible presence of paralytic shellfish poisoning.

D.E.C. informs us that this function is covered under 18 AAC Chapter 34.

5-0495B

Hein

2/17/87

Original sponsors: Ellis, Rieger,
Cotten, et al.

1 IN THE HOUSE

BY THE LABOR AND
COMMERCE COMMITTEE

2 CS FOR HOUSE BILL NO. 108 (L&C)

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 FIFTEENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act relating to aquatic farming; and providing
7 for an effective date."

8 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

9 * Section 1. FINDINGS AND POLICY. (a) The legislature finds that

10 (1) aquatic farming in the state would provide a consistent
11 source of quality food, provide new jobs, increase state exports, create
12 new commercial fishing and other business opportunities, and increase the
13 stability and diversity of the state's economy;

14 (2) many areas of the state are ecologically suited for aquatic
15 farming development;

16 (3) aquatic farming would complement and enhance the variety and
17 quality of Alaska seafood and aquatic products, and thereby benefit the
18 state's economy;

19 (4) development of mariculture in the state would strengthen the
20 competitiveness of Alaska seafood in the world marketplace by broadening
21 the diversity of products and providing year-round supplies of premium
22 quality seafood; and

23 (5) the principal responsibility for development of aquatic
24 farming in the state rests with the private sector.

25 (b) It is the policy of the state

26 (1) to encourage the establishment and growth of an aquatic
27 farming industry in the state;

28 (2) to assist in the planning and orderly development of the
29 industry;

1 (3) that the industry be developed in a manner consistent with
2 the protection and enhancement of traditional high value industries and
3 with protection of the state's natural resources; and

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5 full participation and full benefits to the people of the state.

6 * Sec. 2. AS 08 is amended by adding a new chapter to read:

7 CHAPTER 06. AQUATIC FARMING.

8 Sec. 08.06.010. AQUATIC FARM AND HATCHERY PERMITS. (a) A
9 person may not, without a permit from the commissioner, construct or
10 operate

11 (1) an aquatic farm; or

12 (2) a hatchery for the purpose of supplying aquatic plants
13 or aquatic animals to an aquatic farm.

14 (b) A permit issued under this section authorizes the permittee,
15 subject to the conditions of this chapter, to acquire, purchase, offer
16 to purchase, transfer, possess, sell, and offer to sell stock and
17 aquatic farm products that are used or reared at the hatchery or
18 aquatic farm.

19 (c) The commissioner, after consulting with the commissioner of
20 fish and game and the commissioner of environmental conservation, may
21 attach conditions to a permit issued under this section that are
22 necessary to protect the public health or wild stock.

23 Sec. 08.06.020. PERMIT APPLICATION AND RENEWAL. (a) An appli-
24 cant for an aquatic farming or hatchery permit required under AS 08.-
25 06.010 shall apply on a form prescribed by the commissioner.

26 (b) A permit issued under this section expires one year after
27 the date of issue.

28 (c) An application for renewal must be accompanied by fees
29 required under AS 08.01.065 and a report of a health inspection of the

1 farm or hatchery to be permitted. The inspection shall be conducted
2 by the Department of Fish and Game or by a fish disease diagnostician
3 approved by the Department of Fish and Game. The inspection shall be
4 conducted not more than 30 days before the application is submitted to
5 the department.

6 Sec. 08.06.030. AQUATIC FARM STOCK ACQUISITION PERMITS. (a) A
7 person may not acquire aquatic plants or aquatic animals from wild
8 stock in the state for the purpose of supplying stock to an aquatic
9 farm or hatchery required to have a permit under AS 08.06.010 unless
10 the person holds an acquisition permit from the commissioner of fish
11 and game.

12 (b) An acquisition permit authorizes the permit holder to ac-
13 quire the species and quantities of wild stock in the state specified
14 in the permit for the purpose of supplying stock to an aquatic farm or
15 hatchery required to have a permit under AS 08.06.010.

16 (c) The commissioner of fish and game, in consultation with the
17 commissioner of commerce and economic development, shall specify the
18 expiration date of an acquisition permit and may attach conditions to
19 an acquisition permit, including conditions relating to the time,
20 place, and manner of harvest. Size, gear, place, time, licensing, and
21 other limitations applicable to sport, commercial, or subsistence
22 harvest of aquatic plants and aquatic animals do not apply to a har-
23 vest with a permit issued under this section.

24 (d) The commissioner of fish and game shall forward a copy of
25 each permit application under this section to the commissioner of
26 commerce and economic development. The commissioner of fish and game
27 shall issue or deny a permit within 30 days after receiving an appli-
28 cation.

29 (e) The commissioner of fish and game may deny or restrict a

1 permit under this section if the commissioner finds that the proposed
2 harvest will substantially impair sustained yield of the species. The
3 decision of the commissioner of fish and game must contain the factual
4 basis for the findings. If the substantial impairment could not have
5 been reasonably foreseen and avoided through available management
6 options, the commissioner of fish and game shall explain why in the
7 decision.

8 (f) Except as provided in (e) of this section, the commissioner
9 of fish and game shall issue a permit if

10 (1) wild stock is needed for initial farms or hatchery
11 stock;

12 (2) there are technological limitations on the propagation
13 of cultured stock for the species sought;

14 (3) wild stock is needed to maintain the gene pool of a
15 hatchery or aquatic farm; or

16 (4) commercial harvest of the species sought is not limited
17 under AS 16.43 and is not fully developed.

18 (g) Aquatic plants and aquatic animals acquired under a permit
19 issued under this section become the property of the permit holder and
20 are no longer a public or common resource.

21 (h) The commissioner of fish and game shall make stock available
22 for aquatic farming purposes.

23 Sec. 08.06.040. IMPORTATION OF AQUATIC PLANTS OR AQUATIC ANIMALS
24 FOR STOCK. A person may not import into the state an aquatic plant or
25 aquatic animal for the purpose of supplying stock to an aquatic farm
26 or hatchery unless authorized by the commissioner of fish and game or
27 by a regulation of the Board of Fisheries.

28 Sec. 08.06.050. LIMITATION ON SALE, TRANSFER OF STOCK, AND
29 PRODUCTS. (a) A private hatchery required to have a permit under

1 AS 08.06.010 may sell or transfer stock from the hatchery only to an
2 aquatic farm or other hatchery that has a permit issued under AS 08.-
3 06.010.

4 (b) Stock may not be transferred to or from an aquatic farm or
5 hatchery required to have a permit under AS 08.06.010 without prior
6 notice of the transfer to the commissioner. A notice of transfer
7 shall be submitted at least 30 days before the proposed date of trans-
8 fer.

9 (c) A notice of transfer must be accompanied by a report of a
10 health inspection of the stock. The inspection shall be conducted by
11 the Department of Fish and Game or by a disease diagnostician approved
12 by the Department of Fish and Game.

13 (d) The Department of Fish and Game may restrict or disapprove a
14 transfer of stock if it finds that the transfer

15 (1) would present a substantial risk of spreading disease;
16 or

17 (2) in the case of a transfer from a hatchery for which a
18 permit has been issued under AS 16.10.400, would significantly impair
19 the production needs of the hatchery.

20 (e) A person may not sell, transfer, or offer to sell or trans-
21 fer, or knowingly purchase or receive, an aquatic farm product grown
22 or propagated in the state unless the product was grown or propagated
23 on a farm with a permit issued under AS 08.06.010. The permit must be
24 in effect at the time of the sale, transfer, purchase, receipt, or
25 offer.

26 Sec. 08.06.060. RELEASE OF CERTAIN FISH PROHIBITED. Salmon and
27 trout may not intentionally be released into the public water of the
28 state from a hatchery or aquatic farm required to have a permit under
29 this chapter without prior authorization from the Department of Fish

1 and Game.

2 Sec. 08.06.070. DISEASE CONTROL AND INSPECTION. (a) The De-
3 partment of Fish and Game may order the quarantine or the destruction
4 and disposal of diseased hatchery stock or of aquatic farm products
5 when necessary to protect wild stock. A holder of a permit issued
6 under this chapter shall report to the Department of Fish and Game an
7 outbreak or incidence of disease among stock or aquatic farm products
8 of the permit holder.

9 (b) A holder of a permit issued under AS 08.06.010 shall allow
10 the Department of Fish and Game to inspect the permit holder's farm or
11 hatchery during operating hours and upon reasonable notice. The cost
12 of inspection shall be borne by the Department of Fish and Game.

13 (c) The Department of Fish and Game shall develop a disease
14 management and control program for aquatic farms and hatcheries.

15 (d) The Department of Fish and Game may enter into an agreement
16 with a state or federal agency or a private provider to provide ser-
17 vices under (b) and (c) of this section, or inspections under AS 08.-
18 06.020(b).

19 Sec. 08.06.080. REPORT. The commissioner shall submit to the
20 legislature, not later than the first day of each regular legislative
21 session, a report concerning the progress of the aquatic farming
22 industry, including the number of permits issued under AS 08.06.010,
23 the names and addresses of permit holders, the effect of the industry
24 on the commercial fishing industry in the state, and recommendations
25 for legislation relating to aquatic farming.

26 Sec. 08.06.090. REGULATIONS. The commissioner shall adopt regu-
27 lations necessary to implement this chapter and to effect state policy
28 concerning aquatic farming.

29 Sec. 08.06.100. PENALTY. A person who violates a provision of

1 this chapter, a regulation adopted under this chapter, or a term or
2 condition of a permit issued under this chapter, is guilty of a class
3 B misdemeanor.

4 Sec. 08.06.900. DEFINITIONS. In this chapter

5 (1) "aquatic farm" means a facility that grows, farms, or
6 cultivates aquatic farm products in captivity or under positive con-
7 trol;

8 (2) "aquatic farm product" includes an aquatic plant or
9 aquatic animal, or fish parts that are propagated, farmed, or cul-
10 tivated in an aquatic farm and sold or offered for consumption;

11 (3) "commissioner" means the commissioner of commerce and
12 economic development;

13 (4) "hatchery" means a facility for the artificial incu-
14 bation of stock, including rearing of juvenile aquatic plants or
15 aquatic animals;

16 (5) "positive control" means, for fish and other mobile
17 species, enclosed within a natural or artificial escape-proof barrier;
18 for species with limited or no mobility, such as a bivalve or an
19 aquatic plant, "positive control" also includes managed cultivation in
20 unenclosed water;

21 (6) "stock" means live aquatic plants and aquatic animals
22 acquired, collected, possessed, or intended for use by a hatchery or
23 aquatic farm for the purpose of further growth or propagation.

24 * Sec. 3. AS 03.05.020(a) is amended to read:

25 (a) The commissioner shall

26 (1) require routine inspection of food animals, fish,
27 poultry and derivative food products, to protect the public against
28 fraud, disease and spoilage, and in this connection adopt uniform
29 regulations establishing standards of identity and composition of

1 these food products and minimum standards of sanitation and handling
2 methods as to all phases of slaughtering, processing, storing, trans-
3 porting, displaying and selling of these food products;

4 (2) issue orders or cause the orders to be issued by an
5 authorized veterinarian prohibiting transportation and sale of food
6 products intended for human consumption which do not meet the minimum
7 requirements established under (1) of this subsection, and limiting
8 their use and disposal in conformity with protection of the public;

9 (3) adopt a schedule of fees or charges, and credit pro-
10 visions, for services rendered by state veterinarians to farmers and
11 others at their request in caring for livestock and poultry, and all
12 the fees shall be transmitted to the commissioner for deposit in the
13 state treasury;

14 (4) designate points of entry for admission of livestock or
15 poultry into the state, and arrange inspection at those points with or
16 without collaboration and assistance of the federal government, and
17 bar entry of stock or poultry not shipped under a valid permit or not
18 free from contagious or infectious disease;

19 (5) adopt, repeal, and amend regulations consistent with
20 existing law for

21 (A) the labeling and grading of milk and milk products
22 and standards of cleanliness and sanitation, to at least the
23 minimum of current recommendations of the United States Public
24 Health Service, for the operation of dairies selling, or offering
25 for sale, milk or milk products;

26 (B) the production and sale of ice cream and allied
27 frozen desserts;

28 (C) the production and sale of imitation milk and
29 imitation milk products;

1 (6) monitor aquatic farms and hatcheries that hold permits
 2 under AS 08.06.010 for the possible presence of paralytic shellfish
 3 poisoning.

4 * Sec. 4. AS 08.01.065(a) is amended to read:

5 (a) The department shall adopt regulations that establish the
 6 amount and manner of payment of application fees, examination fees,
 7 license fees, registration fees, permit fees, investigation fees, and
 8 all other fees as appropriate for the occupations covered by this
 9 chapter, for aquatic farms and hatcheries under AS 08.06, and for real
 10 estate brokers and salesmen under AS 08.88.

11 * Sec. 5. AS 16.05.251 is amended by adding a new subsection to read:

12 (f) Except as expressly provided in AS 08.06.040, the Board of
 13 Fisheries may not adopt regulations or take action regarding the
 14 issuance, denial, or conditioning of a permit under AS 08.06, the
 15 construction or operation of a farm or hatchery required to have a
 16 permit under AS 08.06.010, or a harvest with a permit issued under
 17 AS 08.06.030. Regulations or orders adopted by the Board of Fisheries
 18 under this section do not apply to a harvest with a permit issued
 19 under AS 08.06.030.

20 * Sec. 6. AS 16.05.330(a) is amended to read:

21 (a) Except as otherwise permitted in this chapter, a person may
 22 not engage in sport fishing, including the taking of razor clams; in
 23 hunting, trapping, or fur dealing; in the farming of [FISH,] fur [,]
 24 or game; or in taxidermy, without having the appropriate license or
 25 tag in actual possession.

26 * Sec. 7. AS 16.05.340(a)(14) is amended to read:

27 (14) [FISH OR] game farming biennial licenses.....200

28 * Sec. 8. AS 16.05.920(a) is amended to read:

29 (a) Unless permitted by AS 16.05 - AS 16.40 or AS 08.06, or by

1 regulation adopted under AS 16.05 - AS 16.40 or AS 08.06, a person may
2 not take, possess, transport, sell, offer to sell, purchase, or offer
3 to purchase fish, game, or marine aquatic plants, or any part of fish,
4 game, or aquatic plants, or a nest or egg of fish or game.

5 * Sec. 9. AS 16.05.930 is amended by adding a new subsection to read:

6 (g) AS 16.05.330 - 16.05.720 do not apply to an activity au-
7 thorized by a permit issued under AS 08.06.010 or 08.06.030, or to a
8 person or vessel employed in an activity authorized by a permit issued
9 under AS 08.06.010 or 08.06.030.

10 * Sec. 10. AS 16.05.940(14) is amended to read:

11 () "[FISH OR] game farming" means the business of prop-
12 agating, breeding, raising, or producing [FISH OR] game in captivity
13 for the purpose of marketing the [FISH OR] game or game [THEIR] prod-
14 ucts, and "captivity" means having the [FISH OR] game under positive
15 control, as in a pen [, POND,] or an area of land that [OR WATER
16 WHICH] is completely enclosed by a generally escape-proof barrier;

17 * Sec. 11. AS 16.10 is amended by adding a new section to read:

18 Sec. 16.10.269. LIMITATIONS. AS 16.10.265 - 16.10.267 do not
19 apply to the purchase or sale of aquatic farm products from a holder
20 of a permit issued under AS 08.06.010 or stock from a holder of a
21 permit issued under AS 08.06.030.

22 * Sec. 12. AS 16.10.380(b) is amended to read:

23 (b) In this section "user group" includes, but is not limited
24 to, sport fishermen, processors, commercial fishermen, aquatic farm-
25 ers, subsistence fishermen, and representatives of local communities.

26 * Sec. 13. AS 16.10.400 is amended by adding a new subsection to read:

27 (h) AS 16.10.400 - 16.10.475 do not apply to the construction or
28 operation of a private hatchery that has a permit issued under AS 08.-
29 06.010.

1 * Sec. 14. AS 16.10.420 is amended to read:

2 Sec. 16.10.420. CONDITIONS OF A PERMIT. The department
3 shall require, in a permit issued to a hatchery operator, that

4 (1) salmon eggs procured by the hatchery must be from the
5 department or a source approved by the department;

6 (2) no salmon eggs or resulting fry be placed in waters of
7 the state other than those specifically designated in the permit;

8 (3) no salmon eggs or resulting fry, sold to a permit
9 holder by the state or by another party approved by the department,
10 may be resold or otherwise transferred to another person, unless that
11 person holds a permit issued under AS 08.06.010;

12 (4) no salmon be released by the hatchery before department
13 approval, and, for purposes of pathological examination and approval,
14 the department shall be notified of the proposed release of salmon at
15 least 15 days before the date of their proposed release by the hatch-
16 ery;

17 (5) diseased salmon be destroyed in a specific manner and
18 place designated by the department;

19 (6) adult salmon be harvested by hatchery operators only at
20 specific locations as designated by the department;

21 (7) surplus eggs from salmon returning to the hatchery be
22 made available for sale first to the department and then, after in-
23 spection and approval by the department, to operators of other hatch-
24 eries authorized by permit to operate under AS 16.10.400 - 16.10.470,
25 or AS 08.06.010;

26 (8) if surplus salmon eggs are sold by a permit holder to
27 another permit holder, a copy of the sales transaction be provided to
28 the department;

29 (9) [REPEALED]

1 (10)] a hatchery be located in an area where a reasonable
2 segregation from natural stocks occurs, but, when feasible, in an area
3 where returning hatchery fish will pass through traditional salmon
4 fisheries.

5 * Sec. 15. AS 16.10.450 is amended to read:

6 Sec. 16.10.450. SALE OF SALMON AND SALMON EGGS BY HATCHERY. A
7 hatchery operator who sells salmon returning from the natural water
8 [WATERS] of the state, or sells salmon eggs to another hatchery op-
9 erating under AS 16.10.400 - 16.10.470 or with a permit issued under
10 AS 08.06.010, after utilizing the funds for reasonable operating
11 costs, including debt retirement, expanding its facilities, salmon
12 rehabilitation projects, fisheries research, or for costs of operating
13 the qualified regional association for the area in which the hatchery
14 is located, shall expend the remaining funds on other fisheries activ-
15 ities of the qualified regional association. Fish returning to hatch-
16 eries and sold for human consumption must [SHALL] be of comparable
17 quality to fish harvested by commercial fisheries in the area, and
18 shall be sold at prices commensurate with the current market.

19 * Sec. 16. AS 16.43.140 is amended by adding a new subsection to read:

20 (d) This chapter does not apply to activities authorized by a
21 permit issued under AS 08.06.010 or 08.06.030.

22 * Sec. 17. AS 16.51.180(5) is amended to read:

23 (5) "seafood" means finfish, shellfish, and fish by-prod-
24 ucts, including but not limited to salmon, halibut, herring, flounder,
25 crab, clam, cod, shrimp, and pollock, but does not include aquatic
26 farm products as defined in AS 08.06.900;

27 * Sec. 18. This Act takes effect immediately under AS 01.10.070(c).
28
29

Original sponsors: Ellis, Rieger,
Cotten, et al.

BY THE LABOR AND
COMMERCE COMMITTEE

1 IN THE HOUSE

2 CS FOR HOUSE BILL NO. 108 (L&C)

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21 attach conditions to a permit issued under this section that are
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24 cant for an aquatic farming or hatchery permit required under AS 08.-
25 06.010 shall apply on a form prescribed by the commissioner.

26 (b) A permit issued under this section expires one year after
27 the date of issue.

28 (c) An application for renewal must be accompanied by fees
29 required under AS 08.01.065 and a report of a health inspection of the

1 farm or hatchery to be permitted. The inspection shall be conducted
2 by the Department of Fish and Game or by a fish disease diagnostician
3 approved by the Department of Fish and Game. The inspection shall be
4 conducted not more than 30 days before the application is submitted to
5 the department.

6 Sec. 08.06.030. AQUATIC FARM STOCK ACQUISITION PERMITS. (a) A
7 person may not acquire aquatic plants or aquatic animals from wild
8 stock in the state for the purpose of supplying stock to an aquatic
9 farm or hatchery required to have a permit under AS 08.06.010 unless
10 the person holds an acquisition permit from the commissioner of fish
11 and game.

12 (b) An acquisition permit authorizes the permit holder to ac-
13 quire the species and quantities of wild stock in the state specified
14 in the permit for the purpose of supplying stock to an aquatic farm or
15 hatchery required to have a permit under AS 08.06.010.

16 (c) The commissioner of fish and game, in consultation with the
17 commissioner of commerce and economic development, shall specify the
18 expiration date of an acquisition permit and may attach conditions to
19 an acquisition permit, including conditions relating to the time,
20 place, and manner of harvest. Size, gear, place, time, licensing, and
21 other limitations applicable to sport, commercial, or subsistence
22 harvest of aquatic plants and aquatic animals do not apply to a har-
23 vest with a permit issued under this section.

24 (d) The commissioner of fish and game shall forward a copy of
25 each permit application under this section to the commissioner of
26 commerce and economic development. The commissioner of fish and game
27 shall issue or deny a permit within 30 days after receiving an appli-
28 cation.

29 (e) The commissioner of fish and game may deny or restrict a

1 permit under this section if the commissioner finds that the proposed
2 harvest will substantially impair sustained yield of the species. The
3 decision of the commissioner of fish and game must contain the factual
4 basis for the findings. If the substantial impairment could not have
5 been reasonably foreseen and avoided through available management
6 options, the commissioner of fish and game shall explain why in the
7 decision.

8 (f) Except as provided in (e) of this section, the commissioner
9 of fish and game shall issue a permit if

10 (1) wild stock is needed for initial farms or hatchery
11 stock;

12 (2) there are technological limitations on the propagation
13 of cultured stock for the species sought;

14 (3) wild stock is needed to maintain the gene pool of a
15 hatchery or aquatic farm; or

16 (4) commercial harvest of the species sought is not limited
17 under AS 16.43 and is not fully developed.

18 (g) Aquatic plants and aquatic animals acquired under a permit
19 issued under this section become the property of the permit holder and
20 are no longer a public or common resource.

21 (h) The commissioner of fish and game shall make stock available
22 for aquatic farming purposes.

23 Sec. 08.06.040. IMPORTATION OF AQUATIC PLANTS OR AQUATIC ANIMALS
24 FOR STOCK. A person may not import into the state an aquatic plant or
25 aquatic animal for the purpose of supplying stock to an aquatic farm
26 or hatchery unless authorized by the commissioner of fish and game or
27 by a regulation of the Board of Fisheries.

28 Sec. 08.06.050. LIMITATION ON SALE, TRANSFER OF STOCK, AND
29 PRODUCTS. (a) A private hatchery required to have a permit under

1 AS 08.06.010 may sell or transfer stock from the hatchery only to an
2 aquatic farm or other hatchery that has a permit issued under AS 08.-
3 06.010.

4 (b) Stock may not be transferred to or from an aquatic farm or
5 hatchery required to have a permit under AS 08.06.010 without prior
6 notice of the transfer to the commissioner. A notice of transfer
7 shall be submitted at least 30 days before the proposed date of trans-
8 fer.

9 (c) A notice of transfer must be accompanied by a report of a
10 health inspection of the stock. The inspection shall be conducted by
11 the Department of Fish and Game or by a disease diagnostician approved
12 by the Department of Fish and Game.

13 (d) The Department of Fish and Game may restrict or disapprove a
14 transfer of stock if it finds that the transfer

15 (1) would present a substantial risk of spreading disease;
16 or

17 (2) in the case of a transfer from a hatchery for which a
18 permit has been issued under AS 16.10.400, would significantly impair
19 the production needs of the hatchery.

20 (e) A person may not sell, transfer, or offer to sell or trans-
21 fer, or knowingly purchase or receive, an aquatic farm product grown
22 or propagated in the state unless the product was grown or propagated
23 on a farm with a permit issued under AS 08.06.010. The permit must be
24 in effect at the time of the sale, transfer, purchase, receipt, or
25 offer.

26 Sec. 08.06.060. RELEASE OF CERTAIN FISH PROHIBITED. Salmon and
27 trout may not intentionally be released into the public water of the
28 state from a hatchery or aquatic farm required to have a permit under
29 this chapter without prior authorization from the Department of Fish

1 and Game.

2 Sec. 08.06.070. DISEASE CONTROL AND INSPECTION. (a) The De-
3 partment of Fish and Game may order the quarantine or the destruction
4 and disposal of diseased hatchery stock or of aquatic farm products
5 when necessary to protect wild stock. A holder of a permit issued
6 under this chapter shall report to the Department of Fish and Game an
7 outbreak or incidence of disease among stock or aquatic farm products
8 of the permit holder.

9 (b) A holder of a permit issued under AS 08.06.010 shall allow
10 the Department of Fish and Game to inspect the permit holder's farm or
11 hatchery during operating hours and upon reasonable notice. The cost
12 of inspection shall be borne by the Department of Fish and Game.

13 (c) The Department of Fish and Game shall develop a disease
14 management and control program for aquatic farms and hatcheries.

15 (d) The Department of Fish and Game may enter into an agreement
16 with a state or federal agency or a private provider to provide ser-
17 vices under (b) and (c) of this section, or inspections under AS 08.-
18 06.020(b).

19 Sec. 08.06.080. REPORT. The commissioner shall submit to the
20 legislature, not later than the first day of each regular legislative
21 session, a report concerning the progress of the aquatic farming
22 industry, including the number of permits issued under AS 08.06.010,
23 the names and addresses of permit holders, the effect of the industry
24 on the commercial fishing industry in the state, and recommendations
25 for legislation relating to aquatic farming.

26 Sec. 08.06.090. REGULATIONS. The commissioner shall adopt regu-
27 lations necessary to implement this chapter and to effect state policy
28 concerning aquatic farming.

29 Sec. 08.06.100. PENALTY. A person who violates a provision of

1 this chapter, a regulation adopted under this chapter, or a term or
2 condition of a permit issued under this chapter, is guilty of a class
3 B misdemeanor.

4 Sec. 08.06.900. DEFINITIONS. In this chapter

5 (1) "aquatic farm" means a facility that grows, farms, or
6 cultivates aquatic farm products in captivity or under positive con-
7 trol;

8 (2) "aquatic farm product" includes an aquatic plant or
9 aquatic animal, or fish parts that are propagated, farmed, or cul-
10 tivated in an aquatic farm and sold or offered for consumption;

11 (3) "commissioner" means the commissioner of commerce and
12 economic development;

13 (4) "hatchery" means a facility for the artificial incu-
14 bation of stock, including rearing of juvenile aquatic plants or
15 aquatic animals;

16 (5) "positive control" means, for fish and other mobile
17 species, enclosed within a natural or artificial escape-proof barrier;
18 for species with limited or no mobility, such as a bivalve or an
19 aquatic plant, "positive control" also includes managed cultivation in
20 unenclosed water;

21 (6) "stock" means live aquatic plants and aquatic animals
22 acquired, collected, possessed, or intended for use by a hatchery or
23 aquatic farm for the purpose of further growth or propagation.

24 * Sec. 3. AS 08.01.065(a) is amended to read:

25 (a) The department shall adopt regulations that establish the
26 amount and manner of payment of application fees, examination fees,
27 license fees, registration fees, permit fees, investigation fees, and
28 all other fees as appropriate for the occupations covered by this
29 chapter, for aquatic farms and hatcheries under AS 08.06, and for real

1 estate brokers and salesmen under AS 08.88.

2 * Sec. 4. AS 16.05.251 is amended by adding a new subsection to read:

3 (f) Except as expressly provided in AS 08.06.040, the Board of
4 Fisheries may not adopt regulations or take action regarding the
5 issuance, denial, or conditioning of a permit under AS 08.06, the
6 construction or operation of a farm or hatchery required to have a
7 permit under AS 08.06.010, or a harvest with a permit issued under
8 AS 08.06.030. Regulations or orders adopted by the Board of Fisheries
9 under this section do not apply to a harvest with a permit issued
10 under AS 08.06.030.

11 * Sec. 5. AS 16.05.330(a) is amended to read:

12 (a) Except as otherwise permitted in this chapter, a person may
13 not engage in sport fishing, including the taking of razor clams; in
14 hunting, trapping, or fur dealing; in the farming of [FISH,] fur [,]
15 or game; or in taxidermy, without having the appropriate license or
16 tag in actual possession.

17 * Sec. 6. AS 16.05.340(a)(14) is amended to read:

18 (14) [FISH OR] game farming biennial licenses.....200

19 * Sec. 7. AS 16.05.920(a) is amended to read:

20 (a) Unless permitted by AS 16.05 - AS 16.40 or AS 08.06, or by
21 regulation adopted under AS 16.05 - AS 16.40 or AS 08.06, a person may
22 not take, possess, transport, sell, offer to sell, purchase, or offer
23 to purchase fish, game, or marine aquatic plants, or any part of fish,
24 game, or aquatic plants, or a nest or egg of fish or game.

25 * Sec. 8. AS 16.05.930 is amended by adding a new subsection to read:

26 (g) AS 16.05.330 - 16.05.720 do not apply to an activity au-
27 thorized by a permit issued under AS 08.06.010 or 08.06.030, or to a
28 person or vessel employed in an activity authorized by a permit issued
29 under AS 08.06.010 or 08.06.030.

1 * Sec. 9. AS 16.05.940(14) is amended to read:

2 (14) "[FISH OR] game farming" means the business of prop-
3 agating, breeding, raising, or producing [FISH OR] game in captivity
4 for the purpose of marketing the [FISH OR] game or game [THEIR] prod-
5 ucts, and "captivity" means having the [FISH OR] game under positive
6 control, as in a pen [, POND,] or an area of land that [OR WATER
7 WHICH] is completely enclosed by a generally escape-proof barrier;

8 * Sec. 10. AS 16.10 is amended by adding a new section to read:

9 Sec. 16.10.269. LIMITATIONS. AS 16.10.265 - 16.10.267 do not
10 apply to the purchase or sale of aquatic farm products from a holder
11 of a permit issued under AS 08.06.010 or stock from a holder of a
12 permit issued under AS 08.06.030.

13 * Sec. 11. AS 16.10.380(b) is amended to read:

14 (b) In this section "user group" includes, but is not limited
15 to, sport fishermen, processors, commercial fishermen, aquatic farm-
16 ers, subsistence fishermen, and representatives of local communities.

17 * Sec. 12. AS 16.10.400 is amended by adding a new subsection to read:

18 (h) AS 16.10.400 - 16.10.475 do not apply to the construction or
19 operation of a private hatchery that has a permit issued under AS 08.-
20 06.010.

21 * Sec. 13. AS 16.10.420 is amended to read:

22 Sec. 16.10.420. CONDITIONS OF A PERMIT. The department shall
23 require, in a permit issued to a hatchery operator, that

24 (1) salmon eggs procured by the hatchery must be from the
25 department or a source approved by the department;

26 (2) no salmon eggs or resulting fry be placed in waters of
27 the state other than those specifically designated in the permit;

28 (3) no salmon eggs or resulting fry, sold to a permit
29 holder by the state or by another party approved by the department,

1 may be resold or otherwise transferred to another person, unless that
2 person holds a permit issued under AS 08.06.010;

3 (4) no salmon be released by the hatchery before department
4 approval, and, for purposes of pathological examination and approval,
5 the department shall be notified of the proposed release of salmon at
6 least 15 days before the date of their proposed release by the hatch-
7 ery;

8 (5) diseased salmon be destroyed in a specific manner and
9 place designated by the department;

10 (6) adult salmon be harvested by hatchery operators only at
11 specific locations as designated by the department;

12 (7) surplus eggs from salmon returning to the hatchery be
13 made available for sale first to the department and then, after in-
14 spection and approval by the department, to operators of other hatch-
15 eries authorized by permit to operate under AS 16.10.400 - 16.10.470,
16 or AS 08.06.010;

17 (8) if surplus salmon eggs are sold by a permit holder to
18 another permit holder, a copy of the sales transaction be provided to
19 the department;

20 (9) [REPEALED

21 (10)] a hatchery be located in an area where a reasonable
22 segregation from natural stocks occurs, but, when feasible, in an area
23 where returning hatchery fish will pass through traditional salmon
24 fisheries.

25 * Sec. 14. AS 16.10.450 is amended to read:

26 Sec. 16.10.450. SALE OF SALMON AND SALMON EGGS BY HATCHERY. A
27 hatchery operator who sells salmon returning from the natural water
28 [WATERS] of the state, or sells salmon eggs to another hatchery op-
29 erating under AS 16.10.400 - 16.10.470 or with a permit issued under

1 AS 08.06.010, after utilizing the funds for reasonable operating
2 costs, including debt retirement, expanding its facilities, salmon
3 rehabilitation projects, fisheries research, or for costs of operating
4 the qualified regional association for the area in which the hatchery
5 is located, shall expend the remaining funds on other fisheries activ-
6 ities of the qualified regional association. Fish returning to hatch-
7 eries and sold for human consumption must [SHALL] be of comparable
8 quality to fish harvested by commercial fisheries in the area, and
9 shall be sold at prices commensurate with the current market.

10 * Sec. 15. AS 16.43.140 is amended by adding a new subsection to read:

11 (d) This chapter does not apply to activities authorized by a
12 permit issued under AS 08.06.010 or 08.06.030.

13 * Sec. 16. AS 16.51.180(5) is amended to read:

14 (5) "seafood" means finfish, shellfish, and fish by-prod-
15 ucts, including but not limited to salmon, halibut, herring, flounder,
16 crab, clam, cod, shrimp, and pollock, but does not include aquatic
17 farm products as defined in AS 08.06.900;

18 * Sec. 17. AS 38.05.035 is amended by adding a new subsection to read:

19 (g) A land use or tidelands permit issued under this section for
20 aquatic farming or related hatchery operations under AS 08.06 may be
21 issued only to a resident or to a corporation licensed to do business
22 in the state.

23 * Sec. 18. This Act takes effect immediately under AS 01.10.070(c).
24
25
26
27
28
29

A M E N D M E N T

Offered in the HOUSE

TO: CSHB 108(L&C)(2/24/87 draft)

Page 11, after line 17:

Insert a new bill section to read:

"* Sec. 17. AS 38.05.035 is amended by adding a new subsection to read:

(g) A land use or tidelands permit issued under this section for aquatic farming or related hatchery operations under AS 08.06 may be issued only to a resident or to a corporation licensed to do business in the state."

Renumber following bill section accordingly.

Introduced: 2/12/88
Referred: Labor and Commerce, Resources
and Finance

5-1754A

file HB 108

1 IN THE SENATE

BY JONES

2

SENATE BILL NO. 425

3

IN THE LEGISLATURE OF THE STATE OF ALASKA

4

FIFTEENTH LEGISLATURE - SECOND SESSION

5

A BILL

6 For an Act entitled: "An Act relating to the farming of aquatic plants and
7 aquatic animals; and providing for an effective
8 date."

9 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

10 * Section. 1. AS 08 is amended by adding a new chapter to read:

11

CHAPTER 06. AQUATIC FARMING.

12

Sec. 08.06.010. AQUATIC FARM AND HATCHERY PERMITS. (a) A

13

person may not, without a permit from the commissioner, construct or
14 operate

15

(1) an aquatic farm; or

16

(2) a hatchery for the purpose of supplying aquatic plants

17

or shellfish to an aquatic farm.

18

(b) A permit issued under this section authorizes the permittee,

19

subject to the conditions of this chapter, to acquire, purchase, offer

20

to purchase, transfer, possess, sell, and offer to sell stock and

21

aquatic farm products that are used or reared at the hatchery or

22

aquatic farm.

23

(c) The commissioner, after consulting with the commissioner of

24

fish and game and the commissioner of environmental conservation, may

25

attach conditions to a permit issued under this section that are

26

necessary to protect the public health or natural stock.

27

(d) A permit issued under this section is nontransferable.

28

(e) Notwithstanding other provisions of law, the commissioner

29

may not issue a permit under this section for the farming of fish

1 other than shellfish.

2 Sec. 08.06.020. PERMIT APPLICATION AND RENEWAL. (a) An appli-
3 cant for an aquatic farming or hatchery permit required under AS 08.-
4 06.010 shall apply on a form prescribed by the commissioner. An
5 application for a permit must include a plan for the development of
6 the aquatic farm or hatchery, which must be approved by the commis-
7 sioner before the permit is issued.

8 (b) An application for renewal must be accompanied by fees
9 required under AS 08.01.065, a report of a health inspection of the
10 farm or hatchery covered by the permit, and evidence that satisfies
11 the commissioner that the applicant has complied with the development
12 plan required under (a) of this section. The inspection shall be
13 conducted by the Department of Fish and Game or by a disease diagnos-
14 tician approved by the Department of Fish and Game. The inspection
15 shall be conducted not more than 30 days before the application is
16 submitted to the department.

17 Sec. 08.06.030. AQUATIC FARM STOCK ACQUISITION PERMITS. (a) A
18 person may not acquire aquatic plants or shellfish from wild stock in
19 the state for the purpose of supplying stock to an aquatic farm or
20 hatchery required to have a permit under AS 08.06.010 unless the
21 person holds an acquisition permit from the commissioner of fish and
22 game.

23 (b) An acquisition permit authorizes the permit holder to ac-
24 quire the species and quantities of wild stock in the state specified
25 in the permit for the purpose of supplying stock to an aquatic farm or
26 hatchery required to have a permit under AS 08.06.010.

27 (c) The commissioner of fish and game, in consultation with the
28 commissioner of commerce and economic development, shall specify the
29 expiration date of an acquisition permit and may attach conditions to

1 an acquisition permit, including conditions relating to the time,
2 place, and manner of harvest. Size, gear, place, time, licensing, and
3 other limitations applicable to sport, commercial, or subsistence
4 harvest of aquatic plants and shellfish do not apply to a harvest with
5 a permit issued under this section.

6 (u) The commissioner of fish and game shall forward a copy of
7 each permit application under this section to the commissioner of
8 commerce and economic development. The commissioner of fish and game
9 shall issue or deny a permit within 30 days after receiving an appli-
10 cation.

11 (e) The commissioner of fish and game shall deny or restrict a
12 permit under this section if the commissioner finds that the proposed
13 harvest will substantially impair sustained yield of the species. The
14 commissioner may deny or restrict a permit under this section if the
15 commissioner finds that the proposed harvest will significantly dis-
16 rupt established uses of the resources by commercial, sport, personal
17 use, or subsistence users. The commissioner of fish and game shall
18 forward to the Board of Fisheries for action permit applications for
19 species that support commercial fisheries subject to limited entry
20 under AS 16.43. A denial of the permit by the commissioner of fish
21 and game must contain the factual basis for the findings. The commis-
22 sioner shall forward denied permit applications to the Board of Fish-
23 eries for consideration at the next regularly scheduled meeting of the
24 board.

25 (f) Except as provided in (e) of this section, the commissioner
26 of fish and game shall issue a permit if

27 (1) wild stock is necessary to meet the initial needs of
28 farm or hatchery stock;

29 (2) there are technological limitations on the propagation

1 of cultured stock for the species sought;

2 (3) wild stock sought is not fully utilized by commercial,
3 sport, personal use, or subsistence fisheries; or

4 (4) wild stock is needed to maintain the gene pool of a
5 hatchery or aquatic farm.

6 (g) Aquatic plants and shellfish acquired under a permit issued
7 under this section become the property of the permit holder and are no
8 longer a public or common resource.

9 Sec. 08.06.040. IMPORTATION OF AQUATIC PLANTS OR SHELLFISH FOR
10 STOCK. A person may not import into the state an aquatic plant or
11 shellfish for the purpose of supplying stock to an aquatic farm or
12 hatchery unless authorized by the commissioner of fish and game or by
13 a regulation of the Board of Fisheries.

14 Sec. 08.06.050. LIMITATION ON SALE, TRANSFER OF STOCK, AND
15 PRODUCTS. (a) A private hatchery required to have a permit under
16 AS 08.06.010 may sell or transfer stock from the hatchery only to an
17 aquatic farm or other hatchery that has a permit issued under AS 08.-
18 06.010.

19 (b) Stock may not be transferred to or from an aquatic farm or
20 hatchery required to have a permit under AS 08.06.010 without prior
21 notice of the transfer to the commissioner. A notice of transfer
22 shall be submitted at least 30 days before the proposed date of trans-
23 fer.

24 (c) A notice of transfer must be accompanied by a report of a
25 health inspection of the stock. The inspection shall be conducted by
26 the Department of Fish and Game or by a disease diagnostician approved
27 by the Department of Fish and Game. The cost of inspection shall be
28 borne by the Department of Fish and Game.

29 (d) The Department of Fish and Game may restrict or disapprove a

1 transfer of stock if it finds that the transfer would present a sub-
2 stantial risk of spreading disease.

3 (e) A person may not sell, transfer, or offer to sell or trans-
4 fer, or knowingly purchase or receive, an aquatic farm product grown
5 or propagated in the state unless the product was grown or propagated
6 on a farm with a permit issued under AS 08.06.010. The permit must be
7 in effect at the time of the sale, transfer, purchase, receipt, or
8 offer.

9 Sec. 08.06.060. DISEASE CONTROL AND INSPECTION. (a) The De-
10 partment of Fish and Game may order the quarantine or the destruction
11 and disposal of diseased hatchery stock or of aquatic farm products
12 when necessary to protect wild stock. A holder of a permit issued
13 under AS 08.06.010 shall report to the Department of Fish and Game an
14 outbreak or incidence of disease among stock or aquatic farm products
15 of the permit holder.

16 (b) A holder of a permit issued under AS 08.06.010 shall allow
17 the Department of Fish and Game to inspect the permit holder's farm or
18 hatchery during operating hours and upon reasonable notice. The cost
19 of inspection shall be borne by the Department of Fish and Game.

20 (c) The Department of Fish and Game shall develop a disease
21 management and control program for aquatic farms and hatcheries.

22 (d) The Department of Fish and Game may enter into an agreement
23 with a state or federal agency or a private provider to provide ser-
24 vices under (b) and (c) of this section, or inspections under AS 08.-
25 06.020(b).

26 Sec. 08.06.070. REGULATIONS. The commissioner may adopt regu-
27 lations necessary to implement this chapter.

28 Sec. 08.06.080. PENALTY. A person who violates a provision of
29 this chapter, a regulation adopted under this chapter, or a term or

1 condition of a permit issued under this chapter, is guilty of a class
2 B misdemeanor.

3 Sec. 08.06.900. DEFINITIONS. In this chapter

4 (1) "aquatic farm" means a facility that grows, farms, or
5 cultivates aquatic farm products in captivity or under positive con-
6 trol;

7 (2) "aquatic farm product" means an aquatic plant or shell-
8 fish, or parts of shellfish, that are propagated, farmed, or cul-
9 tivated in an aquatic farm and sold or offered for consumption;

10 (3) "aquatic plant" means a plant indigenous to state
11 water;

12 (4) "commissioner" means the commissioner of commerce and
13 economic development;

14 (5) "hatchery" means a facility for the artificial incu-
15 bation of stock, including rearing of juvenile aquatic plants or
16 shellfish;

17 (6) "positive control" means, for mobile species, enclosed
18 within a natural or artificial escape-proof barrier; for species with
19 limited or no mobility, such as a bivalve or an aquatic plant, "posi-
20 tive control" also includes managed cultivation in unenclosed water;

21 (7) "shellfish" means shellfish that is indigenous to state
22 water or that is authorized to be imported into the state under a
23 permit issued by the commissioner of fish and game;

24 (8) "stock" means live aquatic plants and shellfish ac-
25 quired, collected, possessed, or intended for use by a hatchery or
26 aquatic farm for the purpose of further growth or propagation.

27 * Sec. 2. AS 03.05.020(a) is amended to read:

28 (a) The commissioner shall

29 (1) require routine inspection of food animals, fish,

1 poultry and derivative food products, to protect the public against
2 fraud, disease and spoilage, and in this connection adopt uniform
3 regulations establishing standards of identity and composition of
4 these food products and minimum standards of sanitation and handling
5 methods as to all phases of slaughtering, processing, storing, trans-
6 porting, displaying and selling of these food products;

7 (2) issue orders or cause the orders to be issued by an
8 authorized veterinarian prohibiting transportation and sale of food
9 products intended for human consumption which do not meet the minimum
10 requirements established under (1) of this subsection, and limiting
11 their use and disposal in conformity with protection of the public;

12 (3) adopt a schedule of fees or charges, and credit pro-
13 visions, for services rendered by state veterinarians to farmers and
14 others at their request in caring for livestock and poultry, and all
15 the fees shall be transmitted to the commissioner for deposit in the
16 state treasury;

17 (4) designate points of entry for admission of livestock or
18 poultry into the state, and arrange inspection at those points with or
19 without collaboration and assistance of the federal government, and
20 bar entry of stock or poultry not shipped under a valid permit or not
21 free from contagious or infectious disease;

22 (5) adopt, repeal, and amend regulations consistent with
23 existing law for

24 (A) the labeling and grading of milk and milk products
25 and standards of cleanliness and sanitation, to at least the
26 minimum of current recommendations of the United States Public
27 Health Service, for the operation of dairies selling, or offering
28 for sale, milk or milk products;

29 (B) the production and sale of ice cream and allied

1 frozen desserts;

2 (C) the production and sale of imitation milk and
3 imitation milk products;

4 (6) monitor aquatic farms and hatcheries that hold permits
5 under AS 08.06.010 for the possible presence of paralytic shellfish
6 poisoning.

7 * Sec. 3. AS 08.01.010 is amended by adding a new paragraph to read:

8 (28) regulation of aquatic farms and hatcheries under
9 AS 08.06.

10 * Sec. 4. AS 16.05.251 is amended by adding a new subsection to read:

11 (f) Except as expressly provided in AS 08.06.040, the Board of
12 Fisheries may not adopt regulations or take action regarding the
13 issuance, denial, or conditioning of a permit under AS 08.06, the
14 construction or operation of a farm or hatchery required to have a
15 permit under AS 08.06.010, or a harvest with a permit issued under
16 AS 08.06.030. Regulations or orders adopted by the Board of Fisheries
17 under this section do not apply to a harvest with a permit issued
18 under AS 08.06.030.

19 * Sec. 5. AS 16.05.330(a) is amended to read:

20 (a) Except as otherwise permitted in this chapter, a person may
21 not engage in sport fishing, including the taking of razor clams; in
22 hunting, trapping, or fur dealing; in the farming of [FISH,] fur [,]
23 or game; or in taxidermy, without having the appropriate license or
24 tag in actual possession.

25 * Sec. 6. AS 16.05.920(a) is amended to read:

26 (a) Unless permitted by AS 16.05 - AS 16.40 or AS 08.06, or by
27 regulation adopted under AS 16.05 - AS 16.40 or AS 08.06, a person may
28 not take, possess, transport, sell, offer to sell, purchase, or offer
29 to purchase fish, game, or marine aquatic plants, or any part of fish,

1 game, or aquatic plants, or a nest or egg of fish or game.

2 * Sec. 7. AS 16.05.930 is amended by adding a new subsection to read:

3 (g) AS 16.05.330 - 16.05.720 do not apply to an activity au-
4 thorized by a permit issued under AS 08.06.010 or 08.06.030, or to a
5 person or vessel employed in an activity authorized by a permit issued
6 under AS 08.06.010 or 08.06.030.

7 * Sec. 8. AS 16.05.940(14) is amended to read:

8 (14) "[FISH OR] game farming" means the business of prop-
9 agating, breeding, raising, or producing [FISH OR] game in captivity
10 for the purpose of marketing the [FISH OR] game or game [THEIR] prod-
11 ucts, and "captivity" means having the [FISH OR] game under positive
12 control, as in a pen [, POND.] or an area of land that [OR WATER
13 WHICH] is completely enclosed by a generally escape-proof barrier;

14 * Sec. 9. AS 16.10 is amended by adding a new section to read:

15 Sec. 16.10.269. LIMITATIONS. AS 16.10.265 - 16.10.267 do not
16 apply to the purchase or sale of aquatic farm products from a holder
17 of a permit issued under AS 08.06.010 or stock from a holder of a
18 permit issued under AS 08.06.030.

19 * Sec. 10. AS 16.10.400 is amended by adding a new subsection to read:

20 (h) AS 16.10.400 - 16.10.475 do not apply to the construction or
21 operation of a private hatchery that has a permit issued under AS 08.-
22 06.010.

23 * Sec. 11. AS 16.43.140 is amended by adding a new subsection to read:

24 (d) This chapter does not apply to activities authorized by a
25 permit issued under AS 08.06.010 or 08.06.030.

26 * Sec. 12. AS 16.51.180(5) is amended to read:

27 (5) "seafood" means finfish, shellfish, and fish by-prod-
28 ucts, including but not limited to salmon, halibut, herring, flounder,
29 crab, clam, cod, shrimp, and pollock, but does not include aquatic

1 farm products as defined in AS 08.06.900;

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

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

9 * Sec. 14. AS 38 05 is amended by adding new sections to read:

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

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

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

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

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

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

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

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

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

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

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

29 (1) classification or reclassification of state land under

1 AS 38.05.300 and the closing of land to mineral leasing or entry under
2 AS 38.05.185;

3 (2) zoning of land under applicable law;

4 (3) a decision under AS 38.05.035(e) regarding the sale,
5 lease, or disposal of an interest in state land or resources; [AND]

6 (4) a competitive disposal of an interest in state land or
7 resources after final decision under AS 38.05.035(e);

8 (5) a preliminary finding under AS 38.05.035(e) and 38.05.-
9 855(c) concerning sites for aquatic farms and related hatcheries.

10 * Sec. 16. AS 38.05.946 is amended by adding a new subsection to read:

11 (b) The commissioner shall hold a public hearing in each dis-
12 trict identified under AS 38.05.855 within 30 days after giving notice
13 of a preliminary finding under AS 38.05.035(e) and 38.05.855(c) con-
14 cerning sites for aquatic farms and related hatcheries.

15 * Sec. 17. AS 16.05.340(a)(14) is repealed.

16 * Sec. 18. The commissioner of commerce and economic development may
17 not issue a permit under AS 08.06.010, enacted by sec. 1 of this Act, and
18 the commissioner of fish and game may not issue a permit under AS 08.06.-
19 030, enacted by sec. 1 of this Act, until regulations have been adopted
20 under AS 08.06.070, enacted by sec. 1 of this Act.

21 * Sec. 19. The commissioner of natural resources may not issue a permit
22 under AS 38.05.856, enacted by sec. 14 of this Act, until the commissioner
23 adopts regulations necessary for the implementation of AS 38.05.856.

24 * Sec. 20. This Act takes effect immediately under AS 01.10.070(c).

Definitions?

HB 108.326

1

DRAFT fish farm/tidelands leasing language

March 28, 1987

For distribution to:

- Rep. Ellis
- Rep. Herrmann
- Rep. Rieger
- DNR

TOSHIBA

PRELIMINARY REVIEW COPY ONLY

* Section 1. AS 38.05.070(a) is amended to read:

(a) Land, including tide, submerged or shoreland, to which the state holds title or to which it may become entitled, may be leased, except for the extraction of natural resources, in the manner provided in AS 38.05.070-38.05.105. Leasing of land for fish farming sites may occur under AS 38.05.400-38.05.412.

* Sec. 2. AS 38.05 is amended by adding a new article to read:

Article __. Leasing of State Lands for Fish Farming.

Section

- 400. Generally
- 402. Application for a lease
- 404. Application processing
- 406. Review of applications
- 408. Leasing procedures and decisions
- 410. Lease terms
- 412. Regulations

negotiated lease

AS 38.05.400. Generally. Under AS 38.05.400-AS 38.05.412, the commissioner may lease land, including

tide, submerged, and shoreland and adjacent uplands, for fish farm sites.

clarity that it's a neg'd lease

AS 38.05.402. Application for a lease. (a) An Alaska resident holding an Alaska business license who is interested in obtaining a lease for fish farming operations must, by ^{*intent?*} October 1 of the year, submit an application for a lease on forms issued by the commissioner. The commissioner shall require submittal of relevant information including at a minimum:

(1) a map at the most detailed scale generally available showing the proposed site;

(2) a farm operation plan, providing detailed information and drawings of the proposed operation, including

req?

(A) the farm development schedule;

(B) biological and physical capabilities of the site

(C) needs and sources for power, fresh water, fuel, and feed;

(D) waste disposal, including farm product wastes;

(E) production strategies and target levels;

(F) fish processing and markets;

(G) cost estimates and financing; and

(H) special measures to mitigate environmental impact;

- (3) an application fee of \$100;
- (4) evidence that the applicant is fit, willing, and able to conduct the operation;
- (5) photographs of the site.

(b) On receipt of an application for a fish farming lease, the commissioner shall evaluate the application for completeness and request more information, if necessary, within 15 days. If the commissioner does not request more information within 15 days, the application shall be considered complete, although the commissioner may request more information as the application is processed under AS 38.05.404-38.05.406.

input?

Public notice?

AS 38.05.404. Application processing. (a) The commissioner shall begin to process a fish farm lease application after the application is complete.

(b) Between November 1 and December 31 of the year, the commissioner shall publish notice, in accordance with AS 38.05.945, of all fish farm site lease applications submitted by October 1 and completed before November 1 of the year. If warranted by public response to a fish farm application, the commissioner shall hold public hearings at a place and time to be announced at least fourteen days in advance.

(c) The commissioner shall issue final decisions on all fish farm lease applications submitted during the previous year by March 1.

} interest?

C2M 46.40.100?

Bozoy's plans zoning

AS 38.05.406. Review of applications. (a) Before issuing a fish farming lease under AS 38.05.400-38.05.412, the commissioner shall

(1) assure that the proposed use will conform with applicable land use plans adopted by the commissioner under AS 38.04.065 and land classifications under AS 38.05.300;

(2) consider other land uses that exist or can reasonably be expected on the same site;

(3) assess and consider the cumulative impacts of fish farms already leased or proposed in the area;

(4) assure that adequate navigation and access can be maintained, including access to public and private uplands and to public waters; and

(5) identify special operating conditions and mitigating measures that may be required of the applicant.

(b) In considering the fish farm application, the commissioner shall consult with local governments, local fish and game advisory committees, and other agencies, including the Department of Fish and Game.

Regional Review Team?

5

January 15

(c) By ~~the~~ of the year, the commissioner shall prepare and issue preliminary decisions, including draft lease terms and operating conditions, on all complete fish farm leasing applications received during the previous year. Notice of the preliminary decisions shall be provided in accordance with AS 38.05.945. The preliminary decision must include a draft finding of state's interests in accordance with AS 38.05.4⁰⁸~~00~~(b).

intent?

1988

explanation or definition of prequalification may is vague?

AS 38.05.408. Leasing procedures and decisions.

(a) The commissioner may issue ^{negotiate} a fish farm lease to a prequalified ^{applicant} ~~person~~ under regulations adopted in accordance with AS 38.05.400-38.05.412.

(b) After determining that a fish farm lease application accords with AS 38.05.406(a), the commissioner shall consider the state's interests in the proposed lease of state lands, and may not issue any lease unless the commissioner determines that issuance of the lease serves the best interests of the state.

AS 38.05.410. Lease terms.

(a) A fish farm lease for tide, submerged, and shoreland and adjacent uplands may be issued for up to ^{thirty?} fifty-five years, at

30 years? renewals -

the discretion of the commissioner in consideration of the useful life of the improvements to be constructed.

(b) As a rental fee for the lease the commissioner shall provide for return of a portion of the gross receipts from the lease to be deposited in the general fund of the state. For an operation grossing less than \$500,000 per year, the commissioner shall require the return of two per cent of gross receipts. For an operation grossing between \$500,000 and \$1,000,000 per year, the commissioner shall require the return of three per cent of gross receipts. For an operation grossing over \$1,000,000 per year, the commissioner shall require the return of between three per cent and five per cent of gross receipts.

*too arbitrary?
minimum per acre
if not gross -
\$500 acre?*

regs.?

(c) A lease shall contain terms that

- (1) prevent nonconforming uses of the leased property;
- (2) provide for restoration of the site after termination of the lease;
- (3) require investment and development on a specified schedule;
- (4) allow transfer to another owner only with the commissioner's approval;
- (5) permit regular inspection of the facilities and operations; and

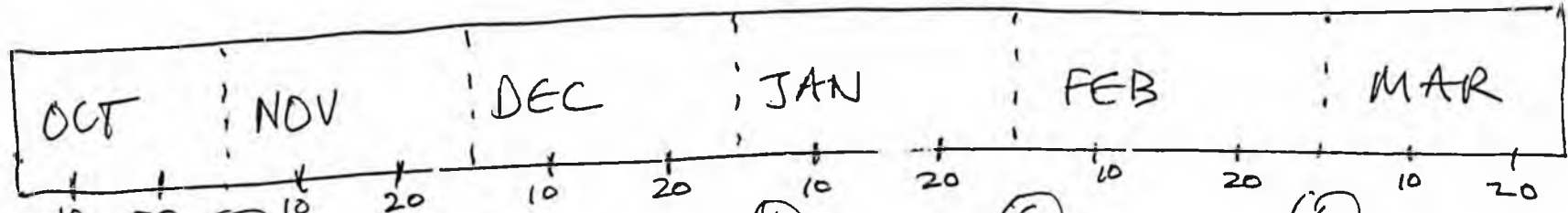
(6) identify ~~special~~ ^{necessary} measures to mitigate environmental impact.

(d) The commissioner may require survey of the lease site at the applicant's expense prior to issuance of a lease. *or during term of a lease.*

(e) The commissioner may include other reasonable terms and conditions in the lease.

(f) The commissioner may not approve the transfer of any lease unless the commissioner determines that there has been substantial development and compliance with the terms of the lease.

AS 38.05.412. Regulations. The commissioner shall adopt regulations to implement AS 38.05.400-38.05.410.



①
OCT 1
 All applications are due (38.05.402(a))

②
OCTOBER
 DNR reviews all applications, can request more info (38.05.402(b))

③
NOVEMBER - DECEMBER
 All applications for the preceding year are noticed for at least 30 days (38.05.945); meanwhile commissioner reviews the applications for compliance w/ 38.05.406(a)-(b).

④
JANUARY
 Commissioner issues ~~draft~~ decisions, w/ best interest findings, for public review by 1/15 (38.05.406(c))

⑤
FEBRUARY
 Public ~~review~~ ^{review} of preliminary decisions/ best interest findings ends during February; commissioner considers comment + makes any changes.

⑥
MARCH
 March 1 - final decision, takes effect 30 days later. (38.05.404(c))

Paula

DCED - fit, willing, + able std.
prior to DGC mtg.

regional review team -

all rvw appln / mtg together.

and 38, 16, 08, 16 to say that
everyone rvws at the same time?
- Corps, USFS? (in SE at least)

remove timeframes? - keep for a few years?
need flexy for commir - wd prefer to
mg as any other use -

TO: PAULA BURGESS
DNR

FROM: BRENT PAINE
REP. RIEGER

TIME: 4:15

Preliminary Review Copy Only

Nine Pages including this cover page.

statute
 negs, ~~policy's~~ procedure
 3-5 year interim guidelines
 what kind of program to see
 (to deal w/ lots of zps.
 Best not to exist if not
 necessary.)

DNR has total authority
 What about Regional Review Team
 concept? DIED study fit/willing/able
 screening up front?

DRAFT fish farm/tidelands leasing language

March 28, 1987

For distribution to:

Rep. Ellis

~~Rep. Harrmann~~

~~Sen. Rieder~~

DNR

PRELIMINARY REVIEW COPY ONLY

* Section 1. AS 38.05.070(a) is amended to read:

(a) Land, including tide, submerged or shoreland, to which the state holds title or to which it may become entitled, may be leased, except for the extraction of natural resources, in the manner provided in AS 38.05.070-38.05.105. Leasing of land for ^{aquatic} fish farming sites may occur under AS 38.05.400-38.05.412.

* Sec. 2. AS 38.05 is amended by adding a new article to read:

Article . Leasing of State Lands for ^{aquatic} Fish Farming.

Section

- 400. Generally
- 402. Application for a lease
- 404. Application processing
- 406. Review of applications
- 408. Leasing procedures and decisions
- 410. Lease terms
- 412. Regulations

AS 38.05.400. Generally. Under AS 38.05.400-AS 38.05.412, the commissioner may lease land, including

2

tide, submerged, and shoreland and adjacent uplands,
for ~~fish~~ farm sites.

Revised lease

AS 38.05.402. Application for a lease. (a) An Alaska resident holding an Alaska business license who is interested in obtaining a lease for ~~fish~~ farming operations must, by October 1 of the year, submit an application for a lease on forms issued by the commissioner. The commissioner shall require submittal of relevant information including at a minimum:

(1) a map at the most detailed scale generally available showing the proposed site;

(2) a farm operation plan, providing detailed information and drawings of the proposed operation, including

(A) the farm development schedule;

(B) biological and physical capabilities of the site

(C) needs and sources for power, fresh water, fuel, and feed;

(D) waste disposal, including farm product wastes;

(E) production strategies and target levels;

(F) fish processing and markets;

(G) cost estimates and financing; and

(H) special measures to mitigate environmental impact;

- (3) an application fee of \$100;
- (4) evidence that the applicant is fit, willing, and able to conduct the operation;
- (5) photographs of the site.

(b) On receipt of an application for a ~~fish~~-farming lease, the commissioner shall evaluate the application for completeness and request more information, if necessary, within 15 days. If the commissioner does not request more information within 15 days, the application shall be considered complete, although the commissioner may request more information as the application is processed under AS 38.05.404-38.05.406.

Public Notice

AS 38.05.404. Application processing. (a) The commissioner shall begin to process a ~~fish~~ farm lease application after the application is complete.

(b) Between November 1 and December 31 of the year, the commissioner shall publish notice, in accordance with AS 38.05.945, of all ~~fish~~ farm site lease applications submitted by October 1 and completed before November 1 of the year. If warranted by public response to a ~~fish~~ farm application, the commissioner shall hold public hearings at a place and time to be announced at least fourteen days in advance.

4

(c) The commissioner shall issue final decisions on all fish farm lease applications submitted during the previous year by March 1.

AS 38.05.406. Review of applications. (a) Before issuing a fish farming lease under AS 38.05.400-38.05.412, the commissioner shall

(1) assure that the proposed use will conform with applicable land use plans adopted by the commissioner under AS 38.04.065 and land classifications under AS 38.03.300;

(2) consider *local district CDM plans* t exist or can reasonably be expected;

(3) assess a *borough comp plans zoning* relative impacts of fish farms already in the area;

(4) assure that adequate navigation and access can be maintained, including access to public and private uplands and to public waters; and

(5) identify special operating conditions and mitigating measures that may be required of the applicant.

Regional Review Teams(?) →

(b) In considering the fish farm application, the commissioner shall consult with local governments, local fish and game advisory committees, and other agencies, including the Department of Fish and Game.

5

January 15

(c) By ~~February~~ of the year, the commissioner shall prepare and issue preliminary decisions, including draft lease terms and operating conditions, on all complete fish farm leasing applications received during the previous year. Notice of the preliminary decisions shall be provided in accordance with AS 38.05.945. The preliminary decision must include a draft finding of state's interests in accordance with AS 38.05.4⁰⁸~~09~~(b).

AS 38.05.408. Leasing procedures and decisions.

(a) The commissioner may issue a fish farm lease to a prequalified ~~landowner~~ *applicant* under regulations adopted in accordance with AS 38.05.400-38.05.412.

(b) After determining that a fish farm lease application accords with AS 38.05.406(a), the commissioner shall consider the state's interests in the proposed lease of state lands, and may not issue any lease unless the commissioner determines that issuance of the lease serves the best interests of the state.

AS 38.05.410. Lease terms.

(a) A fish farm lease for tide, submerged, and shoreland and adjacent uplands may be issued for up to fifty-five years, at

how does prequalification work? is it for the owner/lessee (e.g.) who has total title?

the discretion of the commissioner in consideration of the useful life of the improvements to be constructed.

(b) As a rental fee for the lease the commissioner shall provide for return of a portion of the gross receipts from the lease to be deposited in the general fund of the state. For an operation grossing less than \$500,000 per year, the commissioner shall require the return of two per cent of gross receipts. For an operation grossing between \$500,000 and \$1,000,000 per year, the commissioner shall require the return of three per cent of gross receipts. For an operation grossing over \$1,000,000 per year, the commissioner shall require the return of between three per cent and five per cent of gross receipts.

Also need minimum fee per acre (in effect prior to sale of product)

(c) A lease shall contain terms that

- (1) prevent nonconforming uses of the leased property;
- (2) provide for restoration of the site after termination of the lease;
- (3) require investment and development on a specified schedule;
- (4) allow transfer to another owner only with the commissioner's approval;
- (5) permit regular inspection of the facilities and operations; and

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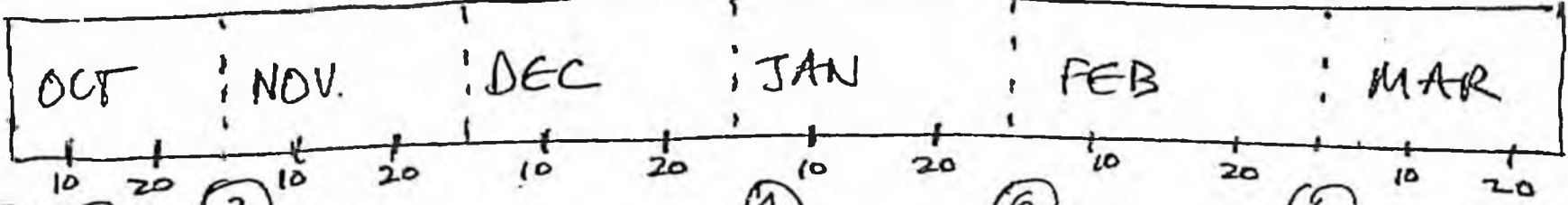
(6) identify ^{or necessary} special measures ^{necessary} to mitigate environmental impact.

(d) The commissioner may require survey of the lease site at the applicant's expense prior to issuance ~~of a lease.~~ ^{or at any time during the lease.}

(e) The [redacted] include other reasonable terms and co [redacted] e.

(f) The commissioner may not approve the transfer of any lease unless the commissioner determines that there has been substantial development and compliance with the terms of the lease.

AS 38.05.412. Regulations. The commissioner shall adopt regulations to implement AS 38.05.400-38.05.410.



①
[OCT 1]
All applications are due (38.05.402(a))

②
[OCTOBER]
DNR reviews all applications, can request more info (38.05.402(b))

③
[NOVEMBER - DECEMBER]
All applications for the preceding year are held for at least 30 days (38.05.945); meanwhile commissioner reviews the applications for compliance w/ 38.05.406(a)-(b).

④
[JANUARY]
Commissioner issues ~~final~~ decisions, w/ best interest findings, for public review by 1/15 (38.05.406(c))

⑤
[FEBRUARY]
Public ~~review~~ ^{review} of preliminary decisions/ best interest findings ends during February; commissioner considers comment + makes any changes.

⑥
[MARCH]
March 1 - final decision, takes effect 30 days later. (38.05.406(e))

1 IN THE HOUSE

BY

2 HOUSE CONCURRENT RESOLUTION NO.

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 FIFTEENTH LEGISLATURE - FIRST SESSION

5 Establishing a Joint Committee on
6 Aquatic Farming.

7 BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

8 WHEREAS aquatic farming has taken place in the state on a small scale
9 since the early 1920s and is a clean industry for which the state's south-
10 ern coast is suited; and

11 WHEREAS aquatic farmers have shown an interest in expanding their
12 operations and range of products in response to worldwide consumer trends;
13 and

14 WHEREAS the possibility of the expansion of aquatic farming in the
15 state has generated many questions with regard to potential coastal and
16 resource-user conflicts, the socioeconomic effects on the coastal communi-
17 ties of the state and existing sea harvesting industry, and the effects on
18 the environment and on the biological integrity of Alaska's wild aquatic
19 species; and

20 WHEREAS public testimony overwhelmingly indicates a desire for the
21 development of environmental and biological safeguards before an expansion
22 of the existing industry is allowed in the state; and

23 WHEREAS pending litigation involving the state may result in the
24 state's inability to legally halt the expansion of aquatic farming; and

25 WHEREAS Norway, Japan, British Columbia, and Chile have experience
26 with regulating aquatic farming from which we can learn;

27 BE IT RESOLVED by the Alaska State Legislature that a Joint Committee
28 on Aquatic Farming is established consisting of two members of the Senate
29 and two members of the House of Representatives; and be it

1 FURTHER RESOLVED that the Joint Committee on Aquatic Farming, after
2 holding public hearings, shall develop proposals for the state's policy on
3 aquatic farming, taking into account the experiences of other countries and
4 the socioeconomic effects of worldwide aquatic farming on existing Alaska
5 sea harvesting industries; the committee shall report its recommendations
6 and findings to the Legislature on the first day of the Second Session of
7 the Fifteenth Alaska State Legislature; and be it

8 FURTHER RESOLVED that the committee may hire staff to assist in the
9 duties of the committee and may appoint advisory committees; and be it

10 FURTHER RESOLVED that the committee may meet during and between
11 sessions of the Fifteenth Alaska State Legislature and shall terminate at
12 the end of the 10th day of the Second Session of the Fifteenth Alaska State
13 Legislature.
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Proposed Amendments to HB 303:

Amend title as follows:

"An Act providing for [PLACING A MORATORIUM ON] the issuance or granting of licenses, permits, or authorization for fish farming or aquatic farming; and providing for an effective date."

lines 11-14, page 1, amend as follows:

* Section 1. FISH FARMING AND AQUATIC FARMING. [MORATORIUM. (A) EXCEPT AS PROVIDED IN (B) OF THIS SECTION, T] Section 1. The following licenses, permits, or authorizations may [NOT] be issued or granted for the construction or operation of a fish farm or aquatic farm:

Line 24, page 1, through line 10, page two, delete existing material and replace with the following:

* Sec. 2. DEFINITIONS. In this chapter

(1) "fish farming or aquatic farming" means a facility that grows, farms or cultivates aquatic farm products in captivity or under positive control;

(2) "aquatic farm product" includes an aquatic plant or aquatic animal, or fish parts that are propogated, farmed, or cultivated in an aquatic farm and sold or offered for consumption;

(3) "positive control" means, for fish and other mobile species, enclosed with a natural or artificial escape-proof barrier; for species with limited or no mobility, "positive control" also includes managed cultivation in unenclosed water.

renumber accordingly.

During March the office activity held to February's steady pace. Teleconference activity nearly doubled with the Anchorage LIO logging over 1,000 participants.

*Arch LIO
March Reprt*

During this month several legislative committee traveled to Anchorage. The new Assembly Chambers was the site for most of these meetings, Senate Resources ANWR meetings, Senate and House Finance Budget hearings. Attendance topped the 100 mark at the Senate Finance Budget hearings. "Aquaculture" and "Mariculture" have hit the number one spot on our most frequently requested items lists, we have given away almost 100 copies of the recently released house research report on this subject. I expect demand will continue with April's planned hearing schedule.

We have been keeping busy trying to keep up with the demand for copies of bills, status requests ect. At long last the pocket directories arrived! This session has been fairly slow for POMs. I feel this is in large part due to outreach efforts encouraging citizen lobbying groups to submit written testimony on issues. POMs that are received are directed to specific committees when a piece of legislation is the issue, and to district legislators for constituent concerns. We have taken a fairly active role in discouraging blanket POMs to "all" legislators.

Spring appears to be here- now that we have passed the half way mark we are counting the days until adjournment.

*Janice -
per. stand
Shirley & Ron
of Gov or
Tut.
Ad*

MAR 03 1987

Adelheid Herrmann, Representative
Alaska State Legislature
P.O. Box V (MS 3100)
Juneau, Alaska
99811

February 23, 1987

Dear Representative Herrmann:

As a partner in a private, non-profit salmon hatchery and "hopeful-to-be" participant in a mariculture operation, I have a personal interest in HB-108. As a professional economist in Alaska since 1971 and a resident since 1963 I am convinced that your support of mariculture in Alaska is in the public interest.

Many people who have an interest in mariculture do not expect state loans, gifts or other forms of "help". What we do expect and hope for is a simple approach that will remove the bureaucratic pitfalls and redundant state "processes" that required over four years of persistence and dedication to obtain just the permits for one of the private non-profit hatcheries.

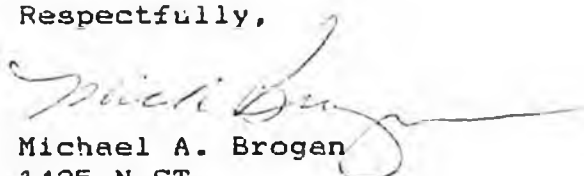
What we ask for is a cleared path that we can walk on in pursuit of our entrepreneurial interests. I cannot afford another four or five years of expense, labor and opportunity cost.

It is predictable, I suppose, but disturbing that the regional aquaculture associations have solicited proposals from lobbyists to mount a campaign designed to prevent passage of legislation that will allow for private mariculture operations.

Your expertise and leadership will prove invaluable in allowing the mariculture industry in Alaska to prosper and grow. Alaska is a small part of the international fishery economy, but the potential exists to become very significant. If you will assist by making sure that we are allowed to pursue our goals the potential may be realized.

I will look forward to your response and contribution to enabling legislation.

Respectfully,


Michael A. Brogan
1435 N ST.
Anchorage, Alaska
99501

Alaska State Legislature

MAR 26 1987
9:02 am

Session Address:
STATE CAPITOL BUILDING
BOX V
JUNEAU, ALASKA 99811
(907) 465-3727



Interim Address:
BOX 53
PALMER, ALASKA 99545
(907) 745-3820 - Palmer
(907) 376-8628 - Wasilla

Representative Ronald L. Larson
District 16B

TO: Representative A. Herrmann

FROM: Representative R. Larson *R. L.*

DATE: March 25, 1987

RE: Information on Mariculture

For your information I am passing along an article on Mariculture. This article was provided to our office by a concerned constituent.

I would appreciate its being included in the Resources Committee packet. Thank you.

UFA NOTEBOOK

'Salmon Can Wait'

Alaska Mariculture

The feverish surge of interest in salmon farming in British Columbia, which has been likened to the Klondike Gold Rush, seems to be spreading to Alaska. Identical bills have been introduced this session in both houses of the Alaska legislature which would permit pen rearing of salmon.

UFA has been interested in mariculture problems since at least 1985. At their annual meeting that year, the Board of Directors noted that pen rearing of salmon was a rapidly growing industry that was already having impact on traditional domestic and export markets for Alaska salmon, with potential for even greater market penetration in the future. (They requested the State of Alaska perform a thorough study of the biological, economic and sociological problems and potentials of salmon pen rearing in Alaska. To date no such impartial studies have been done.)

The increasing interest in beginning this industry in Alaska was

determined that there are many potential problems with pen rearing salmon which must be addressed by state government before the industry is allowed to begin.

UFA's concerns about mariculture were expressed in a resolution issued by the Board at the close of this meeting. They conclude with a request that the State of Alaska take no action on legislation and development of salmon mariculture until such time as specific issues are addressed. The issues of concern cover a wide range.

*State funds and services for DEC, DNR, and FRED division at DF&G, already cut back due to shrinking revenues, will have to be further reallocated to address salmon farming. For example, the farms must be inspected periodically by state officials for maintenance of health and resource protection standards. Many of the salmon farms will be in remote locations, increasing travel costs to the State. It will require staff time to issue and monitor permits for operation.

tained. Since the industry depends on freshness of its product, transportation needs must be met: the remoteness of the farming sites will require additional transportation routes which must at least be addressed by state government, even if subsidies are not requested. Money and staff time for these activities must be taken from existing programs. As yet no realistic fiscal note has been developed to identify the cost to the state incurred by management of the proposed activities.

*Competition for market with wild salmon will increase. Troll-caught fish are already in direct competition with pen reared salmon. Optimists believe the demand for fish will continue to rise and there will be substantial markets for both farmed and wild salmon. Increasing international participation in salmon farming, however, indicates there may soon be a flood of farmed product on the market. The commer-

cial fishing industry now needs marketing efforts which the state is unable to fund. UFA foresees additional problems if forced to compete with farmed Alaska salmon. UFA, however, is not opposed to mariculture of shellfish or aquatic plants and, indeed, sees these operations as offering great potential for the state's economy.

*Water and land use of traditional fishing, hatchery, rehabilitation, and smolt rearing and release sites may be locked out as permits are granted for establishment of salmon farms. Many of the land use permits that have been granted for oyster farming (shellfish is the only form of mariculture now allowed in Alaska) are not being used, and there is concern that speculators are establishing claim to desirable sites, intending to use them when salmon farming is allowed. The State has done no planning to determine the best locations for these farms, and

Alaska Fisherman's JOURNAL, March 1987

no controls have been proposed. Alaska has thousands of miles of coastline but there could easily be conflict between homeowners and salmon farmers, as has occurred in Washington. There may also be conflicts with the tourism industry and with sport fishermen, both of which are important activities for Alaska's economy.

*The potential for disease contamination of the wild stock has not been explored at all. In 1985 Norwegian fish farms were forced to destroy 2,900 metric tons of farmed salmon due to contaminated stock, but since Norway doesn't have its own salmon runs, no one knows what the effects might have been on wild fish. This is an area of serious concern to the commercial fishing industry.

*Many proponents of pen rearing salmon are touting the industry as one which can be done by small as well as large operations. They present it as a boost to the economy of Alaska's coastal villages and suggest that "mom and pop" operations can be as successful as those of a large corporation. In fact, current

evidence indicates this is far from the case. Because of the high costs of fish food, brood stock, and establishment of adequate transportation facilities, in addition to the length of time it takes to produce the first saleable product, it will be almost impossible for any small operation to succeed. Weyerhaeuser, Sealaska and some multi-national corporations which have expressed interest in beginning the industry in Alaska may be among the few operations which can actually be viable.

A recent report by the House Research Agency of the Alaska Legislature titled "Aquaculture in Alaska" mentions these and other concerns, but does not discuss them in any detail and presents few or no solutions to these potential problems. There is a feeling around the state that salmon farming is the wave of the future: it can't be stopped so the only choice is to jump on the bandwagon. UFA disagrees with this sentiment and offers a suggestion: if Alaska must become involved in pen rearing salmon then it should take this chance to do it right the first time. We have excellent international examples of successes and problems before us and we would be wise to emulate the

good and avoid the bad. This can be accomplished only through careful study and planning.

The House Research Agency report states that there is only a narrow window of time for Alaska to join the pen reared salmon industry, after which it will not be economically feasible to begin. UFA disagrees with this position: it feels there will always be room in the marketplace for a competitive product. In the meantime it is essential that studies be done and safeguards be developed to ensure that Alaska's already healthy commercial fishing industry is protected. □



FARMED FISH: Do They Really Compete?

by John van Amerongen

Competition for salmon markets is a lot like musical chairs—nobody loses as long as there are enough seats to go around. The big question come 1990 is whether there will be enough salmon markets for all the salmon produced, given the astronomical production figures currently being tossed about by salmon farmers and those who keep an eye on them.

The growth potential of the Norwegian salmon industry is now beyond debate. In 1971 Norway produced a mere 100 metric tons. By 1985 Norwegian farmers produced 34,000 mt. There's no reason to doubt they'll produce at least 80,000 mt. of Atlantics by 1990. That same year Canadian farmers are expected to market 30,000 mt. of coho and chinook. And that has wild harvesters legitimately nervous. The Canadian projection alone is 3,000 metric tons more than the total wild catch of coho and chinook salmon in Alaska in 1986.

Whether or not the frenzy of activity in B.C. will bear full fruit in 1990 is still speculation, but the potential is certainly there (see related article p. 32). And now that salmon mariculture is seeing a resurgence of activity in Washington State and proposals are making their way to the Alaska Legislature as well, analysts are focusing on a key question.

"The key question," according to Steven White, former director of Prince William Sound Aquaculture Corp., "is will they compete with or complement wild salmon?"

White addressed the question January 13 as part of the University of Washington's Fisheries Research Institute seminar series on floating marine aquaculture.

Unfortunately, White admitted from the onset, "I can't answer it." It's one of those questions, he said, that creates "a lot of heat and very little light."

"Terror," he noted, "creates a lot of heat."

The audience of fisheries students remained relatively calm as White alternately turned the heat on and off the wild salmon industry. After citing the terrifying farm production figures, White eased back a bit, noting optimistically that seafood consumption has been rising steadily.

U.S. consumers are currently eating about 15 pounds of seafood a year, White said. By 1990 we'll be consuming about 20 pounds a year per capita, and that, he said "is a great opportunity for all of us."

"If production would stay stable," he said, "we would assume higher prices for our fishermen."

But the light at the end of the tunnel faded as White reminded everyone that production was not stable, and that as European and Canadian farmed production increased, so too would their exports to the U.S. Not only will their production increase, said White, but the production of farmed catfish and shellfish will increase as well. So too, he said, will hatchery releases from state and non-profit facilities. By 1990, said White, "2.6 billion fish will be released into the wild...a 245 percent increase since 1982."

There are two ways to look at it.

White explained. "Pessimists believe competition is going to be the result...increased demand will be met by increased production and drive down the price."

The optimists, said White, believe that farmed and wild salmon will complement each other in the marketplace. "High priced and high quality imports will create a taste in consumers' mouths that will create an explosion in the market," he said, assuming the role of one whose glass was half-full instead of half-empty.

But White had a problem with the up-beat view that wild and pen-reared salmon will walk hand-in-hand to economic glory. There's "no evidence," he said: "I can't find anything concrete that makes me believe that is going to be the result."

Still, White had almost as much

difficulty finding evidence to confirm that the sky was falling. What he did find was a recent study

co-authored by Ron Rogness of the North Pacific Fishery Management Council and the School of Management at the University of Fairbanks, and Dr. Biing-Hwan Lin of the Department of Agricultural Economics at the University of Idaho. The title of the Rogness-Lin study is "The Marketing Relationship Between Pacific and Pen-Raised Salmon: A Survey of U.S. Seafood Wholesalers."

According to White, the survey was taken as preliminary research for a master's thesis on the subject in conjunction with Alaska Sea Grant. Now that the authors are busy elsewhere [away from the University of Alaska at Fairbanks], White doubts that the research will be completed. Nevertheless, the survey does reveal some interesting information.

In July of 1985, Sea Grant sent out surveys to 925 seafood wholesalers and distributors in Boston, New York, Chicago, Los Angeles, San Francisco, and Seattle. About 24 percent (127) of those surveyed responded to a series of questions dealing with their salmon purchasing decisions.

Of central concern to White were the survey questions aimed at the "substitutability" of wild and farmed salmon. If there's no substitutability, the argument goes, there's no competition.

The responses concerning pan-sized coho, the variety raised by Dorsea Farms in Puget Sound, offered no particular cause for alarm among wild salmon harvesters. The "overwhelming majority" of respondents said they did not consider the small silvers a legitimate substitute for wild Pacific salmon. If anybody has to worry about pan-sized coho, it's the farmers of rainbow trout.

And if you can believe the survey, the bulk of frozen Pacific salmon appears to be on its own in the marketplace as well. Only 15 of the 57 respondents viewed fresh pen-reared Atlantics and frozen wild Pacifics as substitutes. Since only about three percent of the Alaska harvest is sold fresh, the authors concluded that "97 percent of the harvest...would be more or less unaffected by the pen-raised Atlantics."

That's good news unless you happen to be a troller. "...It should be noted," the authors caution, "that a significant portion of the troll-caught chinooks and cohos in Southeast Alaska is frozen and marketed to white tablecloth restaurants which is one of the primary markets of fresh pen-raised Atlantic salmon; the 15 (out of 57) votes for the substitutability between fresh Atlantic and frozen Pacific salmon should therefore not be discounted."

Still, the authors weren't particularly worried about the overall impact of fresh Atlantics on the domestic market for Alaska-caught fish. According to Rogness and Dr. Lin, "...the results seem to suggest that much of the concern shown by many commercial salmon fishermen in Alaska may be somewhat unwarranted."

Like it or not, the survey suggests two separate market niches for fresh farmed and frozen wild-caught Pacific salmon. In automotive terms, one is viewed as a BMW, the other is a lot like riding the bus.

The situation for fresh wild-caught fish seems to be different. The overwhelming majority of respondents (49 of 62) said that pen-raised Atlantics were a legitimate substitute for fresh wild Pacifics.

But legitimate substitutes are not always the same, as the Rogness and Dr. Lin discovered.

Two questions in the survey asked respondents to list the advantages of each variety over the other.

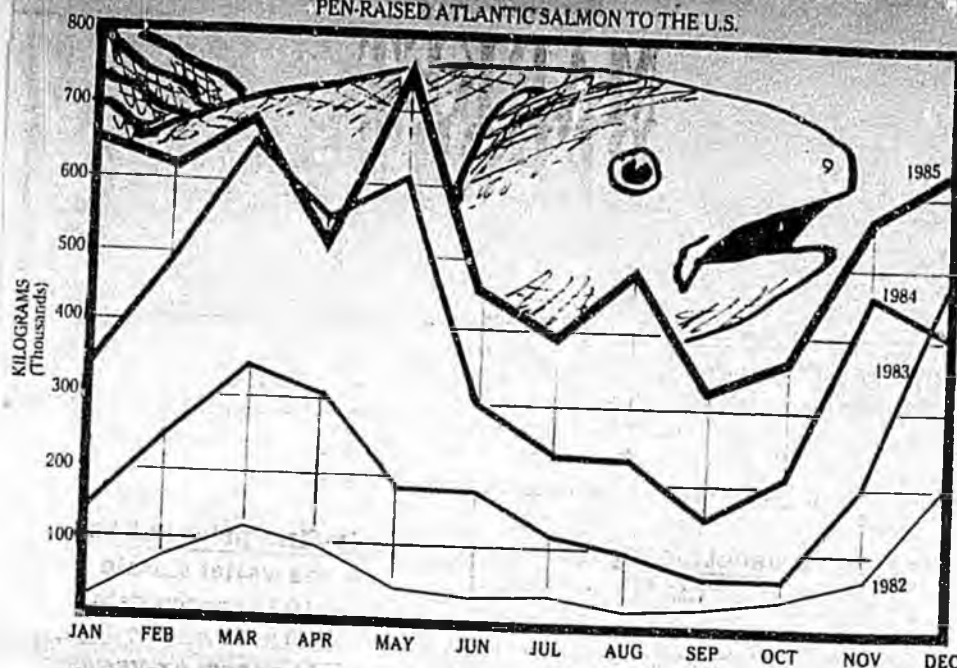
Asked what advantages pen-raised Atlantics had over wild Pacifics, the characteristic most often cited was availability year round (28), followed by freshness or quality (26), consistency (19), size (12), price (11), and shelf life (5).

Asked what advantages wild-caught had over farmed, the most common response was price (27), followed by flesh characteristics — color, firmness, fat content (19), availability of large fish (5), volume of supply (2), and ease of ordering (1).

Price appeared to be the most motivating factor in choosing wild over farmed, while year-round availability and high quality were the best reasons to buy farmed fish, according to the survey. Four respondents could find no advantages of pen-reared over wild, while eight could see no advantages of wild over pen-reared. In automotive terms,

MONTHLY EXPORTS OF FRESH NORWEGIAN

PEN-RAISED ATLANTIC SALMON TO THE U.S.



they are both good cars — one a BMW, the other a Ford Thunderbird. Ford has a better idea as long as the sticker price is right.

How long wild salmon can maintain a price advantage over pen-reared fish is another key question addressed by Mr. White at the FRI seminar. Trollers would understandably like to see the price of wild salmon rise, and salmon farmers aren't anxious to see the price of pen-raised fish fall. As the world supply of salmon increases, however, it's going to be more and more difficult to keep the prices apart and avoid a head to head battle in the marketplace.

Right now transportation costs and the relative inefficiency of the small farms have kept the cost of Norwegian salmon up. The falling value of the dollar in world currency markets is helping, too. When British Columbia comes on line in 1990, however, the situation could be very different. As one industry wag put it, "The Canadians have never met a market they couldn't dump."

White put it another way: "There's a great potential for oversupply." British Columbia is planning to produce 'a lot of product,' White said, "...and there's no indication that product has any market set up for it."

This may have been music to the ears of fishermen who are looking for a gigantic shake-out to put the salmon farming industry on its gills. But White saw it differently.

"Which industry is going to survive the Crash of '89?" White asked. "If the farms crash," he said, answering his own question, "we'll go down with it."

One might think White's best advice to the fisheries students in the audience would have been to pack up their pee-chees and head it on over to the School of Dentistry. But he didn't suggest that. Perhaps all the doom and gloom was just a test to see who was really serious about a career in the salmon industry.

His conclusion offered a ray of hope, even if the light at the end of the tunnel turns out to be Madison Avenue.

The salmon industry, said White, is in a state of transition. "The biological hurdles," he said, "are pretty much over."

"The next problem," said White, "is how [the salmon] can be marketed to keep the [aquaculture] industry alive and maintain the commercial fishing industry."

To accomplish this White suggested 'a conciliation' between wild harvesters and farm producers. "Our real target is not each other," he said, noting that salmon sales are completely eclipsed by beef and chicken. "They're the targets, not each other."

—John van Amerongen

Salmon Farming Goes Crazy in B.C.

by Clark Miller

Salmon farming in British Columbia — they're calling it a Gold Rush, an out-of-control frenzy of production that will glut the world market and plunge prices in two years. Is it really that hazardous?

Vance Lipovsky thinks so. He is director of aquaculture development for British Columbia Packers, Ltd., in Vancouver, B.C. He says production of farmed salmon in British Columbia will hit 30,000 tons by 1990 — in 1984 it was only 107 tons. Meanwhile, prices to producers will dive below \$3 a pound — right now, they're between \$3.50 and \$3.75.

Kicking off a series of lectures on aquaculture at the University of Washington's School of Fisheries last month, Lipovsky said, "It's impossible to keep up with the industry up there... and the pace will not change." In 1985, there were 45 farms. Last year, there were 106 farms. This year there are perhaps 150, with more than 500 applications pending.

"In the three or four years British Columbia will be the largest exporter of salmon to the U.S.," he predicts.

Orders for salmon cages are backed up for six months. B.C.'s 20 hatcheries are charging 65 to 79 cents each for smolts (there ten to twenty more hatcheries on line, Lipovsky says).

The provincial government slowed things down with a 30-day freeze on licenses in October, in order to ask a few questions, but basically decided there are no com-

elling reasons to interfere with something that is boosting the economy of a traditionally depressed area with 69,000 miles of wilderness coastline. "A month later, it was business as usual," Lipovsky said.

One question asked during the moratorium involved the impact of aquaculture on wild salmon prices. The answer in Canada was, None.

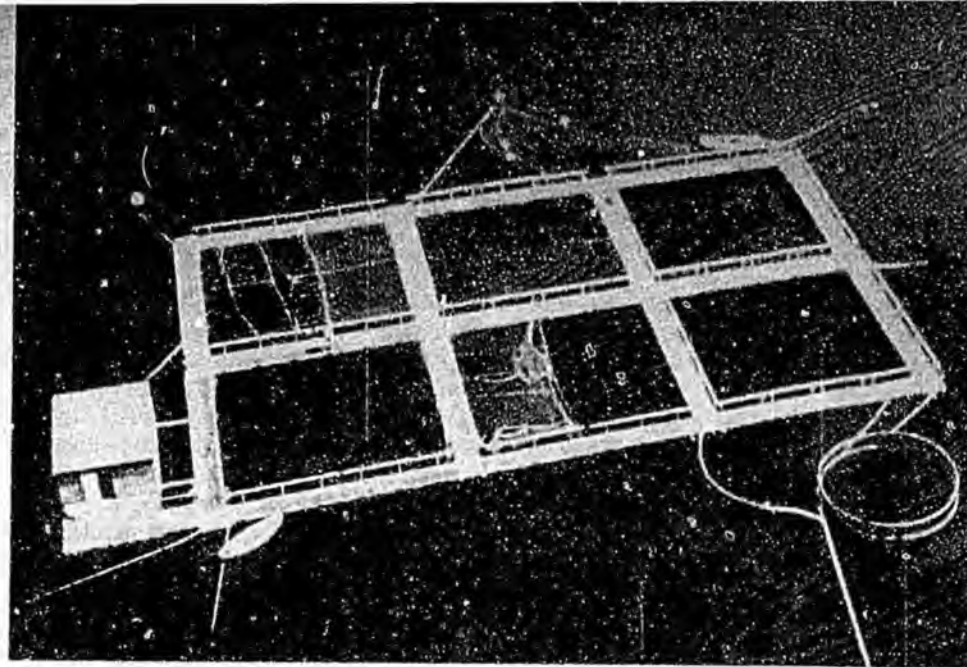
One way of measuring the growth is the number of smolts that are reared each year. In 1984, the number was 1.5 million. In 1985, it was 5 million. In 1986, it was 14 million. This year it will be 30 million. Figuring 50 percent mortality (35 percent is typical, even lower in the north), a million smolts yields about 1,000 tons of salmon. Therefore, 1990's harvest should easily reach 30,000 tons; the B.C. government predicts 40,000, with a potential value to farmers of \$352 million.

Will the market be able to absorb that amount? "Markets are the big unknown," says Lipovsky. "Only the markets will limit us."

Lipovsky thinks the future will be a mixture of successes and failures. In addition to softening prices, he's worried about the high price of feed and a predicted shortage of skilled labor. He told the mostly student audience that employment prospects in aquaculture look very good in B.C. for the next five years at least.

"1991 will be the first crash of the industry," he predicts. Then the "merger phase" will begin; Lipovsky expects to see bargains on farms in two years.

Forty percent of the investment



This photograph from a Norwegian equipment supplier shows a typical small Norwegian fish farm. B.C. farmers have no such size restrictions.

so far is Norwegian, Lipovsky speculates. Norwegian applications for sites began mounting in 1984.

Have the commercial fishermen of B.C. become involved? No, Lipovsky said, the lifestyle is too harsh (he wasn't joking — he said the stresses of living in these isolated wilderness areas is taking its toll on participants, especially women).

The B.C. government makes it easy to get into this business: \$100,000, interest-free loans; grants; no environmental impact statement required for sites. You can claim virtually any wilderness site for \$150, as long as it's a mile and a half from the nearest salmon farm (that's one of the new rules, non-retroactive; formerly, it was only a half mile). Annual rent on government land is only \$200 per acre.

This massive buildup of salmon farming includes some problems. The fish — chemically neutered coho and feminized chinook — aren't growing as fast as they should, and no one is sure why. Inventories are

mysteriously low — farmers accuse the hatcheries of shortchanging them. Much of the feed has been low in quality, but now farmers are being offered high-fat, extruded feeds (at 40 cents a pound, expected to climb to 60 cents by 1990).

Some stress-related diseases have cropped up, as well as some minor hassles with algal blooms. However, Lipovsky gave the impression that the government finds very little to worry about with aquaculture so far.

One of the paradoxes of the business, according to Lipovsky is that farmers are mostly growing 4-6 pounders, even though the greatest market-size need is for 6-9 pounders (restaurants prefer the big fish for "steaking"). The reason — the price of feed. Physical growth is rapid and economical during the first 24 months, especially for coho; continued growth, however, cuts profits.

"Coho will be the fish of the future because of its fast growth rate," Lipovsky said. □