ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672
4931 HRES HB 108 (FILE 1) - HB 108 (FILE 2)

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.

PUBLIC OPINION MESSAGE

APR 0 3 1987

DEAR: REPRESENTATIVE HERRMANN

NAME: ROY M. ALLEY
TITLE:
ADDRESS: P.O. BOX 969
CITY: VALDEZ ZIP: 99686
PHONE: 835-4816
BILL NO: HB 108
SUBJECT: AQUATIC FARMING
MESSAGE: I SUPPORT ORDERLY DEVELOPMENT OF SHELLFISH AND PLANT MARICULTURE BUT I'M OPPOSED TO FISH FARMING. LET BRITISH COLUMBIA TAKE THE INITIAL PIONEER STEP. ALASKA CAN START UP DOWN TH ROAD IF PRESENT FEARS ARE LAID TO REST: I.E. DISEASE - COMPETITION WITH PRESENT SALMON FISHING. ALASKA HAS TOO MUCH INVESTED SALMON.

POMID: 17103114
DATE: 04/02/87
TIME: 10:31:14
LIONAME: VALDEZ INFORMATION OFFICE

COPIES:

REPRESENTATIVES	SENATORS
CATO	KELLY
COTTEN	KERTTULA

- X - NO RESPONSE REQUIRED

Alaska Environmental Lobby, Inc.

204 N. Franklin Street, Suite 3 Juneau, Alaska 99801 907-586-2345

Testimony on HB 108-Mariculture
Prepared by Kelly Kavanaugh 3/31/87

Madame Chair, members of the committee, my name is Kelly Kavanaugh and I'm a volunteer for Alaska Environmental Lobby. Our organization represents 19 environmental groups statewide with 5,000-7,000 members. Interest in mariculture has generated a number of questions regarding existing laws, regulations, policy and actual implementation. The Alaska Environmental Lobby is concerned with these issues for several reasons. First, we are interested in all legislation affecting conservation and natural resource development. Alaska's unpolluted, productive waterways are described as ideal for mariculture development. The potential size and extent of development warrants our special attention. Second, mariculture ventures are slated for undeveloped areas of the state. We want to ensure that planning and development of mariculture activity is environmentally responsible. Third, there are unanswered policy issues which need to be addressed before legislation is passed and development progresses.

The primary aim of this legislation is to clarify regulatory statutes and remove administrative barriers to development of Alaska's mariculture industry. A major part of this process will include setting up clear permitting guidelines. At present, state tideland permitting and leasing guidelines and regulations appicable to mariculture development have not been established. The process does not address necessary safeguards for upland use of state lands. We need to prevent another defacto land disposal program, caused by permitting after the fact and encouraging land speculation. Legislation should provide general criteria for development of a regulatory program to discourage speculation and include intent language to prevent after the fact permitting. The Alaska Environmental Lobby recommends establishment of an operating plan requiring non-transferable permits; a "prove up" system which would require applicants to demonstrate project viability through preparation of a development schedule; reclamation bonds for clean-up of an operation if necessary and regulations giving DNR stronger rights of refusal and authority to revoke permits from non-compliant operators.

Many potential conflicts exist between recreational, subsistence and commercial fishing users. None of these conflicts are addressed in the tidelands permitting and leasing process. User groups are concerned with blocked access to favorite coves, bays and beaches, loss of park, wilderness and recreational shoreline; loss of anchorages and access for commercial fishing and deteriorated aesthetics of coastal areas. DNR currently deals with user conflicts through a "best interest" finding process. This case by case process is arbitrarily based on economics. It is necessary that best interest finding conflicts are addressed before legislation is passed. The Alaska Environmental Lobby recommends that DNR develope guidelines directing an all-encompassing review of permit and lease applications rather than the current case by case approach. We feel this could be accomplished through initiation of coastal resource identification studies and development of regional plans. Each plan could include a zoning process to identify and designate sites best suited to certain uses. Zoning would address user conflicts by directing mariculture applicants away from recreational and other potential high use areas.

We are concerned with potential water quality and sedimentation problems associated with finfish farming. We recommend that water quality issues be addressed through identification of siting criteria which would restrict mariculture operations to areas where tidal action or currents are sufficient

In view of recent state resource policy, we have seen a move towards privatization of public resources. Mariculture industry may affect many of our states coastal waters, tidelands, and adjacent upland areas. We need to ensure development follows an appropriate public review process and provides adequate returns to the state. We recommend a comprehensive evaluation of the mariculture industry to ensure returns for the private use of public resources. Permitting or leasing of any public lands or water rights must go through the public hearing process and hearings must held be in local communities to ensure all user interests are taken into account.

The Alaska Environmental Lobby is not opposed to mariculture development in Alaska. The opportunity for development isn't going to go away and we feel there's no need to hurry the process. Many policy questions still need to be addressed before further development and leasing programs proceed and we want to help ensure it will be done properly.

Rec'd 04-07-8;

Dear Ms Furmann,

Enclosed are a couple of pages of the Petersburg petition against AB 108 that sort of slipped through the cracks. As a counter to Bill Pauliches anecdotal information on how Sitka trollers wanted to know more about salmon farming and weren't against it, I'd like to say that in the few hours I spent collecting seventy or so signatures to the petition that only one person declined to sign because he was for salmon farming. Less than a dozen declined because they were either from out of state or didn't know enough about the issue. All the fishermen I approached -- crabbers, seiners, gillnetters, trollers, longliners, -- except two signed.

I, too, believe that in the long haul mariculture is the way to go. And Alaska is to be congradulated for having gotten into it ten years ago. Record coho catches in SE Alaska can be attributed in large part to effective aquaculture programs run by the PNP and FRED hatcheries. Within five years our king salmon harvest will be more than doubled by 300,000 hatchery kings available to the common property fisheries. These are programs which benefit the thousands

& small businessmen who comprise the salmon fleet in our communities.

Salmon farming will be an industry for big business and big business in the fisheries is bad news for the fishermen. HB 108 mandates ocean ranching for broodstock by private for profit hatcheries. In Oregon the traditional fisheries were closed down to allow ocean ranch, ie to get back to the private hatcheries run by Weyerhaeuser. Before these private hatcheries were permitted Weyerhaeuser made much of how they would add to the sport & commercial catches. Once they were in place traditional user groups were up against a powerful big money lobby which closed down the fisheries so the hatcheries could profit.

If it passes HB108 the legislature will be putting Alaska on what I feel is a dangerous course. The decline of the fisheries in Oregon is an example to reckon with. As the fisheries decayed the economic health of the coast ~~declined~~ declined. I think the social impact of mariculture, particularly salmon farming will be to erode the place of the individual fisherman. And I doubt that the 1900 jobs it will create can begin to counteract

a subsequent decline of our coastal communities.

The social and economic implications of HB 108 are far-reaching. I don't believe that ~~this~~ we should travel the path it suggests until we have thorough non partisan studies of its effects.

Sincerely,

David Bedford
Box 1211
Petersburg, Ak. 99833

Petition to the Legislature of Alaska

Concerning House Bill 108 "Acts relating to aquatic farming"

WHEREAS The introduction of a pen-reared salmon industry in Alaska would negatively impact existing fisheries and

WHEREAS Such an industry would compete with and possibly preclude customary uses of bays and estuary areas and

WHEREAS This industry would pose a serious biological threat to healthy stocks of wild Alaskan salmon and

WHEREAS The existing foreign pen-rearing salmon industry is already going to over-produce, making a fledgeling Alaskan industry untenable and

WHEREAS The pen-reared salmon industry will require substantial new funding to allow regulation and

WHEREAS House Bill 108 fails to properly address these concerns:

The undersigned urge the Legislature of Alaska to VOTE DOWN House Bill 108.

DATE:	NAME: PRINT	SIGNATURE:	ADDRESS:
/16/87	Joe Short	Joe Short	Box 1224 - Petersburg
3/[illegible]	Dennie Westlund	[illegible]	Box 145 [illegible]
/16	Pete Thynes	Pete Thynes	Box 583 Petersburg
3/16	Wayne Short	Wayne Short	Box 1136 Petersburg
3/20	Patrick Shannon Mahn	Pat M[illegible]	" 1763 "
3/20	Daniel Goddard	[illegible]	Box 1523 Petersburg
/20	RON REED	Ronald D. Reed	Box 1437 PETERSBURG

Petition to the Legislature of Alaska

Concerning House Bill 108 "Acts relating to aquatic farming"

WHEREAS The introduction of a pen-reared salmon industry in Alaska would negatively impact existing fisheries and

WHEREAS Such an industry would compete with and possibly preclude customary uses of bays and estuary areas and

WHEREAS This industry would pose a serious biological threat to healthy stocks of wild Alaskan salmon and

WHEREAS The existing foreign pen-rearing salmon industry is already going to over-produce, making a fledgeling Alaskan industry untenable and

WHEREAS The pen-reared salmon industry will require substantial new funding to allow regulation and

WHEREAS House Bill 108 fails to properly address these concerns:

The undersigned urge the Legislature of Alaska to VOTE DOWN House Bill 108.

DATE:	NAME:	SIGNATURE:	ADDRESS:
3-15-87	HAROLD D. MEDALEN	Harold D. Medalen	Box 821, PETERSBURG A
15/87	Fred L Birch	Box 54	
15/87	HAFTOR A. GJERDE	Haftor A. Gjerde	Box 171 PETERSBURG
15-87	HAROLD MEDALEN	Harold Medalen	Box 352 PETERSBURG AK
15/87	DAVID M. BEEBE	David M. Beebe	BOX 148 PETERSBURG AK
15 87	Kerry K. Beebe	Kerry K. Beebe	Box 148 Petersburg AK

John McMullen
P.O. Box 021875
Juneau, Ak 99802

Hon. Ackerhild Herrmann, Co Chair
House Resources Committee
P.O. Box V
Juneau, AK 99811

Dear Rep. Herrmann:

Aquatic farming for salmon and shellfish should be allowed to proceed in Alaska, but House Bill 108 and Senate Bill 106 should be held over until 1988.. The present bills should be re-drafted to describe what the mariculture program is to become. Will preference for sites and permits be afforded Alaskans? Will production capacity for individual farms be capped to promote competition, and therefore lessen the probability of economic failure of individual farms?

If aquatic farming develops in the absence of state policy, I could envision a scenario in which well financed organizations would obtain the expensive sites near transportation centers for the operation of large production facilities, which would probably contain costs through the manufacure of their own fish food. Less well heeled Alaskans might well end up at more remote sites, with smaller production units, and the need to buy higher cost commercial fish food, which would result in a relatively low profit margin.

The State's "Fisheries Cabinet", comprised of the commissioners of several state agencies performed a review of the aquatic farming bills. Their staffs also met several times to discuss the problems that might be involved in administering the program. My conclusions after listening to some of those discussions are: (1) the program could easily be swallowed in the bureaucratic process, and (2) it is going to take awhile to define the regulatory process by which the program is to be administered.

A recent Attorney General's opinion stated that fish farming is legal in Alaska anyway. However, I think the state should sit on that until legislation is in place which names the Department of Commerce as the agency responsible for the program. The Department of Fish and Game is far too conservative to adequately promote this program, but does have the biological expertise in place to deal with the technical aspects of disease prevention, as an example.

Therefore, my recommendation is that HB 108 and SB 106 be held back a year and re-written while the regulatory process is ironed out. The result could be a program for Alaskans, which will be ready for implementation.

This letter is being sent to the Commerce and Labor, and Resources Committees of the House and Senate. I wish you well in your deliberations.

Sincerely,

4-9-87
DATE

TO: Rep. HerrMANN

FR: Tamara & Richard Lundahl

SENT BY SITKA, ALASKA LEGISLATIVE INFORMATION OFFICE.

NUMBER OF PAGES INCLUDING THIS ONE: 3

PLEASE NOTE THAT WE HAVE A RAPICOM 230 AUTOMATIC TELECOPIER; THIS MACHINE CANNOT TRANSMIT PAGES LARGER THAN 8½" x 14". OUR TELECOPIER DIRECT LINE IS (907) 747-5807.

PLEASE TELEPHONE IMMEDIATELY IF ANY PAGES ARE RECEIVED IMPROPERLY: (907) 747-6277.

BILLED TO: _____

Testimony for House Resources Committee re HB 108

STATEMENT FROM RICHARD LUNDAHL, Member Pelican ADFSG Advisory Committee

Alaska has a very well developed and strong salmon fishery in all areas of the State that is totally depended upon by the majority of people in many of the towns and villages along the entire coast and even the interior. It is my understanding that every salmon fish farming venture is either subsidized by their government, a money losing proposition or a shakey venture at best. With all these countries and individuals experimenting with salmon farming, if the concept is viable and if the potential for profit is there, then when the technology has improved, then and only then is the time for Alaska to get into salmon farming.

Pelican is dependent upon salmon fishing. The individuals that fish, that service the fishermen, and that process the fish have invested their own money and laid their entire livelihood on the line. To allow salmon farming as these promotors want, is to jeopardize the entire economic structure of this town, to end up with the same product. The people of this town cannot afford to write off their investments. If Alaska has such a great environment for (salmon) farming, then 5-10-20 years down the line we will still have the same environment. Why jeopardize the major established, renewable, economic resource of the state to satisfy the curiosity of the current world-wide fad of these salmon fish farm promoters.

SUBMITTED THROUGH THE SITKA LEGISLATIVE INFORMATION OFFICE AS TESTIMONY ON HB 108. April 9, 1987.

Richard W. Lundahl
Box 793
Pelican, Ak. 99832

STATEMENT FROM TAMARA LUNDAHL, Pelican, Alaska

As a wife of a commercial salmon fisherman, I can see that the salmon fisherman's expenses have increased over the years, but our salmon fishing prices haven't. Salmon fishermen, fishing in State waters, pay 3 percent of their gross income for hatcheries for salmon enhancement. We fishermen haven't seen much benefit from this 3 percent enhancement tax we pay. Our optimum yield quotas certainly haven't increased over the years and our fishing seasons continue to be shortened. It's getting difficult to make a living salmon fishing with all our restrictions and salmon farming certainly wouldn't benefit individual salmon fishermen and their investments.

SUBMITTED THROUGH THE SITKA LEGISLATIVE INFORMATION OFFICE AS TESTIMONY ON HB 108. APRIL 9, 1987.

Tamara Lundahl
Box 793
Pelican, Alaska 99832

CITY of WRANGELL, ALASKA

INCORPORATED JUNE 15, 1903

BOX 531, 99929 (907) 374-2381

April 6, 1987

ADOPTED AUGUST 1972

Representative Adelheid Herrmann
House Resources Committee
Alaska State Legislature
Post Office Box V, (MS 3100)
Juneau, Alaska 99811

Re: City of Wrangell Resolution #03-87-267 relating to proposed House Bill 108, and Senate Bill 106.

Dear Representative Herrmann:

As per your request during the March 31, 1987 teleconference regarding the above captioned legislation, I am enclosing a copy of the City of Wrangell Resolution #03-87-267 relating to proposed legislation for "Aquatic Farming".

Quite a large segment of Wrangell's economic base is derived from the commercial harvest of wild salmon stocks. It appears there has been no truly qualitative analysis of the short, or long range biological effects of pen raising salmon in Alaskan waters, consequently we feel it is premature to enact legislation that would legalize pen rearing of salmon at this time.

Such a simplistic approach to finfish farming may be expedient in the eyes of the potential investor, but to jeopardize our highly successful and growing salmon enhancement programs without conclusive evidence of the effects on the delicate eco-system of the existing salmon stocks and other aquatic life, would indeed seem foolhardy.

We in Wrangell are excited about the future economic potentials of mariculture and aquaculture, and have been supportive of its development, however we feel that, as the old adage says, "You should always look before you leap."

We hope you will consider our position in this matter.

Sincerely,

Jim Gove

Jim Gove
Economic Development Director

cc: Members House Resources Committee
Members Senate Resources Committee
Representative Robin Taylor
Senator Lloyd Jones

encl.

CITY OF WRANGELL, ALASKA

RESOLUTION NO. 03-87-267

A RESOLUTION OF THE COUNCIL OF THE CITY OF WRANGELL, ALASKA, RELATING TO LEGISLATION PROPOSED IN HOUSE BILL #108 AND SENATE BILL # 106, "AN ACT RELATING TO AQUATIC FARMING AND PROVIDING FOR AN EFFECTIVE DATE", URGING A THOROUGH STUDY OF THE BIOLOGICAL AND ECONOMIC EFFECTS OF PEN REARING SALMON BEFORE ENACTING LEGISLATION LEGALIZING THE PEN REARING OF SALMON IN ALASKAN WATERS.

WHEREAS, the proposed program for pen rearing salmon in Alaska has the potential of having a negative effect on our existing fisheries and commercial fishing fleet; and

WHEREAS, the existing enhancement and hatchery program in alaska has been highly successful to date; and

WHEREAS, there have been no biological or economic studies to determine the effects the pen rearing of salmon may have on our existing fisheries economy, or the environment of existing wild salmon stocks; and

WHEREAS, the City of Wrangell has been supportive of controlled mariculture of shellfish, aquatic plant life, and existing salmon enhancement programs; and

WHEREAS, the proposed legislation encompasses the unknown of pen rearing salmon in Alaskan waters.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF WRANGELL, ALASKA:

1. The Council of the City of Wrangell Does hereby respectfully request that the Fifteenth Legislature of the State of Alaska eliminate any reference to fish farming or pen rearing of salmon in proposed House Bill No. 108 and Senate Bill No. 106.

2. The Council of the City of Wrangell further requests that the Fifteenth Legislature of the State of Alaska support the completion of a thorough study of the economic and environmental effect of pen rearing of salmon in Alaskan waters before proceeding with any legislation directed toward legalization of fish farming.

PASSED AND APPROVED: MARCH 24, 1987

Mayor

ATTEST: Janice K. Lundeson
City Clerk

Eugene Dursin
Box 365
Sterling, AK 99672
(907) 262-2274

I've been a resident of the Kenai Peninsula since 1965, the same year I started fishing Bristol Bay. I've been a driftgillnetter in that area ever since that time. I've also been involved in the halibut and herring fisheries in Prince William Sound.

I just returned from a two month trip to British Columbia where I became involved in their aquaculture industry. I travelled from Vancouver to Egmont, from Victoria to Campbell River. I visited fish farms, hatcheries, processors, and feed mills. Talked to aquaculture associations, government agents and research labs. At Malaspina College in Nanaimo, I took two aquaculture courses that dealt specifically with salmon farming.

We have before us House Bill 108, a proposal that will affect thousands of miles of coastline, that will affect untold generations of Alaskans. You have heard from various experts. You've heard of aquaculture's potential; you've been warned of its hazards. However, I am not certain that you have grasped its enormity. It's as if you have partly developed the wheel, and you are preparing to issue licences. The rest of the vehicle has yet to be designed. There are no rules formulated, no regulations tested, no speed limit, no police force, no funding; why, the highways haven't even been built. I do not believe it has yet dawnwed on youthe enormity of the task that lies ahead. The bad news is that it is going to cost millions of dollars to properly design and implement a decent aquaculture

plan that will benefit all Alaskans. The good news is that it does not have to be done right now. The only action you need to take now is to start planning for the future. Hopefully, by the time it comes time to implement the PLAN , the State will be fiscally better off, and aquaculture can get the funding it deserves.

Throughout these hearings most of the talk has centered around salmon farming, an area of considerable concern. At this time I would like to present some figures that will possibly spark further debate as to the feasibility of salmon farming itself, and of the State's role in the industry.

Smolt, young salmon ready for salt water rearing pens, cost between seventy-five cents and a dollar (depending on whether they are S_0 or S_1 smolt.) Salmon are capable of converting one and one-half pounds of high quality fish feed into one pound of flesh. Fish feed cost about ninety cents per pound. (All these figures are in Canadian dollars; to convert into U.S. funds, multiply by .76). Let's say we are dealing with a salmon that weighs four pounds at harvest; our costs would be as follows: smolt- .75, feed- $5.40. The cost of our four pound coho is now up to between $6.15 and $6.35. Unfortunately, mortality rates run, on the average, about 50%. This means that the costs of raising this four pound fish have now doubled to between $12.30 to $12.70 per fish. As of three weeks ago, the Egmont Fish Plant in B.C. was paying three dollars per pound for coho and chinook in the two to four pound range. At these prices our four pound salmon that cost us close to $12.50 to produce is actually worth twelve; we just lost lost fifty cents per fish. (And we have not even begun to discuss our other expenses such as fish pens, nets, labor, housing, insurance, etc...)

You may well ask... then why are Canadians getting into fish farming in such large numbers? First, there is the question of site availability. Many rush in before the more favorable sites are all taken; this has been referred to as the "new gold rush."

Secondly, fish farmers expect a large price drop in the market for ~~farmed salmon (as more~~ and more farms, worldwide, come into production). The rush is to get your loans paid off before the "BIG CRUNCH." The feeling is that those who are not financially extended at that that time will be able to weather the storm. The third reason fish farmers continue to develop farms is because, like all gamblers, they are optimists. They are hoping that with competition, feed prices will drop. That given enough time, strains of West Coast salmon will be developed that will better withstand confinement. Another reason so many in British Columbia are getting into aquaculture is because it is the first province-wide opportunity to come along in a long time; we are dealing with an area that has been economically depressed for a generation.

My point is that fish farming is a risky business. Banks will not loan money to fish farmers in British Columbia. As one banker explained to our group,"You have no useful collateral. Virtually all your capital is tied up in your fish in the form of smolt costs, labor and fish feed. If they die, we are left holding an empty bag." Enter the Norwegians. They will provide loans to fish farmers on the condition that the farmers buy Norwegian pens, Norwegian nets, and Norwegian feed; and that you sell them your fish when they need them. Is this what we want?

You need to decide soon whether this fishery is to be controlled by large corporations, by Norwegians, by Alaskan puppets, or by mom and pop. To say, "Let the market forces dictate the terms" is both naive and irresponsible. Plan now or pay later!

My last point is that you need to emphasize other species that have market potential. I recently came across an enlightening publication produced by the Science Council of British Columbia. It lists 18 species with aquaculture potential. It would perhaps pay us great dividends if we took advantage of the research that has already been done in an environment similar to our own.

It isn't enough just to vote "NO" on HB 108; if we are to vote it down we should start preparing something more comprehensive to take its place. With this in mind, I have prepared a five point plan I would like to summarize and present at this time:

1. A twelve to twenty-four month moratorium on the issuance of all mariculture licences. This would allow you time to organize the next four items.
2. Have fisheries experts determine the aquaculture potential of the entire Alaskan coastline. Through local input, they could eliminate areas of potential conflict right at the start. Maps could be issued for each specie with potential. No need to look for sites outside the approved areas.
3. Design educational programs that will teach potential mariculturits how to grow, harvest and market specific species. Upon completion of the course, qualified graduates would receive a license allowing them to engage in specific aquaculture activities (i.e. scallop license) These courses would be offerred statewide to enable all interested Alaskan to get involved.
4. Send our legal and fisheries experts to British Columbia to take advantage of their errors and successes.
5. Have a program that would help licensed aquaculture farmers find suitable locations. This would inolude a simplified application process (since you have already eliminated the speculators.)

A program based on the above plan, or one similar to it, will result in an informed, enthousiastic and well planned development of an important resource.

APR 1 3 '87

Cook Inlet Seiners Association

P.O. Box 421
Homer, Alaska 99603

April 7, 1987

House Resources & Finance Committee
House of Representatives
Pouch V
Juneau, Alaska 99811

Att: Representative Adelheid Herrman, Chairperson

Dear Sirs & Madams:

I am writing on behalf of the Cook Inlet Seiners Association, representing Area H salmon permit holders, their crews and families. Our group has quite a few reservations about HB 108. We have obvious concerns about the general threat of finfish mariculture to the fishing industry, including disease, pollution, threats to wild stocks and economic competition.

We are especially worried about diluting ADFG capacity to manage and monitor commercial stocks by increasing Departmental responsibilities without adding personnel or funding. The only hatchery in our area, Tutka Bay, is being slated for closure due to a lack of state funding, and our group would certainly advocate funding existing state hatcheries before venturing financially into a new industry which appears to be both expensive and disruptive to the state.

In addition, our group is concerned about a land, or rather water rush, with nterests from outside areas and even other countries staking out choice sites in locations sensitive to both environmental and recreational pressures. We would hate to lose our traditional common property fishing grounds to fish pens and political pressure.

In summation, the Cook Inlet Seiners Association would not oppose a shell fish mariculture bill if a cautious approach on leasing is followed and state finfish mariculture in this legislation at this time.

Thank you,

PHILIP BRUDIE

Vice President
Cook Inlet Seiners Association

PB:jsm

TESTIMONY OF ALASKA TROLLERS ASSOCIATION REGARDING

FISCAL NOTES ATTACHED TO HB 108 and SB 106 - APRIL 6, 1987

You have heard quite a number of comments regarding the fiscal notes attached to these companion mariculture measures - HB 108 and SB 106. We think much of the criticism is justified. At one point during the testimony last week it was asserted that permit and other user fees on mariculture licensees could be expected to largely defray the costs of regulating the new industry. We think this is extremely unlikely. Even a simplistic analysis of the existing fiscal notes indicates FY88 - FY92 program costs of some $2.245 million against expected receipts of just $247,000 - leaving a shortfall of some $2 million over five years. Moreover, these cost estimates are optimistically low.

The Department of Environmental Conservation has already retrenched from its original $0.00 fiscal note. Doug Donegon of DEC indicated that after listening to extensive testimony he would have to rethink their entire approach to the issue of regulating a new mariculture industry. Given the responsibilities of his agency I believe it is only prudent to expect a fairly significant fiscal note from DEC, which would add to the cost side of the fiscal estimates just cited.

The Department of Fish and Game submitted a fiscal note dealing with only one of its divisions - Fisheries Rehabilitation Enhancement and Development. While FRED will surely bear the brunt of responsibilities for mariculture within ADF&G, we think it is unrealistic to believe that additional costs will not be incurred in other areas too.

Increased burdens for the Habitat Division come to mind most immediately. One criticism we have of FRED's fiscal note is that it anticipates 100 permit applications in FY88, resulting in 20 operational farms by 1992, but does not project an ongoing stream of applications in years subsequent to FY88. Still, FRED's projections work out to $11,900 per application, or $59,500 per successful farm over 5 years. Quite obviously, recovery of such costs through permit fees is unrealistic in the extreme, as the financial burden on applicants would be excessive. This is particularly so since at least some of these cost would be ongoing beyond the FY92 projection limit of the fiscal notes.

The Department of Natural Resources fiscal note also indicates a significant shortfall, although given the language of their note it is impossible to indicate per permit costs over the five year projection period. In gross terms DNR posits some $989,400 in administrative costs against $147,000 in revenues for an $842,400 shortfall over the period.

Commerce and Economic Development's fiscal note is the most optimistic of all, projecting an actual surplus of revenues over costs of $33,900 from FY88 through FY92. However, we believe that DCED's cost estimates are seriously flawed. As written these two bills would establish DCED as the lead agency for development of this industry in Alaska. As such the cost estimates are hopelessly out of whack. It seems fairly clear to us that actual lead agency responsibility must ultimately rest with one of the agencies having the greatest regulatory responsibility. It

appears that DCED envisions its role actually diminishing from its current "road show" responsibilities even as the industry grows! In our view this reflects a very unrealistic view of the complex set of issues that establishment of a new, technologically sophisticated industry would pose in such a large, diverse and difficult development environment as Alaska. Even the simplest of coordinative roles will impose a greater burden on DCED than that projected in its fiscal note. As "lead agency" precisely what sort of services does Commerce see itself providing - either to the public or other agencies - for a mere $16,100 in 1992?

One of the most disconcerting things about these fiscal notes is that they are all based on entirely different assumptions about the number of potential applicants.

Commerce projects a straightline increase of 50 new permit applications per year through 1992. They apparently don't think any of those permits applications will be denied and/or abandoned, as revenues at the rate of $100 per permit are projected through the entire period of the fiscal note, with a projected 300 active permits in FY 92.

Fish and Game calls for 100 permit applications in FY 88 resulting in 20 operational farms in FY 92. There is no mention of expected new permit applications subsequent to FY 88. Are we to assume that the projected costs through FY 92 are based solely on tracking those initial 100 applications through the period? If so can we expect an additional increment of 100 new applications to be received in FY 89,

and each year thereafter, with a similar additional cost increments over each subsequent five year period?

Natural Resources's fiscal note suffers from a similar discontinuity, as they too provide an estimate of the number of applications - some 70 - only in the first fiscal year of the projection period. How many additional applications do they expect through FY 92? What effect will those new applications have on their fiscal note?

This whole issue raises questions about lead agency responsibility once again. It seems only reasonable for the Administration to have come into these Legislative hearings with a set of agency fiscal notes based on a set of common assumptions. First year estimates of permit applications vary from 50, to 70, to 100. No two agency estimates are the same. Projections in subsequent years are completely muddled. The proper approach on this would be to develop a set of mutually agreed upon assumptions upon which every Department would base its fiscal projections. These assumptions should include low, mid and high range estimates of the number of permit applications and ultimate number of operators. Further, a careful analysis of all State government agencies expected to be involved in the regulatory processes of this new industry should have been completed well in advance. Each should have been provided with the basic assumptions and been directed to complete a timely and complete fiscal note. To us, that's what lead agency responsibility is all about. Unfortunately, Commerce's "road show" doesn't seem to have included much in the way of inter-agency

coordination, and their projected fiscal note indicates no planning to take on that role.

Clearly, a great deal more fiscal analysis is required before the State leaps into this mariculture business. We need fiscal analyses from all effected agencies. We need analyses based on a set of clear, consistent assumptions about industry growth and regulatory requirements. Finally, we need some cogent analysis of the impacts of these new budgetary inputs on the conduct of vital existing management programs. This last point is absolutely crucial given sharply declining State revenues and already severely curtailed budgets in key resource management agencies. As so many others have already testified, the Alaska Trollers Association strongly believes that the State's limited funds would be far better spent in strengthening our existing fisheries.

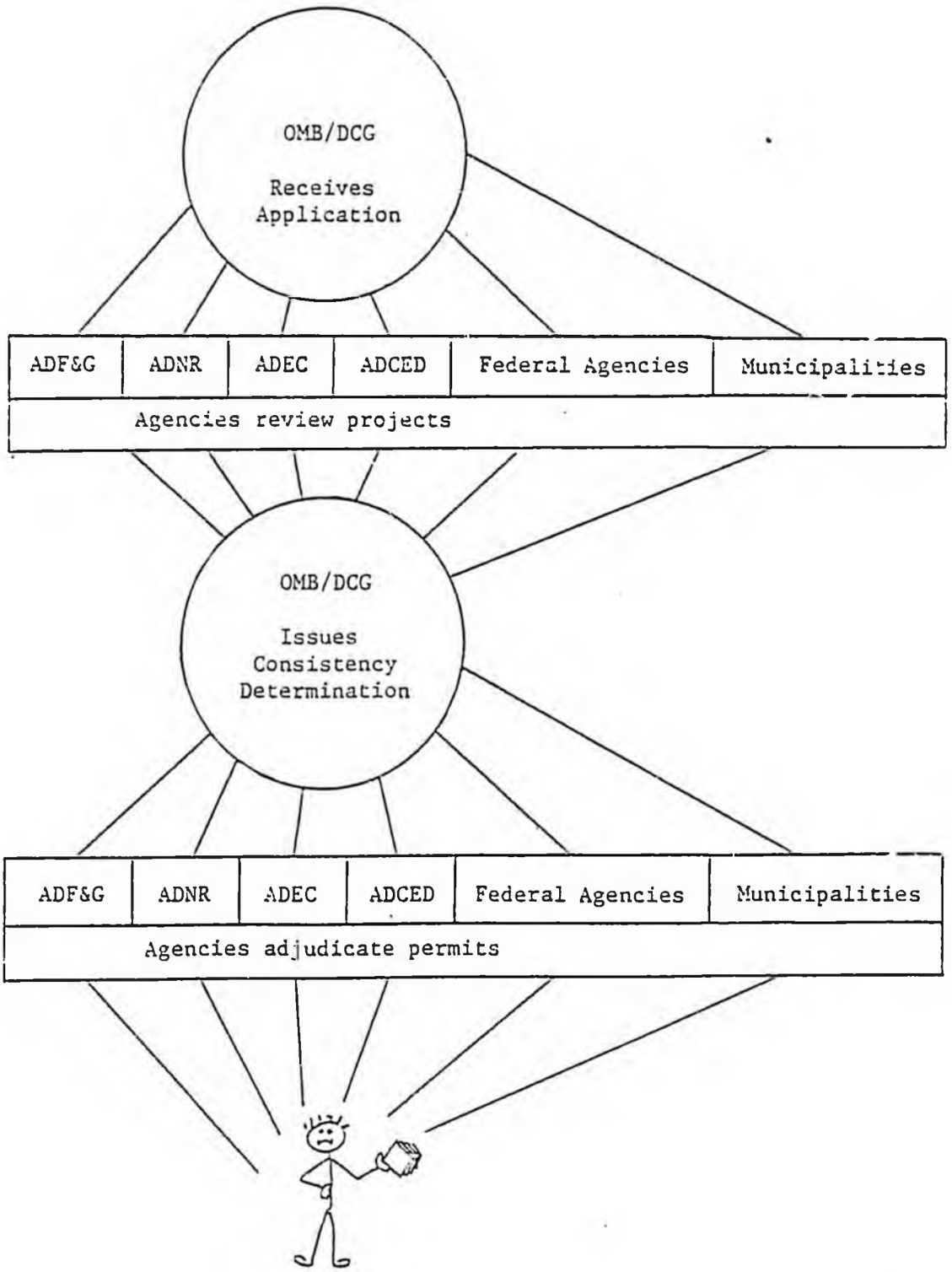
Agency	Regulatory Issues	Legislative Questions	Policy Questions
ADF&G	1. Broodstock acquisition a. from hatchery --charge PNP law --state sale b. from wild stock --need Board of Fish regulations 2. Broodstock Hatchery a. Pathology --disease control for brood --prevention in facility design and maintenance b. Genetics c. Siting --habitat protection --protection of natural stocks d. Water --quality --quantity e. Management --qualifications of managers --on-site personnel f. Site selection 3. Fish Farm a. Use of certified brood --disease control --genetic protection b. Adequate control of stock --prevent release into wild c. Siting	1. Size and scope of operations 2. Broodstock acquisition (sale of eggs 16.10.420 (7) (8) PNP) 3. How do we control size of program (B.C. Goldrush) 4. State-approved facility design	1. Impacts on traditional fisheries at site 2. Highest and best use of the site 3. Conflicts with recreational, subsistence, and other uses 4. Board of Fisheries involvement in developing regulatory framework
CFEC	1. License for broodstock acquisition a. Interim use permit 2. Oversite for limited entry permit use		
DNR	1. Water rights --highest and best use 2. Tidelands lease and permits --use conflicts 3. State-owned uplands --leases --parks	1. Size and scope of operations 2. Need for guidance for resolving use conflicts for tidelands	1. Highest and best use of the site (Is it in state's interest to use tidelands this way?) 2. Aesthetic concerns 3. Conflicts with recreational/log transfer facilities, and other uses 4. Speculation on sites 5. Bonding requirements (clean-up bonds) 6. Cumulative impacts 7. Fair return to the state for tidelands
DEC	1. Water quality --site selection criteria --on-shore hatchery discharge 2. PSP testing --shellfish 3. Product quality --inspection	1. Size and scope of operations 2. Change produce wholesomeness statute to allow inspection of fish farms	
DCED	1. Without new legislation DCED not directly involved in regulation 2. Assistance in fisheries economic development and promotion	1. Without enabling legislation, DCED cannot assess economic viability of proposed projects or be involved in industry regulation	1. Economic viability of project 2. Bonding requirements 3. Cost recovery of administrative cost
Revenue	1. Fish farm licensing --when to issue --need to formalize relationship with ADF&G --need to tie in with OMB review		
OMB/DGC	1. Multiagency project review --new questionnaire needed --czm compliance		1. Require applicant to submit project plan

DRAFT

EXISTING PERMIT STRUCTURE

for

RESOURCE AGENCIES



3/24/87

Alaska Department of
NATURAL RESOURCES

LEASING OF STATE LANDS AND TIDELANDS

A.S. 38.05.070

State land, including tide, submerged and shore land is available to lease by any member of the public, business or organization that can demonstrate a need for appropriate development. Leases may be offered competitively through public auction or negotiated directly with the applicant. If the fair market annual rental is determined to be less than $5000.00, the law allows the State to negotiate that lease directly with the applicant for 10 years or less. However, if it is determined that a competitive interest exists or if the annual rental is greater than $5000, the lease will be offered at a public auction to the highest bidder. The minimum bid will be the appraised fair market value annual rental.

Competitive leases can be issued for a term not to exceed 55 years, while negotiated leases can only be issued for a term of 10 years or less. Within those parameters, the determining factors are the estimated life of the project or the estimated time that the applicant thinks the land will be needed and the extent of the improvements. Land leases that are offered by competitive bid are renewable at the director's discretion. The renewal must be applied for in a timely manner. Leases negotiated under A.S. 38.05.070(b) are not eligible for renewal.

The owner or lessee of land that fronts on tide or submerged land is entitled to acquire a negotiated lease for the tide and submerged land if the requirements of A.S. 38.05.075(c) are met.

Negotiated leases may also be requested by: 1) commercial operators of fishing or hunting camps within an exclusive or joint use guiding area, 2) commercial operators of duck shacks, and 3) shore fishery setnetters seeking an upland lease for use in conjunction with their fishing sites. Parcel size should be limited to the minimum acreage needed. In the case of setnetters, they must provide evidence that they have necessary limited entry permit to participate in the local fishery and the term of the upland lease should coincide with the term of their shore fishery lease. If they do not have a shore fishery lease, they should apply during the filing period.

Leases may be transferred by assignment with the approval of the chief of Contract Administration. Before approving an assignment of lease, the individual receiving the lease must be determined eligible to participate in the program under which the lease was created and the lease must be in good standing.

It is the responsibility of the applicant to arrange and pay for survey, appraisal and legal notice publication, and to see that these tasks are carried out in a timely manner when directed to do so by the State. Depending on the time of year, these tasks could be time consuming. If the lease is negotiated, the decision on whether or not to require a survey will be made on a case by case basis and will depend on the type and extent of existing monumentation, the existing uses of the surrounding land, the likelihood that the surrounding land will be developed during the lease term and any other pertinent factors which may apply to a particular parcel of state land.

The following is a general time table for processing a lease:

1.	Application received, serialized and photo copied.	*30 days
2.	In-house and agency review	30 days
3.	Preliminary decision	30 days
4.	.945 notice letters (AS 38.05.945(c)	30 days
5.	.945 public notice (newspaper ad) (AS 38.05.945(b)	30 days
6.	Survey and appraisal (11 AAC 58.400 - .410)	60 days
7.	Final decision	10 days
8.	.945 notice letters (if competitive offerings)	30 days
9.	.945 public notice (if competitive)	30 days
10.	Lease offering	10 days

In addition to the above mentioned times, applicants must take into consideration delays that may occur if the land is not classified or needs to be reclassified (approximately 90 days - 11 AAC 55). If the land is located within an organized borough, the survey plat must be approved by the local platting authority which requires additional time (11 AAC 53). Applications are processed in the order received and there is currently a backlog of over 2000 casefiles.

Applicants should include the following information with their completed application form:

- Filing fee.
- USGS map 1:63,360 scale with the location marked.
- Development plan and time schedule.
- A clear statement of the intended use of the property.
- Any applicable licenses.

---

* Some upland leases and all tideland leases are within the "coastal zone" and other permits may be required from other agencies. These go through another review for consistency with the Alaska Coastal Management Plan or approved local coastal plans. Normal review period is 50 days.

The development plan should contain the following information:

- A description of the type and location of the temporary and/or permanent structures and a scale drawing depicting all proposed structures.
- The intended access to the site.
- An explanation of any clearing or cutting of trees.
- A description of the intended power source and fuel storage area.
- An explanation of the intended solid waste and waste water disposal method.

Applicable statutes for reference:

A.S. 38.05.035 -- Powers and duties of the director.
A.S. 38.05.070-.105 -- Leasing of lands other than for the extraction of natural resources.
A.S. 38.05.840 -- Appraisal
A.S. 38.05.920 -- Assignment
A.S. 38.05.945 -- Notice

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

Southcentral Regional Office
OFFICE LOCATION:
3601 "C" Street, Tenth Floor
Anchorage, Alaska
Phone: (907) 762-2202
MAILING ADDRESS:
P.O. Box 7005
Anchorage, Alaska 99510-7005

Mat-Su Area Office
OFFICE LOCATION:
Century Plaza, Suite 202
Mile .5 Knik Road
Wasilla, Alaska
Phone: (907) 376-4595
MAILING ADDRESS:
P.O. Box 874008
Wasilla, Alaska 99687

Northern Regional Office
OFFICE LOCATION:
4420 Airport Way
Fairbanks, Alaska
Phone: (907) 479-2243
MAILING ADDRESS:
4420 Airport Way
Fairbanks, Alaska 99709

Southeast Regional Office
OFFICE LOCATION:
400 Willoughby Avenue,
Suite 400
Juneau, Alaska
Phone: (907) 465-3400
MAILING ADDRESS:
400 Willoughby Avenue,
Suite 400
Juneau, Alaska 99801

Alaska Department of
NATURAL
RESOURCES

FACT SHEET - LAND USE PERMITS ON STATE LAND

Division of Land and Water Management
Southeast Regional Office
400 Willoughby Ave., Suite 400
Juneau, Alaska 99801
Tel, No. 465-3400

WHAT IS A LAND USE PERMIT?

A land use permit is authorization for the temporary use of state land, tideland or resources. It 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 they are revocable without cause upon a thirty day notice. Permits are not transferable. Permanent structures are prohibited on a permit area. Therefore, any structure placed on the permit area must be readily removable.

FOR HOW LONG IS A PERMIT ISSUED?

It is division policy that a permit may not exceed one year in length. A permit may not be renewed, but it may be re-issued by submitting a new application.

HOW DO I OBTAIN A LAND USE PERMIT?

A permit may be obtained by making application to the Southeast Regional Office at the address listed above. The applicant must submit a completed land use permit application, a filing fee, a sketch map and a completed coastal project questionaire.

WHAT COSTS ARE INVOLVED?

An applicant must pay a fifty dollar filing fee. There are no user fees for non-exclusive permits, however, user fees of fifty dollars per acre per year with a one-hundred dollar minimum will be charged for all permits for exclusive use or commercial use.

WHAT IS THE PROCESSING TIME?

Normally the processing time is about thirty days. This allows time for review of the application by other state agencies and for a determination of consistency with coastal zone management statutes.

WHAT ARE GENERALLY PERMITTED ACTIVITIES?

Regulations specify certain activities which will be allowed on state lands without the issuance of a written permit. These are called generally permitted activities. A list of generally permitted activities is on the attached page.

Prepared 8/29/86

The following constitutes the list of generally permitted activities on state lands:

A. Hiking and backpacking, horse and dog team travel, cross-country skiing and snowmachining, camping and warming fires, mountain climbing.

B. Light plane and helicopter landing; use of water equipment such as boats, rafts and canoes.

C. Hunting, fishing and trapping; use of state land for setting up fish camps or hunting camps when such camps are for the individual's own temporary use and do not constitute a preference right. Placement of crab and shrimp pots in accord with fish and game regulations is allowed.

D. Harvesting small number of wild plants for personal use; securing dead or down firewood for personal use; harvesting mushrooms, berries and other plant materials for personal use as food.

E. Non-exclusive recreational use or other use that is temporary and has no noticeable effect on vegetation, drainage or soil stability nor involves any harassment of wildlife other than lawful hunting, trapping and fishing.

F. Recreational gold panning.

Although the following activities are generally permitted on the state public domain, a written permit is required for surface uses of lands designated as part of the state park system, fish and game sanctuaries, refuges, and critical habitat areas, or areas where use is limited by classification or special use designation including university grant lands:

A. Mineral prospecting using pick and shovel; hard rock prospecting by backpacking; gold or other mineral recovery utilizing small hand held or floating suction dredging apparatus.

B. Brushing survey lines or trails less than three feet wide where there is no disturbance of the root system and when such trails do not constitute a right-of-way.

C. A livestock drive of less than 100 animals.

D. Anchoring of mooring buoys or construction of private floats and docks by the upland owner for his own personal noncommercial use on state tide or shore lands.

E. Use of vehicles such as 4-wheel drive vehicles, pickups and all-terrain vehicles (wheeled and tracked) off established right-of-way easements.

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.

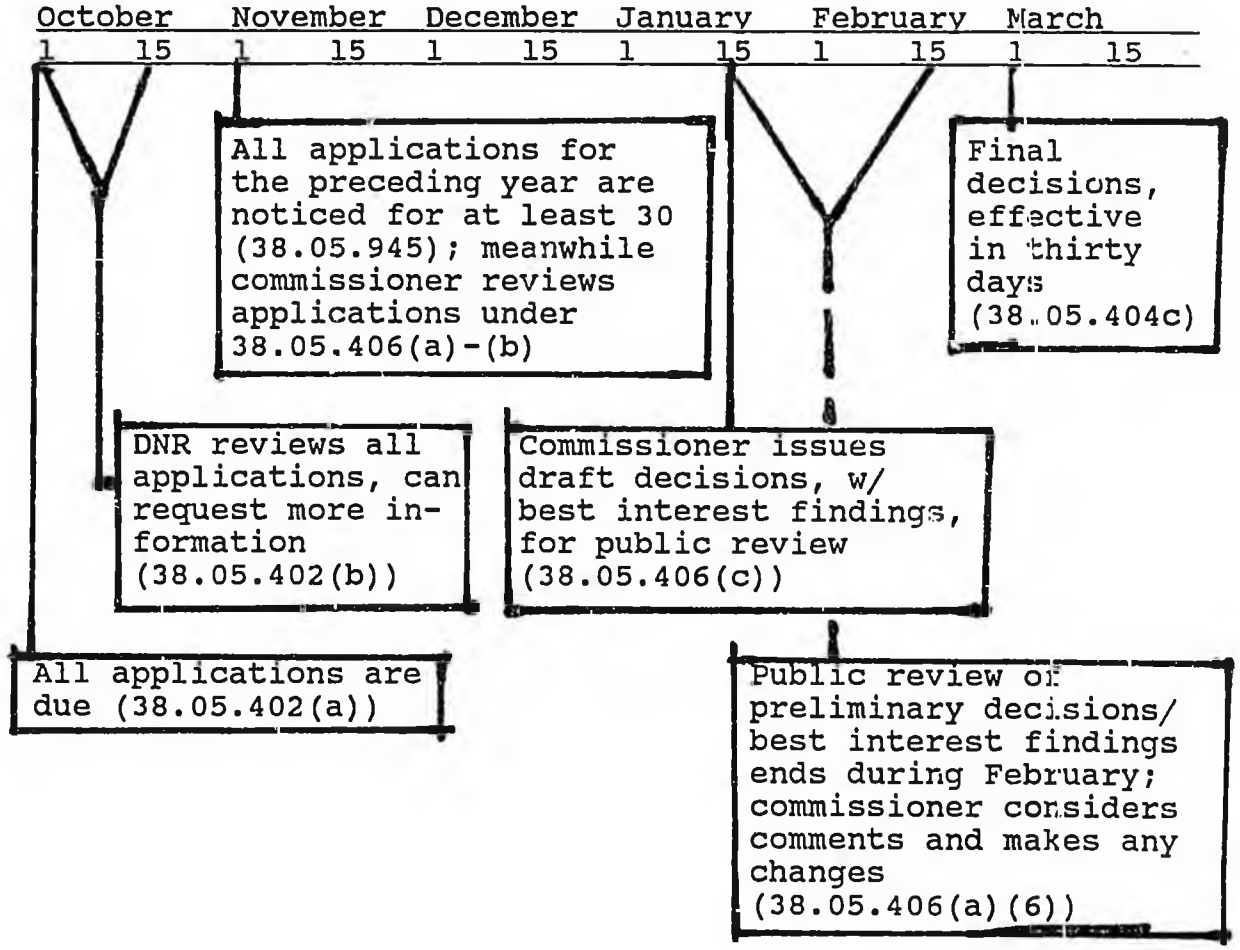
(d) The commissioner may require survey of the lease site at the applicant's expense prior to issuance of a lease or during the term of the lease.

(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.

TO: Brent Paine
Assistant to Representative Rieger

DATE: March 16, 1987

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.

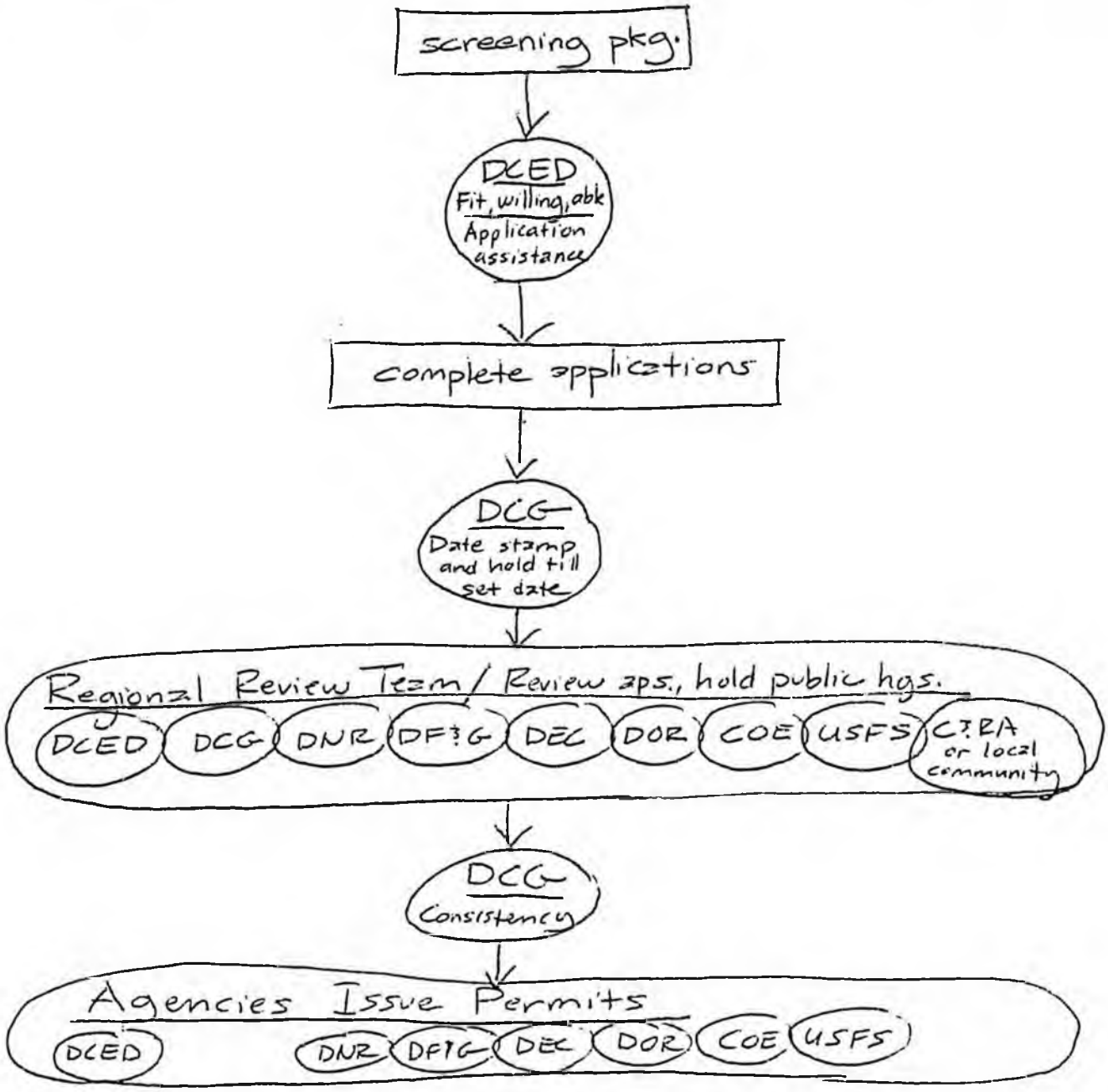
I have attached a discussion of some of mariculture issues quite eloquently outlined by David Benton (a rough draft). It is not yet ready for public review (so I hope you will treat it accordingly), but it will give you a feeling for some of our concerns. Off-hand, two issues appear to me to be missing: 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 guage 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 disccurage 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 guage 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

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

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 ~~per??~~ permit) (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 ~~react~~ 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.
R.R. 1 Site 5 Comp. 4
Denman Island, B.C. V0R 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.

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 your 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

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 F_2 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.

...2

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

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 Meyboom, 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.

TO: Distribution List

DATE: September 19, 1986

FILE NO:

Thru: Paula Burgess
Regional Manager

TELEPHONE NO: 465-3400

FROM: Bob Palmer
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

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
John Harmening, USFS
Gary Gustafson, DLWM, Anchorage
Tom Kron, FRED
Bill Paulick, DCED
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
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.

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 that $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.

Southcentral Regional Office
OFFICE LOCATION:
3601 "C" Street, Tenth Floor
Anchorage, Alaska
Phone: (907) 762-2202
MAILING ADDRESS:
P. O. Box 7005
Anchorage, Alaska 99510-7005

Mat-Su Area Office
OFFICE LOCATION:
Century Plaza, Suite 202
Mile .5 Knik Road
Wasilla, Alaska
Phone: (907) 376-4595
MAIL ADDRESS:
P. O. Box 874008
Wasilla, Alaska 99687

Northern Regional Office
OFFICE LOCATION:
4420 Airport Way
Fairbanks, Alaska
Phone: (907) 479-2243
MAILING ADDRESS:
4420 Airport Way
Fairbanks, Alaska 99709

Southeast Regional Office
OFFICE LOCATION:
400 Willoughby Avenue,
Suite 400
Juneau, Alaska
MAILING ADDRESS:
400 Willoughby Avenue,
Suite 400,
Juneau, Alaska 99801

APR 07 '87 11:37 LEG. AFFAIRS - KETCHIKAN

TELECOPY COVER SHEET

TO: Rep Cotton and Ch. Resources
KETCHIKAN LIO (225-9675)

TO: Rep. Hermann PHONE

FROM: Keith Johnson PHONE

INSTRUCTIONS:

Please deliver one copy to each. -
Thank you

RECEIVED: DATE TIME

SENT: DATE 4-7-87 TIME 12:45

DISPOSAL OF ORIGINAL: THROW AWAY HOLD FOR PICK UP

NUMBER OF PAGES: 2 (two) (NOT COUNTING COVER SHEET)

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

S.S.R.A.A.

TESTIMONY ON HOUSE BILL 108

Keith A. Johnson
Operations Manager
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-

590 University Avenue, Suite [illegible]

---

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 distributers 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 distributers 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 insigificant 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

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

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 (Macrocysistis) 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. <u>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?</u>

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. <u>Have salmon fishermen in other countries become involved in salmon farming?</u>

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 entrepenuers 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 mariuclture 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 potenital 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 hactheries. 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.

Alaska Mariculture Association

P.O. Box 020704
Juneau, AK 99802-0704
(907) ~~586-2202~~ 463-3600

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 futher 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 ofthe 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 maricutlure 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.

Alaska Mariculture Association

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 distributers 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 distributers 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 insigificant 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

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

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	$263,800-347,000

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

Alaska Mariculture Association

P.O. Box 020704
Juneau, AK 99802-0704
(907) ~~586-2982~~ 463-3600

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 Alaksa 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 entrepenuers 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 worker were sent home, the plant sat idle and the customers bought fish elsewhere.